

### III - HISTORY OF PROJECT

#### 3-01 Authorization

The construction and operation of Sepulveda Dam and other flood control projects in Los Angeles County by the U.S. Army Corps of Engineers are authorized by several Acts of Congress: the Emergency Relief Appropriation Acts of 8 April 1935 and 8 April 1936; and the Flood Control Act of 22 June 1936 (PL 74-738), as amended by the Acts of 15 May 1937 and 28 June 1938 (PL 75-761); plus the Flood Control Act of 18 August 1941 (PL 77-228).

#### 3-02 Planning and Design

The need for flood control in the coastal drainages of Los Angeles County was recognized before 1900, but really began to grow after the floods of January and February 1914. On 12 June 1915, Los Angeles County Flood Control District (now Los Angeles County Department of Public Works, Hydraulic Division) was created. This new County agency worked with the Corps of Engineers, Los Angeles District, on various minor flood control projects, but it was not until two decades later that major flood control construction projects were given serious consideration.

The major flood of 1 January 1934 emphasized the need for major flood control projects in southern California, and the Federal Depression-relief jobs programs provided the financial vehicle for comprehensive construction programs.

In 1935 and 1936, the Corps of Engineers, Los Angeles District, and Los Angeles County Flood Control District became partners in a large Works Progress Administration contract to design a comprehensive flood control plan for Los Angeles County. The Flood Control Act of 1936 changed the Civil Works mission of the Corps of Engineers from one of temporary status (designed to relieve unemployment during the Depression), to one of permanent responsibility for flood control.

During the next three years, a comprehensive flood control system for the Santa Ana, San Gabriel, and Los Angeles Rivers and their tributaries was designed. This included a Definite Project Report for the control of Los Angeles River, submitted in December 1936.

The severe storm and flood of February-March 1938 provided additional impetus for the need for a comprehensive flood control program in southern California, and it provided excellent rainfall and runoff data for use in new design criteria and as verification for existing design criteria.

Increasing hostilities overseas in 1938 and 1939 created still another aspect of flood-control-its importance to national defense through the need to protect defense industry facilities that were subject to flooding.

One of the components of the comprehensive flood control system under consideration for southern California was a large dam and reservoir on the main stem of the Los Angeles River in the San Fernando Valley. Several sites for this structure were examined, and the one ultimately selected was considered to be a best overall combination as to effectiveness, cost, and minimum disruption to existing dwellings, utilities, railroads, and other facilities (see table 1-01: Survey Report, Sepulveda Dam (January 1940) and Analysis of Design, Vol. I, Sepulveda Dam (August 1939, rev. October 1941)). The dam that was to be built on this site was named Sepulveda because of its location.

### 3-03 Construction

After approval of the final designs, construction on Sepulveda Dam was authorized, and work began on 31 December 1939. The crest gates and the outlet gates were completed in July 1941, and construction of the embankment and appurtenant concrete structure was completed on 30 December 1941. The cost of the project, which was financed by Federal funds, was \$6,650,561.

At the time that Sepulveda Dam was completed, the downstream channel capacity on the Los Angeles River was 7,100 cfs. A major channel improvement project, conducted in 1951-1953, increased the channel capacity to 16,900 cfs.

### 3-04 Related Projects

Sepulveda Dam is one component of a large Los Angeles County Drainage Area system of flood control dams and improved river channels. The operating agencies and major features of six reservoirs that directly affect the Los Angeles River (in addition to Sepulveda Dam), plus four other reservoirs in this system are discussed in Sections 4-10 and 4-11 of this manual.

In addition to the facilities discussed in the above mentioned sections, there is an old dam on the upstream Browns Canyon Wash that is now completely filled with debris and thus functions merely as a waterfall. Its origins are unknown, according to the Los Angeles County Department of Public Works' historians.

### 3-05 Modifications to Regulations

At the time of construction of Sepulveda Dam in 1941, the downstream channel of the Los Angeles River had a capacity of about 7,100 cfs. Therefore, the initial water-control plan limited releases from Sepulveda Dam to 7,100 cfs or less, depending upon downstream tributary flow. In 1953 the U.S. Army Corps of Engineers improved the downstream channel, developing a capacity of about 16,900 cfs. Accordingly, the water control plan was then revised to allow release rates as high as the new channel capacity. Within this upper limit, the operating criteria for Sepulveda Dam were based strictly upon reservoir water surface elevation criteria, irrespective of downstream

channel conditions. Those basic criteria were applied for use in this manual (see Exhibit A), with additional options to consider real-time storm and channel conditions and available forecast information.

### 3-06 Principal Regulation Problems

There have been no major problems in the regulation of Sepulveda Dam since construction was completed in 1941. The dam has never spilled; there have never been any structural deficiencies or major hydraulic malfunctions. The dam has performed very adequately since its construction.

During the storms and impoundments of January 1943 and February 1944 (see Sections 8-02.c.(1) and (2)), the trash racks became clogged from excess debris accumulation, impeding flow through the outlet works. The condition was remedied in November and December 1944, when the racks were modified below elevation 687.5 feet by the removal of some of the frames and I-beams.