VI - HYDROLOGIC FORECASTS

6-01 General

a. Role of LAD. LAD does not make any formal hydrologic forecasts, published or unpublished, for Carbon Canyon Dam. Despite the lack of formal hydrologic forecasts, LAD does carefully monitor the reservoir water surface elevation in Carbon Canyon Reservoir, and does notify other agencies of any significant changes or anticipated changes as described in section 5-6. LAD continues to improve its monitoring capabilities of conditions not only at Carbon Canyon Dam, but in adjacent watersheds. Improved and increased numbers of automatic telemetry rain and stream gauges also help in the development of computerized rainfall-runoff forecast models. The long-term goal of LAD is to be able to provide relatively accurate predictions of inflows and reservoir water surface elevations as far in advance as possible. It is intended that these predictions will become accurate and reliable enough that they can be shared with NWS, OCEMA, city and county emergency officials, and others, to be used as a basis for reservoir systems regulation during the upcoming years.

The LAD Meteorologist prepares special quantitative precipitation forecasts for the Santa Ana River drainages and other watersheds including those in the immediate area of Carbon Canyon Dam watershed. These are used in determining the potential for significant runoff into Carbon Canyon and other reservoirs. Research is progressing into the direct incorporation of these quantitative precipitation forecasts into the rainfall-runoff forecast models being developed.

b. Role of Other Agencies. No other agency has any specific forecast responsibility for water surface elevations in Carbon Canyon Reservoir or for discharges in Carbon Canyon Reservoir or for discharges on Carbon Canyon Creek, either upstream or downstream of Carbon Canyon Dam. NWS issues Flash Flood Warnings for rivers and other watercourses in the Orange County coastal plain.

LAD does receive real-time weather reports and forecasts, as well as historical weather data, from NWS. This is accomplished by means of weather facsimile pictures and teletype data and forecasts transmitted by NWS and received by an LAD facsimile recorder and teletype printer. Close coordination is maintained with the NWS forecast office located in Los Angeles.

Historical precipitation and streamflow data are available from OCEMA and other sources. These data, while not of use in real-time, are important to studies of historical storms and floods which aid in the development and refinement of computerized rainfall-runoff forecast models.

6-02 Flood Conditions Forecasts

Forecasts of flood hydrographs are currently not made. However, routine evaluation of precipitation, resulting inflow, and forecast precipitation provides valuable subjective predictions of flood situations. Using such information, LAD RRS can evaluate if an ongoing flood will increase or decrease over the next 24 hours.

6-03 Conservation Purposes Forecasts

Since Carbon Canyon Dam is strictly a flood-control facility, forecasts for other purposes, including water conservation, are not made.

6-04 Long-Range Forecasts

Since the watershed above Carbon Canyon Dam is relatively small, and since water is impounded behind Carbon Canyon Dam for short time periods, there is little direct need for long-range forecasts in the regulation of Carbon Canyon Dam. Only in the event of major impoundment at Carbon Canyon Reservoir, as well as simultaneously at other reservoirs affecting the downstream channel, and the San Gabriel and Santa Ana Rivers, would a forecast of more than one day be of immediate significance to the regulation of Carbon Canyon Dam. In such a case, the forecast of another impending major storm or lack of such a storm might influence the release rate of water from Carbon Canyon Dam. The primary consideration of the release rate of water from all of the dams in the San Gabriel and Santa Ana River system is to prevent or minimize downstream damages.