



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



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# **LOS ANGELES RIVER 7 LEVEE SYSTEM**

**LOS ANGELES COUNTY, CALIFORNIA**  
**NLD SYSTEM ID # 3805010078**

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

**FINAL SYSTEM RATING: UNACCEPTABLE**  
**FINAL RATING DATE: AUGUST 26, 2015**

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

SUBMITTED: JULY 2015  
INSPECTED: 23 JULY TO 24 JULY 2014

## EXECUTIVE SUMMARY

URS Group, Inc. (URS) performed Periodic Inspection (PI) No. 1 of the Los Angeles River 7 (LAR7) Levee System for the U.S. Army Corps of Engineers (USACE) Los Angeles District (USACE-SPL). This Executive Summary provides an introduction to the PI, an overview of the LAR7 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 Inspection

The purpose of the PI of the LAR7 Levee System 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.

By their nature, PIs are limited. This assessment of the general condition of the LAR7 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 are beyond the scope of this levee system inspection.

### 1.2 System Summary

The LAR7 Levee System is located in the Cities of Glendale and Los Angeles, in the County of Los Angeles, California. The NLD depicts the LAR7 Levee System (NLD System ID #3805010078) on the left bank (looking downstream) of the Los Angeles River from just north of the confluence of the Burbank Western Channel (Station 412+90.47) within the Los Angeles River (LAR) to just north of Ventura Freeway (State Route 134) (Station 341+06.10), for a total length of 7,184 feet (1.36 miles) measured along the levee system alignment (LSA). The NLD website, however, lists the total length as 1.68 miles. There are a total of 2 bridge crossings within the system.

During the PI, the levee system shown in the NLD was reviewed to identify channel reaches<sup>1</sup>. In discussions with USACE-SPL, it was decided to reduce the extent of the LAR7 Levee System by removing the channel reach at the upstream end of the system, as well as the one at the downstream end of the system. The channel reach that is located between two levee reaches belonging to the LAR7 Levee System was not removed from the system. With the removal of upstream and downstream end channel reaches, the LAR7 Levee System begins at Station 410+00 (at the confluence of the Los Angeles River and Burbank Western Channel [the confluence assumed to be the downstream end of the channel wall between the two]) and ends at Station 372+20. The total length of the LSA is 3,780 feet (0.72 miles). The Location and Leveed Area Map (Figure 1) shows the LSA recommended by this PI and the version that was in the NLD at the outset of this PI.

URS also reviewed the leveed area in the NLD and proposed a modified leveed area based on the revised extent of the LAR7 Levee System recommended by this PI. After discussions with USACE-SPL, it was decided to revise the leveed area as shown in the Location and Leveed Area Map (Figure 1), which also shows the version that was in the NLD at the outset of this PI.

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<sup>1</sup> A channel reach is a reach along the river where the top of the channel slope is not higher in elevation than the ground adjacent to the channel to a significant distance (200 feet or greater).

Whenever the levee system or leveed area is referred to in the PI Report, it should be understood that URS' recommended version of the levee system is being discussed, unless the NLD version is referred to for comparison or correction.

The LAR7 Levee System is a part of the Los Angeles County Drainage Area (LACDA) Project. According to the Operation, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) Manual (USACE-SPL, 1999), the LACDA Project was authorized by the Emergency Relief Appropriation Act of 8 April 1935 and later transferred to the Flood Control Act of 22 June 1936. No agreement for local cooperation has been signed. USACE-SPL is responsible for operating and maintaining the LAR7 Levee System as well as the channel improvements associated with the levee system. Construction of the levee improvements was completed by USACE-SPL in 1939.

### 1.3 Summary of Major Deficiencies Found

A team of five professionals from URS inspected the LAR7 Levee System on 23 and 24 July 2014. An engineer from the USACE-SPL Dam and Levee Safety Section acted as the Site Safety and Health Officer. The levee sponsor, the USACE-SPL Operations Branch, did not participate in the field inspection with the PI team.

Each item on the levee system inspection checklist observed during the site inspection was rated "Unacceptable" (U), "Minimally Acceptable" (M), "Acceptable" (A) or "Not Applicable" (NA) following criteria incorporated in the Levee Inspection System (LIS). During the periodic inspection of the system, any deficiencies ("Unacceptable" or "Minimally Acceptable" observations) were noted for which remedial actions are required. The following deficiencies were noted during the periodic inspection of the LAR7 Levee System features:

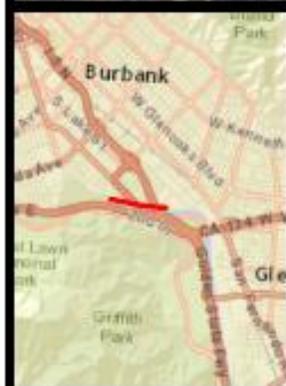
- Levee Embankment
  - Non-compliant Vegetation Growth—Significant vegetation, including trees with trunks up to 36 inches in diameter, were present on the landside of the levee crown throughout the system.
  - Encroachments—Encroachments for which permits were not located were identified; these included fills, power pole stumps, a fence blocking access to the levee crown and an abandoned side drain.
- Interior Drainage System
  - Vegetation and Obstructions—Significant obstruction such as vegetation, debris, or sediment have blocked more than 10% of a culvert opening.
  - Culverts/Discharge Pipes—The interior condition of the pipes has not been verified using television camera videotaping or visual inspection methods within the past 5 years.
  - Flap Gates—Flap gates were found to be missing, unknown operability, concrete sealed, or propped open.
- Flood Damage Reduction Channel:
  - Vegetation and Obstructions—Significant vegetation and shoaling, including trees with trunks up to 36 inches in diameter, was present in the channel throughout the system.
  - Shoaling—Shoaling is well established, stabilized by saplings, brush or other vegetation.
  - Riprap Revetments & Banks—Stone at grade stabilizer appears to be migrating.

#### **1.4 Overall Rating**

The Levee Safety Out-Brief Meeting for the LAR7 Levee System was held on 4 March 2015. Minutes of the meeting, including the PowerPoint presentation slides, are included in Appendix IX. An engineering determination has concluded that the observed deficiencies would prevent the system from performing as intended during the next design flood event. These include the dense vegetation in the channel throughout the reach and no video inspection of pipes. Therefore, the Levee Safety Officer, USACE-SPL, has determined the overall system rating to be “Unacceptable (U).” 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. 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, which in this case is the Operations Branch USACE-SPL, will be notified of the overall rating of the levee system by letter with instructions to correct any 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.”



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**LOCATION AND LEVEED AREA MAP**

**URS** U.S. Army Corps of Engineers Los Angeles District

Figure 1