



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



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# **CHINO CREEK 1 LEVEE SYSTEM**

## **SAN BERNARDINO COUNTY, CALIFORNIA**

### **NLD SYSTEM ID # 3805030002**

**PERIODIC INSPECTION REPORT NO. 1**  
**GENERALIZED EXECUTIVE SUMMARY**

**FINAL SYSTEM RATING: UNACCEPTABLE**  
**FINAL RATING DATE: APRIL 16, 2015**

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

SUBMITTED: JANUARY 2011  
INSPECTED: MARCH 25, 2010 BY TETRA TECH AND MARCH 1, 2012 BY USACE

## EXECUTIVE SUMMARY

This Executive Summary provides an introduction to the periodic inspection (PI), an overview of the Chino Creek 1 Levee 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 this 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

The Chino Creek 1 levee system is located in the cities of Chino and Chino Hills upstream of the Prado Basin in San Bernardino County, California. The Chino Creek 1 Levee System runs along the northeast/left bank (looking downstream) of Chino Creek, from approximately Central Avenue at Station 357+00 to a few hundred feet downstream of Flowers Street at Station 281+00. Figure 1 shows the extent of the levee system and the leveed area. This system was built and is owned and operated by the U.S. Army Corps of Engineers (USACE).

### 1.3 Summary of Major Deficiencies Found

The periodic inspection of the Chino Creek 1 Levee System was conducted on March 25, 2010 by Tetra Tech and USACE staff was present. The levee system was re-inspected on March 1, 2012, by USACE staff after significant vegetation was removed from the river and land side slopes of the levee. During the inspection of the system, several deficiencies were noted for which remedial actions are required. The following main deficiencies of the project features were noted during the periodic inspection:

- Levee Embankments
  - Non-Compliant Vegetation Growth: Significant vegetation growth including trees with trunks larger than 2-inches in diameter and shrubs were present within the vegetation-free zone. The vegetation-free zone extends 15 feet outward from both the landward and riverward toes of the levee.
  - Encroachments: An unpermitted 24-inch-diameter CMP and two unpermitted 60-inch-diameter CMPs were found. Permits need to be obtained.
  - Erosion and Bank Caving: Severe riverside erosion and bank caving along the levee system. The low flow channel cuts very close to the levee, causing extreme bank cutting, and erosion is caused by a double barrel storm water outlet.
  - Depressions / Rutting: Ruts identified along the road during the inspection made access along the levee difficult. During storm events it would be difficult to pass

along this road at all. It is likely the emergency access vehicles would be able to navigate this levee with higher vehicle clearance and 4-wheel drive. However, this creates a safety issue for flood-fighting operations.

- Interior Drainage System
  - Foundation of Concrete Structures: Erosion and grouted stone displacement present at the outlet of a side-drainage structure.
  - Culverts/Discharge Pipes: Video inspections of the side-drainage structures or side-drain junction structures provided were not acceptable.
  - Trash racks: One side-drainage structure was missing a trash rack.

#### **1.4 Overall Rating**

The Levee Safety Out-Brief Meeting was held on September 14, 2012. An engineering determination has concluded that the observed deficiencies would prevent the system from performing as intended during the next significant runoff event. Therefore, the Levee Safety Officer (LSO), Los Angeles District, has determined the overall system rating of Chino Creek 1 Levee System to be “Unacceptable.” An “Unacceptable” system rating is defined as:

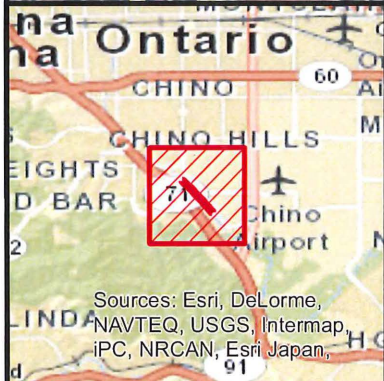
*One or more System Components are rated Unacceptable and require immediate correction. An engineering determination has concluded that the Unacceptable System Components identified seriously impair the functioning of the levee system, would prevent the system from performing as intended, and pose unacceptable risk to public safety.*

USACE Los Angeles District – Asset Management will be notified of the overall rating of the levee system by letter with instructions to correct Critically Unacceptable rated items immediately, Unacceptable rated items as soon as possible, and to correct the Minimally Acceptable rated items within two years so that they do not deteriorate further and become Unacceptable. Because this levee system is rated as “Unacceptable” a public notice will be prepared and coordinated between the USACE and the Local Sponsor. Once the Critically Unacceptable deficiencies are corrected by the sponsor and verified by the USACE, the system rating will be revised to “Minimally Acceptable.”

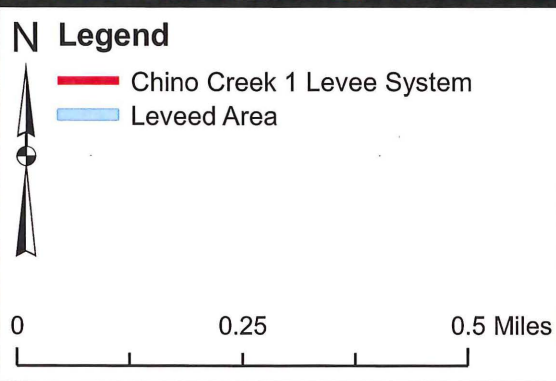




Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community




Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN, Esri Japan, etc.



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**LOCATION AND  
LEVEED AREA MAP**



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Figure 1