



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



SAN DIEGO RIVER 2 LEVEE SYSTEM

SAN DIEGO COUNTY, CALIFORNIA
NLD SYSTEM ID # 3805010007

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

FINAL SYSTEM RATING: UNACCEPTABLE
FINAL RATING DATE: MARCH 7, 2016

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

SUBMITTED: SEPTEMBER 2015
INSPECTED: JANUARY 21-22, 2015

EXECUTIVE SUMMARY

This Executive Summary provides the scope and purpose of the periodic inspection, an overview of the San Diego River 2 (SDR2) Levee System, a summary of the major findings of the periodic inspection, and the overall levee system rating.

1.1 Scope and Purpose of Periodic Inspection

The purpose of the SDR2 Levee System periodic inspection is to identify deficiencies that pose hazards to human life or property, and to determine design adequacy relative to present day criteria. 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 SDR2 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 SDR2 Levee System periodic inspection.

1.2 System Summary

The SDR2 Levee System is an earthen levee located on the north bank (right bank [looking downstream]) of the San Diego River in San Diego, California. This levee was federally authorized and subsequently constructed with earthen fill by the United States Army Corps of Engineers, Los Angeles District (USACE SPL). The San Diego River and Mission Bay Improvement Project is a combined flood risk reduction and coastal navigation project. This project included realignment of the San Diego River, construction of ocean jetties, and dredging within Mission Bay under multiple contracts. Realignment of the San Diego River began with the construction of ocean jetties. Construction of the San Diego River floodway was initiated under two construction contracts which incorporated channel widening, riverside slope protection, and various drainage structures on both banks. Based on as-built drawings, the alignment of the right bank levee is between Station 58+40.74 and 217+00.

Several development projects have occurred after the San Diego River and Mission Bay Improvement Project. Development projects included the construction of multiple bridge crossings (Sunset Cliffs Blvd., Mission Bay Drive, and Interstate 5) and Sea World Drive. The landside of the right bank levee has been filled at grade or above the existing maintenance road between Station 109+60 and 184+90. Between Station 58+40.74 and 109+60, Sunset Cliffs Blvd. and Mission Bay Drive were constructed. Downstream from Station 58+35.74, the right bank levee ties into the middle jetty. Due to significant differences between present day conditions and the as-built drawings, it was recommended to inspect the as-built right bank levee (Station 58+40.74 to 217+00). It is unknown if the maintenance road was built as a bike path. Development adjacent to the right bank levee has modified the continuous levee into a series of alternating channel and levee reaches. The SDR2 Levee System extent and leveed area were revised on March 27, 2015 (USACE 2015) to include levee and channel reaches between Station 58+40.74 and 179+60 (Figure 1). The channel reach is located between Station 109+60 and 179+60 and corresponding inspection observations were retained in this report. During completion of this report, it is recommended that the channel reach between Station 109+60 and 179+60 be removed from the NLD because this

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reach of the project is a channel. Future levee inspections conducted by USACE SPL Levee Safety Program will only include the SDR2 Levee System between Station 58+40.74 to 109+60, a distance of approximately 5,119 feet (0.97 miles). The levee reach from Station 182+00 to 209+40 will be designated as San Diego River 3 (SDR3) Levee System.

The SDR2 Levee System is operated and maintained by the City of San Diego (Local Sponsor). The Operation and Maintenance (O&M) Manual, San Diego River and Mission Bay Project, Pacific Ocean to Mission Valley, San Diego County, California (USACE 1956) included a detailed description of acceptance by the Local Sponsor of operation and maintenance responsibilities on December 3, 1953. The National Levee Database (NLD) number for the SDR2 Levee System is 3805010007.

1.3 Summary of Major Deficiencies Found

The periodic inspection of the SDR2 Levee System was conducted on January 21-22, 2015 by the USACE San Francisco District (SPN) along with staff from USACE SPL and the Local Sponsor. Levee safety issues identified during the periodic inspection are further discussed below.

- Levee Embankment
 - Encroachments – Encroachments without documented permits include two undocumented levee penetrations within the levee reaches, and development adjacent to the landside levee slope.
- Interior Drainage
 - 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 Valves/Pinch Valves – Flap gates are deteriorated and/or damaged to the point they need to be replaced.
- Flood Damage Reduction Channels
 - Shoaling – A large area of shoaling was observed at the mouth of the river. The channel cross-sectional area is reduced up to 66% which reduces flow capacity.

