

I - INTRODUCTION

1-01 Authorization

This Carbon Canyon Dam and Reservoir Water Control Manual was prepared in compliance with the following directives: ER 1110-2-240, EM 1110-2-3600, and ETL 1110-2-251.

1-02 Purpose and Scope

This water control manual provides a detailed plan for regulation of Carbon Canyon Dam and Reservoir on Carbon Canyon Creek (also known as Carbon Creek) for the purpose of flood control. Carbon Canyon Dam is located approximately 4 miles east of the city of Brea, and approximately 12 miles north of the city of Santa Ana, in Orange County, California (see pl.1-1). Major topics in this manual include: authorization, history, and description of the project; watershed characteristics; hydrometeorology; data collection and communication networks; hydrologic forecasting; the water control plan; and responsibilities and coordination for water control management.

1-03 Related Manuals and Reports

Manuals and reports with data and information relevant to the information of this manual are listed in table 1-1.

1-04 Project Owner

Carbon Canyon Dam and Reservoir was constructed and is owned and operated by the U.S. Army Corps of Engineers, Los Angeles District (LAD).

1-05 Operating Agencies

a. LAD. LAD is responsible for the operation and maintenance of the dam, reservoir, and outlet works. The outlet gates are operated manually, as needed. LAD is also responsible for 4080 feet of Carbon Canyon Channel just below the dam.

b. OCEMA. The Orange County Environmental Management Agency (OCEMA) is responsible for operation and maintenance of the remainder of Carbon Canyon Channel, Carbon Creek Channel, and Carbon Canyon Diversion Channel.

1-06 Regulating Agency

LAD is responsible for developing the flood control regulation plan for Carbon Canyon Dam and Reservoir as well as operation of the dam.

Table 1-1. Related Manuals and Reports.

1. Hydrology for Carbon Canyon Dam, Design Memorandum No. 1, Santa Ana River Basin (and Orange County), California, Flood Control, U. S. Army Engineer District, Los Angeles, Corps of Engineers, April 1957.
2. General Design for Carbon Canyon Dam and Channel, Design Memorandum No. 2, Santa Ana River Basin (and Orange County), California, Flood Control, U.S. Army Engineer District, Los Angeles, Corps of Engineers, August 1957.
3. Real Estate for Carbon Canyon Dam and Channel, Design Memorandum No. 3, Santa Ana River Basin (and Orange County), California, Flood Control, U.S. Army Engineer District, Los Angeles, Corps of Engineers, December 1957.
4. Embankment Foundation for Carbon Canyon Dam, Design Memorandum No. 4, Santa Ana River Basin (and Orange County), California, Flood Control, U.S. Army Engineer District, Los Angeles, Corps of Engineers, August 1958.
5. Reservoir Regulation Manual for Carbon Canyon Flood Control Reservoir, Santa Ana River Basin (and Orange County), California, U.S. Army Engineer District, Los Angeles, Corps of Engineers, February 1964.
6. Carbon Canyon Regional Park Master Plan, Design Memorandum No. 6, Santa Ana River Basin, California, U.S. Army Engineer District, Los Angeles, Corps of Engineers, March 1974.
7. Interim Report on Hydrology and Hydraulic Review of Design Features of Existing Dams for Carbon Canyon, San Antonio, and Tahchevah Dam, U.S. Army Engineer District, Los Angeles, Corps of Engineers, June, 1978.
8. Operation Manual, Carbon Canyon System, Orange County Environmental Management Agency, Revised February 1981.
9. Internal Report, Reservoir Elevation-Frequency, Carbon Canyon Dam, Brea, California, U.S. Army Engineer District, Los Angeles, Corps of Engineers, Reservoir Regulation Section , May 1981.
10. Internal Report, Revisions in Gate Operating Schedules of Los Angeles District, Corps of Engineers Dam, July 1982, preliminary draft.
11. Hydrology Documentation, Coyote Creek Tributaries, Santa Ana River Basin, Orange County, California, Interim 3, U.S. Army Engineer District, Los Angeles, Corps of Engineers, March 1984.
12. General Report, Flood Emergency Plan, Carbon Canyon Dam, Carbon Canyon Creek, Santa Ana River Basin, Orange County, California, U.S. Army Engineer District, Los Angeles, Corps of Engineers, December 1985.
13. Carbon Canyon Dam Seismic Evaluation of Embankment and Foundation, Phase II Report, Carbon Canyon Creek Improvement, Santa Ana River Basin, Orange County, California, U.S. Army Engineer District, Los Angeles, Corps of Engineers, June 1988.