

## **Executive Summary**

This is a report to Congress mandated by the Central Valley Project Improvement Act (CVPIA), Section 3406(d)(6). The Congressional directive requires investigations of: (1) the adequacy of and needs for water supplies to *existing private wetlands* in the Central Valley; and (2) water supply and delivery requirements to permit full habitat development on 120,000 acres of *supplemental wetlands* (which may be public or private), and feasible means of meeting those requirements.

### **SCOPE OF THIS REPORT**

These investigations were very specific to assessing water supplies to meet the needs of wetlands in the Central Valley as requested in the Congressional directive. The water needs were based on identified private wetlands and on the goals of the Central Valley Habitat Joint Venture's (Joint Venture) "Implementation Plan" dated April 19, 1990, for 120,000 acres of additional supplemental wetlands. Actions are underway by many public and private organizations and partnerships to meet supplemental wetlands goals, and considerable progress has already been made. However, those efforts are outside the scope of this report, which is limited to addressing issues of water supply adequacy, reliability, and availability to wetlands.

In order to address water supply issues for supplemental wetlands, it was necessary to identify where these wetlands might be. This effort was limited to identifying land areas that could be appropriate for wetlands. Lands far in excess of the Joint Venture's stated goals were identified for this report, based primarily on attributes such as soil types, adjacent land uses, and proximity to other wetlands. The specific suitability of any particular parcel of land was not included in the scope of the investigations. This report should contribute significantly to programs which focus on restoring wetlands by providing reliable information on water supply needs and availability. Although a key factor, water supply is only one of the many factors to be considered in wetlands planning, and other issues would have to be investigated individually for each site proposed for wetlands restoration or development.

### **CONDUCT OF THE INVESTIGATIONS**

This is a report on concurrent investigations conducted on two topics: existing private wetlands, and supplemental wetlands. The Chapter 1 introduction and overview applies to both investigations. Chapter 2 describes the private wetlands investigations. Chapter 3 describes the supplemental wetlands investigations. Chapter 4 presents the findings of both.

To conduct these investigations, the 10-million-acre Central Valley was divided into nine basins. Similar conditions exist within each basin, but there are significant differences in water supply needs and conditions from one basin to another. The most dramatic differences are between basins in the north (Sacramento Valley) and south (San Joaquin Valley). A geographic information system (GIS) model was developed to conduct these investigations. It was also designed to provide the data in a form that would be useful for future wetlands planning by

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Federal, State, and local agencies and private organizations.

These investigations bring together data from many sources, and are the result of cooperative efforts by Federal and State agencies, local water suppliers, and private organizations. The GIS model used for these investigations was first developed by Ducks Unlimited, Inc. in 1996, under contract with the California Department of Fish and Game, the Wildlife Conservation Board, and the U.S. Bureau of Reclamation. The investigations were guided by a Focus Group made up of Central Valley Habitat Joint Venture partners, under the management of the U.S. Fish and Wildlife Service. Initial investigations and further GIS model development were conducted by the California Department of Water Resources as a contractor. Follow up work was done by a private contractor, who conducted interviews with water supply agencies throughout the Central Valley to establish and document water supply data.

### **ORGANIZATION AND CONTENT**

Chapter 1 is an introduction and overview that explains the purpose of these investigations and how they were conducted. This chapter presents background information that is important to an understanding of wetlands water needs, relating to both existing private wetlands and supplemental wetlands. It explains the basis for establishing water needs for this report, and the general approach of these investigations.

Chapter 2 contains all the specific information on the private wetlands investigations. It includes background, study approach and methodology, and individual basin investigations for nine basins in the Central Valley.

Chapter 3 contains similar information as provided in Chapter 2, but on the supplemental wetlands investigations.

Chapter 4 summarizes the findings of this report. In essence, there is an estimated shortfall of about 108,500 acre-feet per year of water needed to supply existing private wetlands full deliveries in an average year. For the remaining supplemental wetlands needed to meet established goals, there is an estimated shortfall in reliable water supplies of about 179,007 acre-feet per year. The report identifies potential means to obtain the needed water supplies.

It must be recognized that the Central Valley Project is not capable of meeting all needs of Central Valley Project water service contractors for water and the additional environmental needs mandated by CVPIA and other Federal and State environmental laws and regulations. California's other developed water supplies are similarly over-committed. Federal and State agencies are working together with stakeholders to find solutions to the state's overall water supply shortages. This situation has created strong competition for existing and future water supplies, which makes it uncertain that wetlands water needs for optimum management will be met. The most likely options for achieving wetlands goals appear to be through land retirement, water banking, and conversion from one land use to another.

This report presents findings of the investigations, which will help in forming the basis for future wetlands water supply planning, but it should be noted that this report does not extend to

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recommendations or conclusions. The purpose of the report was to *identify needs and means to provide* adequate and reliable water for Central Valley wetlands. Any specific actions to provide for the Central Valley's wetlands water needs will require cooperation and negotiation among diverse water users and interested parties to balance competing water needs, and are beyond the scope of this report. In summary, this report will tell you what the water needs are, and how they might be met. It is up to the public agencies and other interested parties, including wetlands proponents, to develop specific actions to meet those water needs.

**COMMENTS ON THE AUGUST 2000 DRAFT REPORT**

The August 2000 Draft Report was distributed for review to all the agencies and organizations that contributed information and to other interested parties. Comments on the August 2000 Draft Report were received from two water agencies and several CVHJV participants.

All specific comments noting errors or needed clarification have been addressed by revisions to this report. There were also general comments relating to the way the investigations were conducted, and to issues which were beyond the scope of this report. General comments and responses are presented in Chapter 4 - Findings.