



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



**CITY CREEK LEVEE SYSTEM
SAN BERNARDINO COUNTY, CALIFORNIA
NLD SYSTEM ID # 3805010070**

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

**FINAL SYSTEM RATING: UNACCEPTABLE
FINAL RATING DATE: NOVEMBER 6, 2013**

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

SUBMITTED: FEBRUARY 2013
INSPECTED: MARCH 23, 2010, AND AUGUST 31, 2010

EXECUTIVE SUMMARY

This Executive Summary provides an introduction to the periodic inspection, an overview of the City Creek Levee System, a summary of the major findings of the periodic inspection of the City Creek Levee System, and the Overall Levee System Rating.

1.1 Scope and Purpose of this Periodic Inspection

The purpose of the City Creek 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 City Creek 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 City Creek Levee System periodic inspection.

1.2 System Summary

The City Creek Levee System, shown on Figure 1, was federally authorized and constructed. The entire system is a locally operated and maintained flood risk management project. It is comprised of two segments, which are both located along the right/west bank (looking downstream) of City Creek, and total 13,313 feet in length. Segment B extends from the former Atchison, Topeka and Santa Fe (ATSF) Railroad to a point between Interstate 210 (I-210) and the City Creek Diversion Channel, a length of 5,638 feet. Segment B from the former ATSF Railroad to Boulder Avenue was constructed by the United States Army Corps of Engineers (USACE) in 1960. Segment B from Boulder Avenue to about 3,400 feet downstream was constructed by the County of San Bernardino in 1942 and later improved by the USACE in 1960. Segment C extends from the downstream end of Segment B to the Santa Ana River, a length of 7,675 feet. Segment C was federally authorized and constructed by the USACE in 1942. The National Levee Database Number (NLD No.) for City Creek Levee System is 3805010070.

Note that Segment A is considered to be the reach from Nona Avenue to the former ATSF Railroad. It is not considered in the Periodic Inspection Report (PIR) because it is inactive in the Rehabilitation and Inspection Program (RIP). As a result, Segment A was removed from City Creek Levee System. Although Segment A is no longer part of City Creek Levee System, the Segment A Periodic Inspection Report and checklist can be found in Appendix IX.

1.3 Field Inspection and Summary of Major Deficiencies Found

The periodic inspection of the City Creek Levee System was conducted on March 23, 2010, and August 31, 2010. The local sponsor representative met with the inspection team and assisted with granting access along the length of the levee. During the inspection of the levee system, several deficiencies were noted for which remedial actions are required. The following main unacceptable deficiencies of the project features were noted during the inspection:

Levee Embankments

- Segments B and C: Significant vegetation growth (brush, tall grass, and trees greater than 2 inches in diameter) was present within the vegetation-free zone. The vegetation-free zone extends 15 feet from both the landward and riverward toes of the levee.
- Segments B and C: Material excavated from the channel following storm events has been placed on the levee slopes. As a result of this action, the riprap revetment has not been

inspected along intermittent reaches and the riverward slope has been steepened beyond the design slope.

- Segments B and C: The side-drainage structures and a diversion structure are not shown on the as-built drawings (USACE, 1960), were not permitted by the USACE, and could negatively impact the integrity of the levee.
- Segment C: A portion of the riverward slope slid toward the river.
- Segments B and C: Significant erosion occurred along riverward slope, reaching into the extended footprint of the levee foundation and compromising the stability of the levee.
- Segments B and C: Significant erosion gullies have formed on both the riverward and landward slopes of the levee, due to concentration of local runoff.
- Segments B and C: The riprap revetment was not visible in many locations. This is a result of the rock having been buried and/or displaced.
- Segment C: There are no maintenance records which indicate that the toe drains associated with the grouted revetment have been regularly cleaned.

Interior Drainage System

- Segment B: The condition of the pipes has not been verified using a television camera or other visual-inspection method within the past five years.
- Segment C: The sluice gate at the inlet of the diversion channel is inoperable.

1.4 Overall System Rating

The Levee Safety Out-Brief Meeting was held on May 26, 2010. 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 City Creek 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.

