



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



SAN GABRIEL RIVER 2 LEVEE SYSTEM
LOS ANGELES COUNTY, CALIFORNIA
NLD SYSTEM ID # 3805010062

PERIODIC INSPECTION REPORT NO 1
GENERALIZED EXECUTIVE SUMMARY

FINAL SYSTEM RATING: MINIMALLY ACCEPTABLE
FINAL RATING DATE: SEPTEMBER 26, 2013

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

SUBMITTED: AUGUST 2012
INSPECTED: JANUARY 12-13, 18, 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 this Periodic Inspection

The purpose of the 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 San Gabriel River 2 (SGR2) Levee System, shown on Figure 1, is located in the County of Los Angeles, California, in the State of California. The SGR2 Levee System comprises two levee segments: Segment 2a and Segment 2b. The Los Angeles County Department of Public Works (LACDPW) is the sponsor for the SGR2a levee segment. The US Army Corps of Engineers (USACE) Los Angeles District is the sponsor for the SGR2b levee segment. The total length of levee included in the system is 8.36 miles. The National Levee Database (NLD) System ID Number for SGR2 Levee System is 3805010062.

The SGR2a levee segment runs along the right bank of the San Gabriel River from alongside the Santa Fe Flood Control Basin outlet works, approximately Station 1560+41, to Station 1224+30, located just upstream of the San Gabriel River/San Jose Creek confluence. It is in the cities of El Monte, Arcadia and Irwindale. The SGR2b levee segment runs along the right bank of the San Gabriel River from the downstream end of the SGR2a levee segment at Station 1224+30 to Station 1121+64.14, located just upstream of the Whittier Narrows Flood Control Basin spillway into the San Gabriel River. It is in the cities of Whittier, Pico Rivera, South El Monte and Industry, and in an unincorporated part of Los Angeles County.

The San Gabriel River channel from Santa Fe Flood Control Basin to the Whittier Narrows Flood Control Basin, which includes the SGR2 Levee System, was improved under the general comprehensive plan for flood control and other purposes in the basins of the Los Angeles and San Gabriel rivers and Ballona Creek (as set forth in House Document 838, 76th Congress, third session). The comprehensive plan was approved August 18, 1941 by act of Congress, Public Law 228, 77th Congress, first session (USACE, October 1956).

The USACE Los Angeles District and the Los Angeles County Flood Control District (LACFCD) entered into a Project Cooperation Agreement (PCA) on August 7, 1995. As required by Public Law 99-622, the LACFCD is ultimately responsible for operating and maintaining all the non-federal features of the LACDA and is required to ensure that all features operate as intended during flood events per the PCA. The LACDPW has assumed the functions of the LACFCD.

1.3 Field Inspection and Summary of Major Deficiencies Found

The field inspection for the SGR2 Levee System was conducted on January 12, 13 and 18, 2011. The LACDPW representative met with the inspection team on January 12, 2013. The local sponsors show an active response to operation and maintenance of the project; however, some deficiencies were noted and remedial actions are required. The main system deficiencies are:

Levee Embankments

- **Non-Compliant Vegetation Growth:** The growth of non-compliant vegetation on the riverside and landside slopes of the levee embankment.
- **Encroachments:** The encroachment of side drains, stream gauging stations, utilities, poles, irrigation lines, walls, fences and encampments on the landside slope and near the crown of the levee. The Levee Embankments checklist was used to record (1) any side drain that was shown on available as-built drawings but was not found during the field inspection and for which no approved permit for removal was found and (2) any side drain that was found during the field inspection but is not shown on the as-built drawings nor permitted by the USACE (this may include side drains where changes have occurred, such as change in pipe material, change in diameter/size, or fewer or more pipes/conduits). Side drain encroachments are important because they may have been removed or installed using unacceptable methods that could cause seepage and erosion along the pipe/conduit or leakage of water and backfill into the pipe/conduit. A total of 22 side drain encroachments were identified.
- **Erosion/Bank Caving:** Erosion on the landside and riverside slope and crown, typically caused by irrigation or drainage runoff from the crown.
- **Depressions/Rutting:** Depressions and ruts on the landside and riverside slope and at invert of the river channel.
- **Animal Control:** Animal burrows on the landside and riverside slope, crown and river channel bottom.
- **Culverts/Discharge Pipes:** See Culverts/Discharge Pipes under the Interior Drainage System heading for details.
- **Riprap Revetments & Bank Protection:** Displaced riprap revetment on the riverside slope.
- **Revetments other than Riprap:** Cracked grouted riprap with exposed earthen levee.

Interior Drainage System

- **Vegetation and Obstructions:** Vegetation and debris obstructing drainage structures.
- **Culverts/Discharge Pipes:** Documentation of the interior condition of the pipes (via video or visual inspection methods) was not provided.
- **Sluice/Slide Gates:** Sluice/slide gates structures were not operated by the LACDPW (local sponsor) and also were not inspected because the structures were immersed under water.
- **Flap Gates/Flap Valves/Pinch Valves:** Missing, inoperable and propped open flap gates. Due to inaccessibility of some flap gates, their operability could not be verified.

- **Revetments other than Riprap:** Cracking and undermining of the revetment at drainage outlet structures.

Flood Damage Reduction Channels

- **Shoaling (Sediment deposition):** Sediment deposited on the channel invert facilitating vegetation growth and obstructing flow in the channel.
- **Flap Gates/Flap Valves/Pinch Valves:** See Flap Gates/Flap Valves/Pinch Valves under the Interior Drainage System heading for further details.
- **Revetments other than Riprap:** See Revetments other than Riprap under the Interior Drainage System for further details.

