US Army Corps
of Engineers

Los Angeles District

General Investigations

MURRIETA CREEK

FLOOD CONTROL, ENVIRONMENTAL RESTORATION, AND RECREATION

FINAL FEASIBILITY REPORT

SEPTEMBER, 2000

CESPD-ET-P (October 2000) (1105) 1st End
SUBJECT: Murrieta Creek, Riverside County, California Feasibility Report for Flood Control, Ecosystem Restoration and Recreation

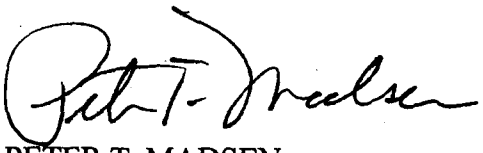
DA, South Pacific Division, Corps of Engineers, 333 Market Street, Room 923
San Francisco, CA 94105-2195 11 October 2000

FOR Deputy Commanding General for Civil Works, ATTN: CECW-B, U.S. Army Corps of Engineers, 441 G Street, NW., Washington, DC 20314-1000

1. I concur in the conclusions and recommendations of the District Commander.

2. The recommended plan provides flood protection, ecosystem restoration and recreational opportunities along Murrieta Creek and in the cities of Murrieta and Temecula. The improvements for the City of Murrieta, which consists of a widened and deepened channel with levees, from Elm Street upstream through the City of Murrieta to Tenaja Road, are a part of the recommended plan. These upstream improvements preserve habitat values from piecemeal development, but this preservation and the limited flood damages prevented do not incrementally justify this reach in accordance with Federal planning procedures.

3. The upstream reach represents a significant separable element of the recommended plan. The non-Federal sponsor requested that the upstream improvements be included in the recommendation for Federal authorization and agreed to provide 100% of their implementation costs, to ensure a continuous and consistent level of flood protection. These locally preferred improvements are included in my recommendation, with the understanding that they must be concurred in by the Headquarters and also approved by the Assistant Secretary of the Army for Civil Works.



PETER T. MADSEN
Brigadier General, U.S. Army
Commanding

EXECUTIVE SUMMARY

General

This Feasibility Report presents the results of a study for flood control along Murrieta Creek with associated components for ecosystem restoration, and recreation. This study was initiated at the request of the Riverside County Flood Control and Water Conservation District following the completion of a positive Expedited Reconnaissance Report [905(b) Analysis] in August 1997. Murrieta Creek is located in Riverside County, California. It is a major tributary of the Santa Margarita River watershed and extends from the unincorporated area of Wildomar, through the cities of Murrieta and Temecula to the confluence with Temecula Creek forming the Santa Margarita River. These cities have been experiencing increasingly frequent flooding events. One of the findings generated by this study was to indicate a Federal interest in providing a solution to flooding problems along Murrieta Creek within the cities of Murrieta and Temecula.

The Problem

Flood Control: The largest known flood in the overall Santa Margarita watershed was in January of 1862, and the second greatest was in February 1884. Other major floods occurred in 1916, 1938, 1943, 1969, 1978, 1980, 1991 1992, and 1993. During the 1978 and 1980 events, the U.S. Army Corps of Engineers staged emergency flood fights, and federal funds were used to restore sections of the existing Murrieta Creek channel that were severely eroded. In January and February of 1993, Riverside County was hit by severe storms resulting in a Presidential Disaster Proclamation. This large flood event resulted in two to six feet of sediment deposition in the Murrieta Creek streambed from Winchester Road south into the "Old Town" area of the city of Temecula. Breakout of floodwaters was caused largely by the magnitude of the event, the vegetation density, and sediment accumulations within the channel that severely reduced flow-carrying capacity. The storm caused over $10 million in damages to public facilities along Murrieta Creek. In addition, the Riverside County Flood Control and Water Conservation District incurred approximately $450,000 and the City of Temecula and the Kemper Corporation expended in excess of $1 million in flood clean-up and facility repair costs.

Flooding problems in the Murrieta Creek watershed are related to inadequate capacity of the existing drainage network, particularly in the "Old Town" area of Temecula. The problem manifests itself as frequent overtopping of the Murrieta Creek channel by floodwaters in a number of channel reaches, flood inundation of structures with attendant damages, and other water-related problems caused by these events, including emergency costs, automobile damage, and traffic disruption.

Ecosystem Degradation: Murrieta Creek has been altered since the late 1800's, and has experienced channelization and some type of flood control since the 1930's. Restoration along the creek banks, within the channel invert and in and around its tributaries and floodplain would not only