1.4 Overall Rating

The Levee Safety Officer (LSO) Out-Brief Meeting for the SDR2 Levee System was held on June 3, 2015 at the USACE SPL headquarters, with USACE SPN and representatives of the City of San Diego participating by webinar. An engineering determination has concluded that multiple observed deficiencies would prevent the system from performing as intended during the next significant runoff event. Therefore, the Levee Safety Officer, Los Angeles District, has determined the overall system rating to be “Unacceptable.” 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.

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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 SPL and the Local Sponsor. Once the Critically Unacceptable deficiencies are corrected by the Local Sponsor and verified by the USACE SPL, the system rating will be revised to "Minimally Acceptable."

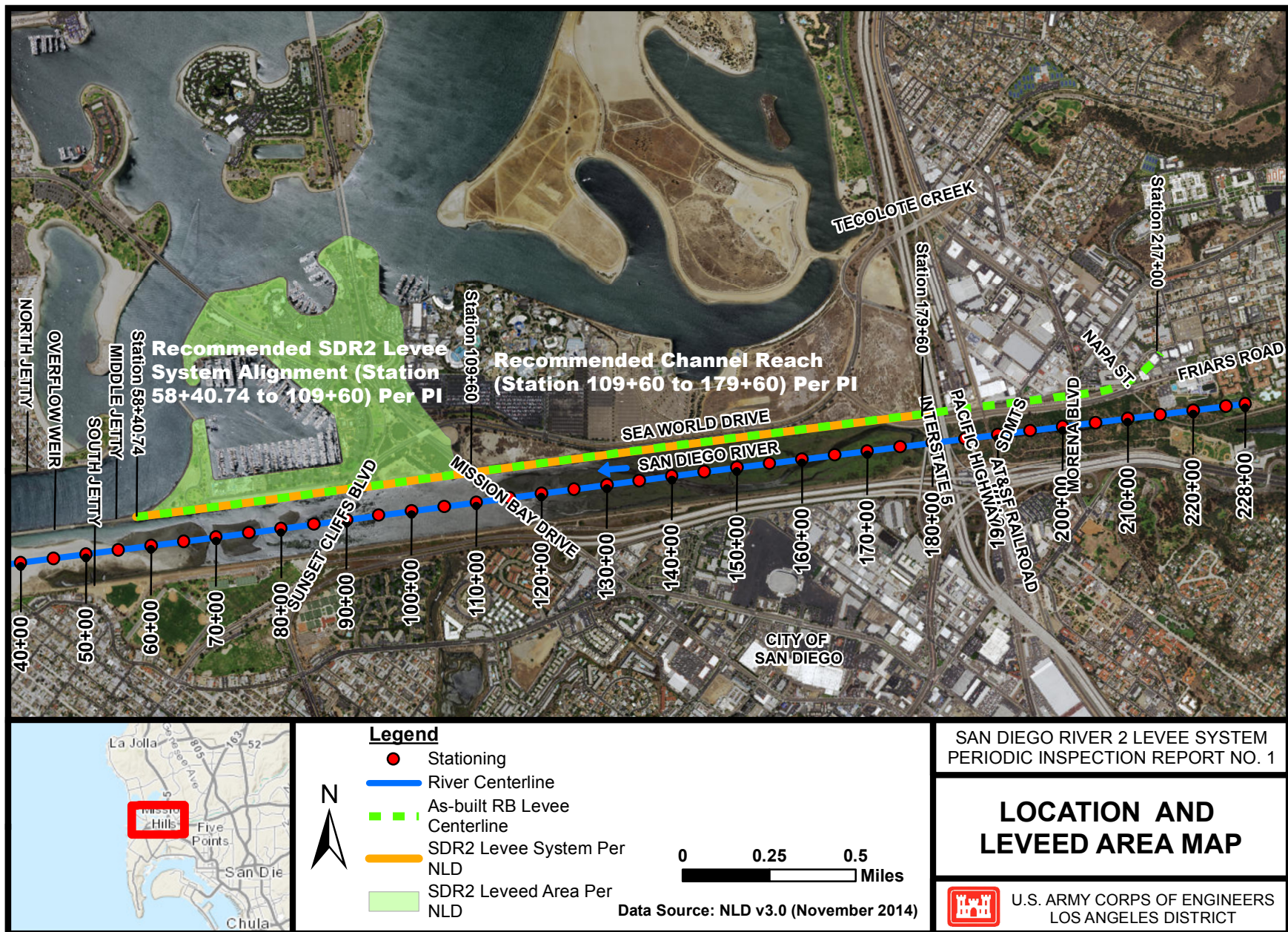


Figure 1