In addition to the Periodic Inspection, a verification of existence of project features such as floodwalls, levee embankment, weep holes, subdrain risers, interior drainage inlets/outlets, slope protection material and access ramps was performed. Several discrepancies were found. Many of these were likely due to modifications to the system since the construction of the items for which documentation is available. Several side drains appear to have been added since original construction and are not shown on the as-built drawings. The data sheets in the *Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual, Los Angeles County Drainage Area, California* (USACE, December 1999) need to be updated.

URS presented an out-brief concerning Periodic Inspection No. 1 to the Los Angeles District Levee Safety Officer, reviewers of the draft report, and other interested USACE personnel. The USACE Los Angeles District has determined the overall system rating for the SGR2 Levee System as described in section 1.4 below.

1.4 Overall System Rating

The Levee Safety Officer, Los Angeles District, has determined the overall system rating of San Gabriel River 2 Levee System to be “Minimally Acceptable.”

A Minimally Acceptable System is where one or more items are rated as Minimally Acceptable or one or more items are rated as Unacceptable and an engineering determination concludes that the Unacceptable items would not prevent the segment/system from performing as intended during the next significant runoff event.

The Local Sponsors will be notified of the overall rating of the levee system by letter with instructions to correct the “Unacceptable” rated items immediately, and correct the “Minimally Acceptable” rated items within two years so that they do not deteriorate further and become “Unacceptable.”

SAN GABRIEL RIVER 2 LEVEE SYSTEM
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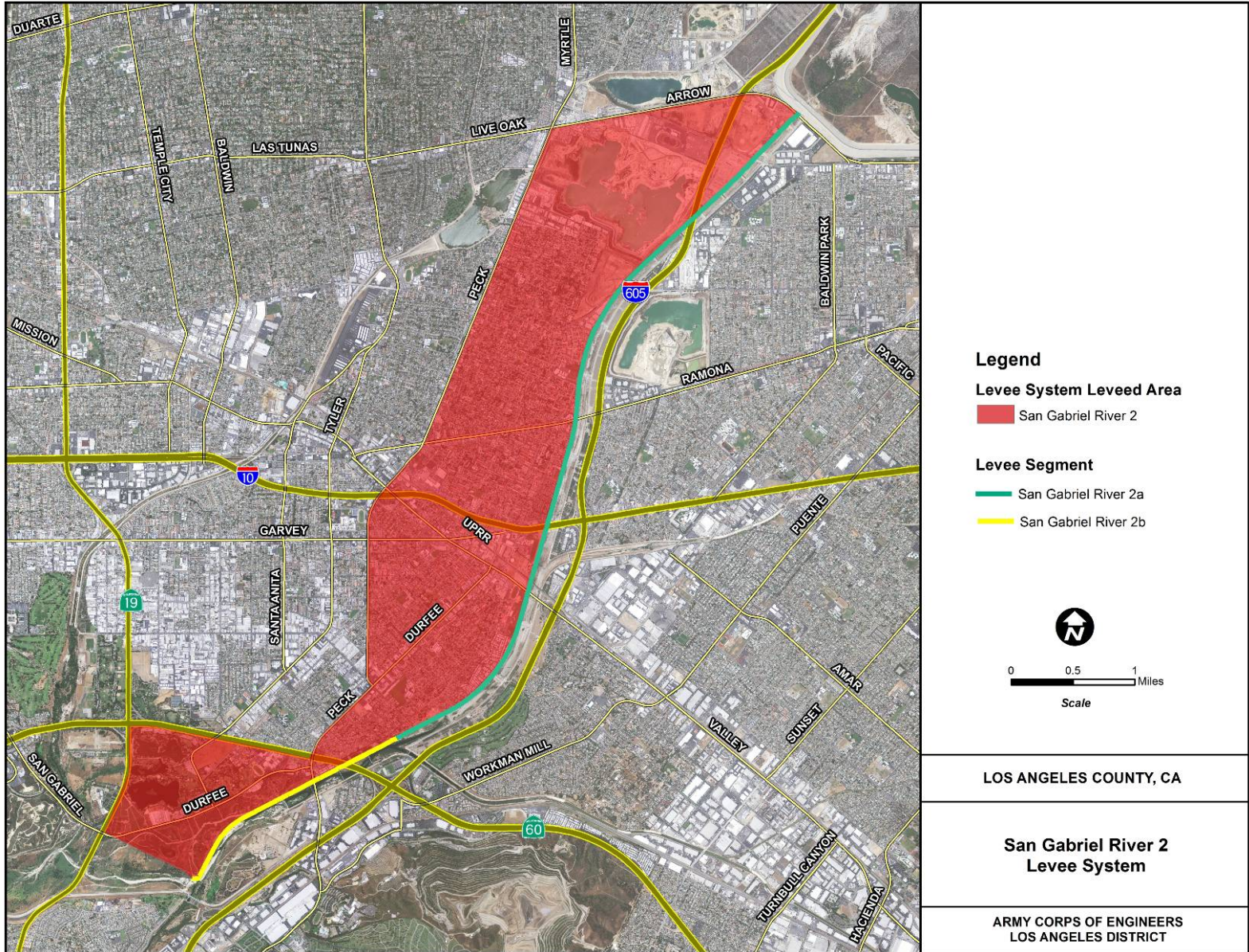


Figure 1. San Gabriel River 2 Levee System
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