



**US Army Corps
of Engineers** ®
Los Angeles District



RIVERSIDE 1 LEVEE SYSTEM
RIVERSIDE COUNTY, CALIFORNIA
NLD SYSTEM ID # 3805010038

PERIODIC INSPECTION REPORT NO 1
GENERALIZED EXECUTIVE SUMMARY

FINAL SYSTEM RATING: UNACCEPTABLE
FINAL RATING DATE: JANUARY 18, 2013

PERIODIC INSPECTION REPORT PREPARED BY TETRA TECH, INC.
FOR THE U.S. ARMY CORPS OF ENGINEERS, LOS ANGELES DISTRICT

SUBMITTED: DECEMBER 2012
INSPECTED: APRIL 5, 2011

EXECUTIVE SUMMARY

This Executive Summary provides an introduction to the periodic inspection, an overview of the system, a summary of the major findings of the periodic inspection, and the overall rating for the system.

1.1 Scope and Purpose of Periodic Inspections

The purpose of the Riverside 1 Levee System periodic inspection is to identify deficiencies that pose hazards to human life or property. The inspection is intended to identify the issues in order to facilitate future studies and associated repairs, as appropriate.

This assessment of the general condition of the levee system is based on available data and visual inspections. Detailed investigation and analysis involving hydrologic design, topographic mapping, subsurface investigations, testing, and detailed computational evaluations is beyond the scope of this levee system inspection.

1.2 System Summary

Riverside 1 Levee System is located in the City of Riverside, in the County of Riverside, in the State of California. Riverside 1 Levee System forms the west/right bank levee (looking downstream) of the Santa Ana River. Riverside 1 Levee System starts immediately upstream of Market Street (Station 276+36) and extends to Station 151+00, which is located approximately 5,000 feet downstream of the Mission Boulevard Bridge (see Figure 1). Riverside 1 Levee System was federally authorized and subsequently constructed by the United States Army Corps of Engineers (USACE). It is now entirely operated and maintained by the Riverside County Flood Control and Water Conservation District (RCFC & WCD). The National Levee Database (NLD) System ID Number for Riverside 1 Levee System is 3805010038.

The RCFC & WCD is the Local Sponsor for the Riverside 1 Levee System.

1.3 Summary of Major Deficiencies Found

The levee system was inspected on April 5, 2011. During the periodic inspection of the system, several deficiencies were noted for which remedial actions are required. Specifically, severe bank erosion from the December 2010 storm flows was found and is currently under the USACE Rehabilitation and Inspection Program (RIP) process for repair. The following main deficiencies were noted during the periodic inspection of the project features:

- Levee Embankments
 - Significant vegetation growth was present within the vegetation-free zone. The vegetation-free zone extends 15 feet outward from both the landward and riverward toes of the levee prism.
 - Significant erosion has occurred along riverward slope, reaching into the extended footprint of the levee foundation and compromising the stability of the levee.

- Significant erosion gullies have formed on both the riverward and landward slopes of the levee, due to concentration of local runoff.
- Up to approximately 75 linear feet of rock has been displaced from the end of the groins.
- Interior Drainage System
 - The inlet of a Reinforced Concrete Pipe (RCP) side-drainage structure was obstructed by debris.
 - The condition of a RCP side-drainage structure has not been verified using videotaping by television camera or other visual-inspection method within the past five years.
 - The grouted rock apron at the outlet of a side-drainage structure is being undermined.

1.4 Overall Rating

The Levee Safety Officer, Los Angeles District, has determined the overall system rating of Riverside 1 Levee to be “Unacceptable.” An “Unacceptable” system rating is defined as:

The Periodic Inspection has identified one (or more) System Components which are rated Unacceptable and require immediate correction. The deficiency (or deficiencies) identified have resulted in an Unacceptable System rating and seriously impair the functioning of the flood protection system and pose unacceptable risk to public safety.

The Local Sponsor will be notified of the overall rating of the levee system by letter with instructions to correct the “Unacceptable” rated items not related to the RIP repair as soon as possible. A public notification will be made regarding this levee system and the periodic inspection rating.



Figure 1. Riverside 1 Levee System