



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



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# **OAK STREET DRAIN RIGHT BANK 2 LEVEE SYSTEM**

**RIVERSIDE COUNTY, CALIFORNIA  
NLD SYSTEM ID # 3805030011**

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

**FINAL SYSTEM RATING: MINIMALLY ACCEPTABLE**

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

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

SUBMITTED: MARCH 2015  
INSPECTED: JULY 8, 2014

## EXECUTIVE SUMMARY

This Executive Summary provides an introduction to the periodic inspection, an overview of the Oak Street Drain Right Bank 2 (OSDRT2) Levee System, and a summary of the major findings of the periodic inspection of the OSDRT2 Levee System.

### 1.1 Scope and Purpose of Periodic Inspections

The purpose of the OSDRT2 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 OSDRT2 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 OSDRT2 Levee System is located on the right/east bank of the Main Street Drain, the right/east bank of the Oak Street Drain, and the left/south bank of Temescal Wash in the state of California, in Riverside County, in the city of Corona (Figure 1.1). The OSDRT2 Levee System was federally authorized and subsequently constructed by the U.S. Army Corps of Engineers, Los Angeles District (USACE LAD). Construction of the OSDRT2 Levee System was completed in March 1994 (USACE LAD 1994). The OSDRT2 Levee System is now entirely operated and maintained by Riverside County Flood Control and Water Conservation District (RCFC&WCD), which is governed by the Riverside County Board of Supervisors. The National Levee Database Number (NLD No.) for the OSDRT2 Levee System is 3805030011. The OSDRT2 Levee System has a levee embankment, a trapezoidal channel lined with grouted stone, a side-drainage structure, and various appurtenant features.

The OSDRT2 Levee System forms the right/north bank of the downstream most segment of the Main Street Drain, and extends from Main Street Drain (MSD) Station 14+98 to the confluence with the Oak Street Drain at MSD Station 10+00, a distance of approximately 498 feet. The OSDRT2 Levee System also forms the right/east bank of the Oak Street Drain, and extends from the confluence with Main Street Drain at Oak Street Drain (OSD) Station 27+00 to the confluence with Temescal Wash at OSD Station 20+00, a distance of 700 feet. At the confluence with Temescal Wash, the OSDRT2 Levee System wraps around to form the left/south bank of Temescal Wash from the confluence with Oak Street Drain at Temescal Wash (TW) Station 126+00 upstream, where it ties into the existing channel bank at TW Station 128+80, a distance of 280 feet.

It should be noted that currently in the NLD, the OSDRT2 Levee System extends an additional 83 feet upstream of MSD Station 14+98 along Main Street Drain. There is text on the USACE LAD as-built drawings (USACE LAD 1992) for the USACE LAD-designed levee to tie into the existing berm at MSD Station 14+98. It is assumed the USACE LAD investigated the tie-in at the time of design and determined it to be adequate; however, there is no information on file at the USACE LAD, RCFC&WCD, or at the City of Corona regarding this embankment. It is unknown who designed and constructed the embankment, but it is assumed to have been designed and constructed by Western Municipal Water District (WMWD), because the embankment appears to retain sewage in the basins and not to provide flood-risk reduction to the surrounding areas. It was

noted during a USACE LAD site inspection on October 2, 2014 (USACE LAD 2014), that the non-federal portions are of a lower elevation than the federal portions and the grouted stone revetment demarcates the transition between federal and non-federal reaches. It was concluded the embankment does not function as a levee, but as part of the retention basins. The embankment is lower than the Oak Street Drain levee and will allow all ponding from behind the Oak Street Drain levees back into the Main Street Drain. Therefore, the 83 feet of embankment along Main Street Drain upstream of MSD Station 14+98 was not included as part of this periodic inspection and it is recommended to be removed from the NLD.

Not only did the original levee alignment in the NLD extend further upstream, but it also extended further downstream. The OSDRT2 Levee System extended an additional 103 feet upstream of TW Station 128+80 along Temescal Wash Channel. This 103 feet of channel was designed by RCFC&WCD in 1971 (RCFC&WCD 1971). There is text on the USACE LAD as-built drawings (USACE LAD 1992) for the USACE LAD-designed levee to join the existing berm at TW Station 128+80. There is a non-leveed condition behind the additional 103 feet of channel. As a result, the 103 feet of channel was not included in this inspection and it is recommended that it also be removed from the NLD.

### **1.3 Summary of Major Deficiencies Found and Subsequent Repairs**

The periodic inspection of the OSDRT2 Levee System was conducted on July 8, 2014 and RCFC&WCD staff was present. During the inspection of the levee system, “Unacceptable” deficiencies were noted for which remedial actions were required; however, most of these issues were subsequently corrected by the RCFC&WCD (RCFC&WCD 2014). The following deficiency is the only remaining “Unacceptable” rated deficiency:

- Interior Drainage System:
  - Vegetation and Obstructions: The inlet to the 18-inch-diameter CMP was completely obstructed by sediment.

### **1.4 Overall Rating**

The Levee Safety Out-Brief Meeting was held on October 1, 2014. No engineering determination was made at the out-brief meeting if the deficiencies observed during the periodic inspection would prevent the system from performing as intended during the next flood event; however, in a subsequent Memorandum for Record (MFR [USACE LAD 2014]), the USACE LAD recommended that the levee system be rated “Minimally Acceptable” provided the recommendations provided in the MFR were implemented. The recommendations in the MFR were implemented as discussed in the RCFC&WCD letter to the USACE LAD (RCFC&WCD 2014).

A “Minimally Acceptable” system rating is defined as, “One or more items are rated Minimally Acceptable or one or more items are rated 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, not to exceed two years, and to correct the “Minimally Acceptable” rated items so that they do not deteriorate further and become “Unacceptable.”

OAK STREET DRAIN RIGHT BANK 2 LEVEE SYSTEM  
 FINAL PERIODIC INSPECTION REPORT NO.1



Figure 1.1