The Local Sponsor 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. Additionally, due to the “Unacceptable” rating, the levee system will be removed from the USACE Rehabilitation and Inspection Program. Once the “Critically Unacceptable” deficiencies are corrected by the sponsor and verified by the USACE, the system rating will be revised to “Minimally Acceptable” and the system will be reevaluated for eligibility in the Rehabilitation and Inspection Program.

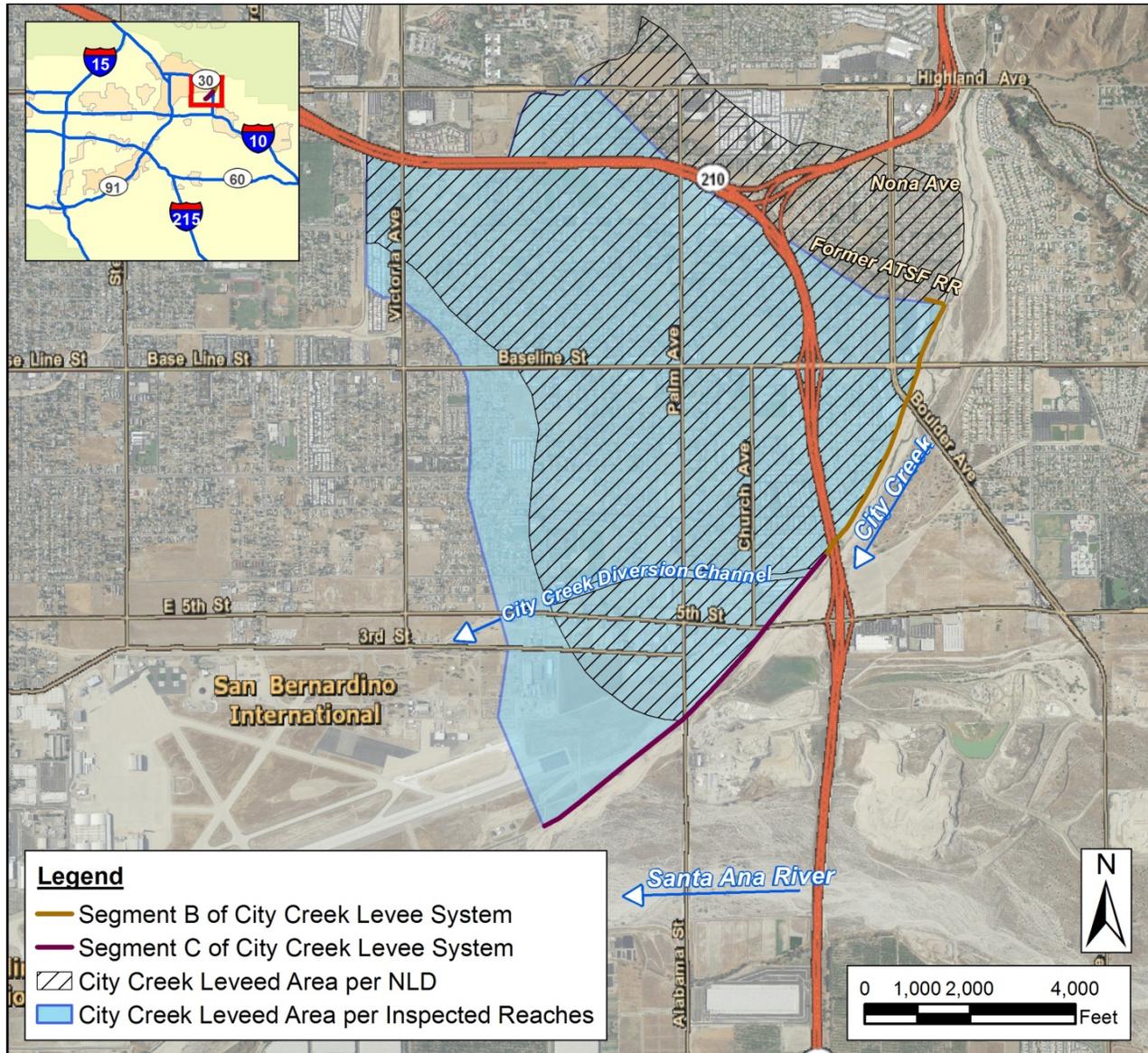


Figure 1: City Creek Levee System