

# I - INTRODUCTION

## 1-01. Authorization

The authority and directives for the preparation of this manual are contained in the following U.S. Army Corps of Engineers publications:

- (1) Engineering Regulation (ER) 1110-2-240, dated 8 October 1982:  
Engineering and Design, Water Control Management.
- (2) Engineering Technical Letter (ETL) 1110-2-335, dated 1 April 1993:  
Development of Drought Contingency Plans.
- (3) Engineering Manual (EM) 1110-2-3600, dated 30 November 1987:  
Management of Water Control Systems.
- (4) Engineering Regulation (ER) 1110-2-8156, dated 31 August 1995:  
Engineering and Design, Preparation of Water Control Manuals.
- (5) Federal Standard 376B, dated 5 May 1983: Preferred Metric Units for  
General Use by the Federal Government.

## 1-02. Purpose and Scope

The purpose of this water control manual is to provide current information about Alamo Dam and Lake, the regulating policy, and a description of the organizations responsible for reservoir regulation and data collection. The manual contains (a) descriptive information pertaining to the drainage area and the project; (b) a description of the plan of operation of Alamo Dam and its application to various floods; (c) the organization for operations by the U.S. Army Corps of Engineers, Los Angeles District; and (d) sources of hydrologic data and forecasts.

### **1-03. Related Manuals and Reports**

Manuals and reports relevant to Alamo Dam, Alamo Lake, and the drainage area above and below Alamo Lake are listed in Table 1-01.

### **1-04. Project Owner**

Alamo Dam and Lake are on land owned by the U.S. Army Corps of Engineers (reference Section 2-05). The Los Angeles District of the U.S. Army Corps of Engineers is responsible for reservoir regulation and for operating and maintaining the dam.

### **1-05. Operating Agency**

The operation of Alamo Dam is the responsibility of the U.S. Army Corps of Engineers, Los Angeles District (SPL). The District Engineer has delegated authority for this function through the Chief, Engineering Division and the Chief, Hydrology and Hydraulics Branch to the Chief, Reservoir Regulation Section. The dam is staffed by two project operators (dam tenders) who live at the dam year round. The operators are under the supervision of the Operations Branch SPL; they receive their reservoir regulation instructions from the Reservoir Operations Center (ROC), at the downtown Los Angeles office of the Reservoir Regulation Section.

### **1-06. Regulating Agencies**

The U.S. Army Corps of Engineers, Los Angeles District is responsible for the maintenance of Alamo Dam, for developing the water control plan for the regulation of Alamo Lake, and for operating the dam.

The Arizona State Parks Department (ASP) manages U.S. Army Corps of Engineers' withdrawn and acquired lands at Alamo Lake (Plate 2-11) for fish and wildlife purposes under Department of the Army license DACA09-3-97-31. The Arizona

Game and Fish Department also has a role as trustee for all wildlife in the State of Arizona, including both in the reservoir area and downstream from Alamo Dam.

The U.S. Geological Survey (USGS) operates and maintains a streamflow gage on the Bill Williams River approximately 0.6 miles (0.97 Km) below Alamo Dam. Additionally, the USGS maintains for SPL a streamflow gage on the Bill Williams River 33.7 miles (54.23 Km) below Alamo Dam.

The U.S. Fish and Wildlife Service maintains the Bill Williams River National Wildlife Refuge, located on the lower 9 miles (14.5 Km) of the Bill Williams River including the confluence with the Colorado River at Lake Havasu.

The U.S. Bureau of Land Management maintains two wilderness areas along the Bill Williams River: the Rawhide Wilderness, located immediately below Alamo Dam; and the Swansea Wilderness, located approximately 20 miles (32.2 Km) downstream.

The National Weather Service's Colorado Basin River Forecast Center in Salt Lake City, Utah provides inflow forecasts to Alamo Lake during the winter flood season and at other times of the year upon request from the Corps.

**Table 1-01. Related Manuals and Reports**

<b>No.</b>	<b>Title</b>	<b>Date</b>
1	Bill Williams River and Tributaries, Arizona, 78 <sup>th</sup> Congress, 2 <sup>nd</sup> Session, House Document No. 625	May 31, 1944
2	Hydrology, Alamo Reservoir, bill Williams River, Arizona	March 29, 1946
3	Design Memorandum No. 3, General Design for Alamo Reservoir	April 1964
4	Design Memorandum No. 4, Master Plan for Alamo Lake	January 1975
5	Hydrology for Review of Design Features of Existing Dams, Alamo Lake, Bill Williams River, Arizona	April 1982
6	Interim Report on Hydrology and Hydraulic Review of Design Features of Existing Dams for Alamo and Whitlow Ranch Dams	March 1986
7	Bill Williams River – Alamo Lake to Lake Havasu Hydrologic Appraisal (prepared by Bill Stephens & Associates, Phoenix, AZ, for City of Scottsdale)	January 7, 1988
8	Bill Williams River Riparian Management (prepared by Bureau of Land Management, Phoenix District, Arizona)	February 1, 1988
9	Assessment of Water Resource Conditions in Support of Instream Flow Water Rights, Bill Williams River, Arizona (prepared by Bureau of Land Management, Phoenix District, Arizona)	December 1988
10	Alamo Lake, Arizona Reconnaissance Study	July 1990
11	Proposed Water Management Plan for the Alamo Lake and the Bill Williams River, Final Report and Recommendations of the Bill Williams River Corridor Technical Committee, Volume I	November 1994
12	Proposed Water Management Plan for the Alamo Lake and the Bill Williams River, Final Report and Recommendations of the Bill Williams River Corridor Technical Committee, Volume II	November 1994
13	Technical Considerations for Alamo Lake Operation, U.S. Army Corps of Engineers Hydrologic Engineering Center	April 1998
14	Alamo Dam Risk Assessment Study, U.S. Army Corps of Engineers, Los Angeles District, South Pacific Division	March 1999
15	Alamo Dam Demonstration Risk Assessment: Summary Report, RAC Engineers & Economists and the Los Angeles District, U.S. Army Corps of Engineers	August 2000
16	Alamo Lake, Arizona Feasibility Report and Environmental Impact Statement, U.S. Army Corps of Engineers, Los Angeles District	July 1999
17	Alamo Lake, Arizona Feasibility Study Technical Appendices, U.S. Army Corps of Engineers, Los Angeles District	July 1999
18	Operation and Maintenance Manual for Alamo Dam, Colorado River Basin, Bill Williams River, Arizona, Department of the Army, Los Angeles District Corps of Engineers	December 1969
19	Instream Flow Request for the Bill Williams River National Wildlife Refuge, Application Number 33-96300 (submitted to Arizona Department of Water Resources)	September 1993
20	Instructions for Reservoir Operations Center Personnel (The “Orange Book”)	November 2002