



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



RIO HONDO UPPER 4 LEVEE SYSTEM
LOS ANGELES COUNTY, CALIFORNIA
NLD SYSTEM ID # 3805010104

PERIODIC INSPECTION REPORT NO 1
GENERALIZED EXECUTIVE SUMMARY

FINAL SYSTEM RATING: MINIMALLY ACCEPTABLE
FINAL RATING DATE: JANUARY 23, 2014

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

SUBMITTED: OCTOBER 2013
INSPECTED: MARCH 15, 2012 (RHU4A); FEBRUARY 28, 2012 (RHU4B)

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 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 Rio Hondo channels are a unit of the Los Angeles County Drainage Area (LACDA) project. The RHU4 Levee System is located in the Cities of El Monte and South El Monte, in Los Angeles County, California. The total length of the system is about 14,545 feet (2.75 miles).

The RHU4 Levee System runs along the left (east) bank (looking downstream) of the Rio Hondo Upper channel and is divided into two levee segments, the Rio Hondo Upper 4A (RHU4A) Segment and the Rio Hondo Upper 4B Segment (RHU4B). The RHU4A Segment begins downstream of the Union Pacific Railway Bridge at Station 735+45 and extends down to Station 638+00, upstream of Rosemead Boulevard Bridge, for a length of about 9,745 feet (1.85 miles). The RHU4B Segment continues from Station 638+00 down to the Rio Hondo basin inlet at Station 590+00 for a length of approximately 4,800 feet (0.91 miles).

The RHU4 Levee System is a concrete-lined, trapezoidal channel with a subdrainage system below the invert. According to as-built plans, the RHU4 Levee System includes 6 bridge crossings, and 11 culverts (8 side-drainage structures) that penetrate through the levee and outlet into the upper Rio Hondo channel. Five additional culverts (5 side-drainage structures) and 3 floodwalls were observed during the field inspection.

RHU4 Levee System was federally authorized and subsequently constructed by the US Army Corps of Engineers (hereafter the 'USACE') between 1954 and 1957. The RHU4A Segment is operated and maintained by the Los Angeles County Department of Public Works (LACDPW). The RHU4B Segment is operated and maintained by the USACE, Los Angeles District.

1.3 Field Inspection and Summary of Major Deficiencies Found

The field inspection for the RHU4A Levee Systems was conducted 15 March 2012. The main system deficiencies are:

Levee Embankments

- **Non-Compliant Vegetation Growth:** Vegetation (including large trees) was encountered on the landside slope of the RHU4A Segment.
- **Encroachments:** Much of the RHU4A Segment has changed since original construction. Encroachments observed during the site inspection include modification of the landside

levee embankment, either with the addition of retaining walls or hardening of the levee landside slope with concrete; two floodwalls up to 5 feet high on the riverside crest; private property owners who have added retaining walls and built terraces into the levee; and four side drainage structures have been constructed.

Interior Drainage System

- **Culverts/Discharge Pipes:** The condition of the pipes have not been verified using television camera videotaping or visual inspection methods within the past five years.

The field inspection for the RHU4B Levee Systems was conducted 12 February 2012. The main system deficiencies are:

Levee Embankments

- **Unwanted Vegetation Growth:** Non-compliant vegetation growth (including large trees) was observed along the landside slope and toe.
- **Encroachments:** Unauthorized/unpermitted structures observed during the site inspection include a side drainage structure, a floodwall, and nursery encroachments.
- **Animal Control:** Animal burrows ranging in size from 6 to 12 inches in diameter were observed along the landside slope.

Interior Drainage System

- **Culverts/ Discharge Pipes:** The condition of the pipes have has not been verified using television camera videotaping or visual inspection methods within the past five years.

Flood Damage Reduction Channels

- **Vegetation and Obstructions:** A 75 feet long by 15 feet wide “island” of heavy vegetation growth may be damaging the concrete invert.

An out-brief concerning Periodic Inspection No. 1 was presented 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 RHU4A 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 Rio Hondo Upper 4 Levee 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 Sponsor will be notified of the overall rating of the levee system by letter with instructions to correct the “Unacceptable” rated items as soon as possible, and correct the “Minimally Acceptable” rated items within two years so that they do not deteriorate further and become “Unacceptable.”



Figure 1. Rio Hondo Upper 4 Levee System