US Army Corps of Engineers ®
Los Angeles District

SAN JACINTO RIVER / BAUTISTA CREEK LEVEE SYSTEM

RIVERSIDE COUNTY, CALIFORNIA
NLD ID # 3805010019

PERIODIC INSPECTION REPORT NO 1
GENERALIZED EXECUTIVE SUMMARY
FEBRUARY 2013

FINAL RATING: MINIMALLY ACCEPTABLE
FINAL RATING DATE: 5 FEBRUARY 2013

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

SUBMITTED: JANUARY 2013
INSPECTED: 10 AUGUST 2010 AND 13 JUNE 2012

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 Periodic Inspections

The purpose of the San Jacinto River/Bautista Creek 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

San Jacinto River/Bautista Creek Levee System is located in the City of San Jacinto, County of Riverside, California. This system was built by the United States Army Corps of Engineers (USACE), and is operated and maintained by the Riverside County Flood Control and Water Conservation District (RCFC & WCD). San Jacinto River/Bautista Creek Levee System includes four segments: Bautista Creek Channel, Bautista Creek Levee, San Jacinto River Levee Segment 1a, and San Jacinto River Levee Segment 1b.

The Bautista Creek Channel segment includes the left/west half of the Bautista Creek Channel from Florida Avenue (BCC Station 99+40) to the channel outlet (BCC Station 26+00), a distance of 7,340 feet. Approximately 6,138 feet of channel is trapezoidal, 200 feet of channel transitions between a trapezoidal and rectangular cross-sectional geometry, and 1,002 feet of channel is rectangular. From BCC Station 99+40 to BCC Station 34+98, the channel is lined with reinforced concrete. From BCC Station 34+98 to BCC Station 26+00, the channel is lined with grouted stone revetment. Bautista Creek Channel also includes the earthen landward slope behind the concrete channel and the grouted stone revetment.

The Bautista Creek Levee segment includes the setback levee located along Bautista Creek which was originally constructed in 1962 by the USACE (USACE, 1962a). It is setback from the left/west bank of what was Bautista Creek and is an earthen levee faced with ungrouted stone revetment on the riverward slope. Bautista Creek Levee extends from Florida Avenue (Bautista Creek Levee [BCL] Station 94+60) to just downstream of Cedar Avenue (BCL Station 32+48), a distance of 6,212 feet.

San Jacinto River Levee Segment 1a and San Jacinto River Levee Segment 1b are located along the left/west bank San Jacinto River and are earthen levees faced with grouted stone revetment on the riverward slope. San Jacinto River Levee Segment 1a extends from the downstream end of Bautista Creek Channel (Station 197+65) to the Meridian Street Channel confluence (Station 128+50), a distance of 6,915 feet. San Jacinto River Levee Segment 1b extends downstream from

the Meridian Street Channel confluence (Station 128+50) to Olmstead Street (Station 0+80), a distance of 12,770 feet.

A location map is shown on Figure 1.

1.3 Summary of Major Deficiencies Found

Bautista Creek Levee, San Jacinto River Levee Segment 1a, and downstream San Jacinto River Levee Segment 1b were inspected on August 10, 2010. Bautista Creek Channel was incorporated into San Jacinto River/Bautista Creek Levee System in May 2012 and was inspected on June 13, 2012. During the inspection of the system, deficiencies were noted for which remedial actions are required. The following main deficiencies were noted during the inspection of Bautista Creek Channel, Bautista Creek Levee, San Jacinto River Levee Segment 1a, and Segment 1b. The respective segment is noted for each major deficiency.

- General Items for All Flood Damage Reduction Segments/Systems
  - Bautista Creek Channel: The Operation and Maintenance Manual is missing. The District should coordinate with the USACE to obtain a manual prior to the next periodic inspection.
- Levee Embankment
  - Bautista Creek Channel, Bautista Creek Levee, San Jacinto River Levee Segment 1a, and San Jacinto River Levee Segment 1b: Unauthorized encroachments such as material preventing inspection, items inhibiting operations, maintenance and emergency efforts and access, unpermitted side-drain-junction structures and side-drainage structures.
  - Bautista Creek Levee: Erosion and bank caving were evident, along with loss of access road base material and pavement due to bank caving.
  - Bautista Creek Levee, San Jacinto River Levee Segment 1a, and San Jacinto River Levee Segment 1b: Depressions deeper than 6 inches were observed on the landward levee slopes and on the levee crown due to surface water runoff erosion and animal burrows.
  - Bautista Creek Channel: The debris shields located at the outlets of the toe drains are missing. In addition, there are no maintenance records which indicate that the subdrainage system has been regularly cleaned. The subdrainage system is part of the channel, but is included here for reporting purposes.
- Interior Drainage
  - Bautista Creek Levee and San Jacinto River Levee Segment 1b: There is debris blocking more than 10 percent of the opening of a side-drainage structure along Bautista Creek Levee and a side-drainage structure along San Jacinto River Segment 1b.
  - San Jacinto River Segment 1a: A joint associated with a Reinforced Concrete Box (RCB) is separating. Backfill material behind the RCB wall panel is being lost through the joint. Joint is no longer watertight.
  - Bautista Creek Channel, Bautista Creek Levee, San Jacinto River Levee Segment 1a, and San Jacinto River Levee Segment 1b: The condition of the side-drainage structures, side-drain-junction structures, and diversion structure located during the periodic inspection has

not been verified within the past five years using television-camera videotaping or visual inspection methods.

- Flood Damage Reduction Channel
  - Bautista Creek Channel: Willows located at the downstream end of Bautista Creek Channel have impaired the channel flow capacity. Removal of the trees is required to re-establish flow capacity.

Bautista Creek Channel: An unauthorized Reinforced Concrete Pipe (RCP) side-drain-junction structure was added that could have a negative impact on the overall integrity of the channel. The side-drain-junction structure is not shown on the USACE construction drawings nor was it permitted by the USACE.

1.4 Overall Rating

The Levee Safety Officer, Los Angeles District, has determined the overall system rating of San Jacinto River/Bautista Creek Levee System to be Minimally Acceptable. A Minimally Acceptable system rating is defined as:

> *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 flood 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."

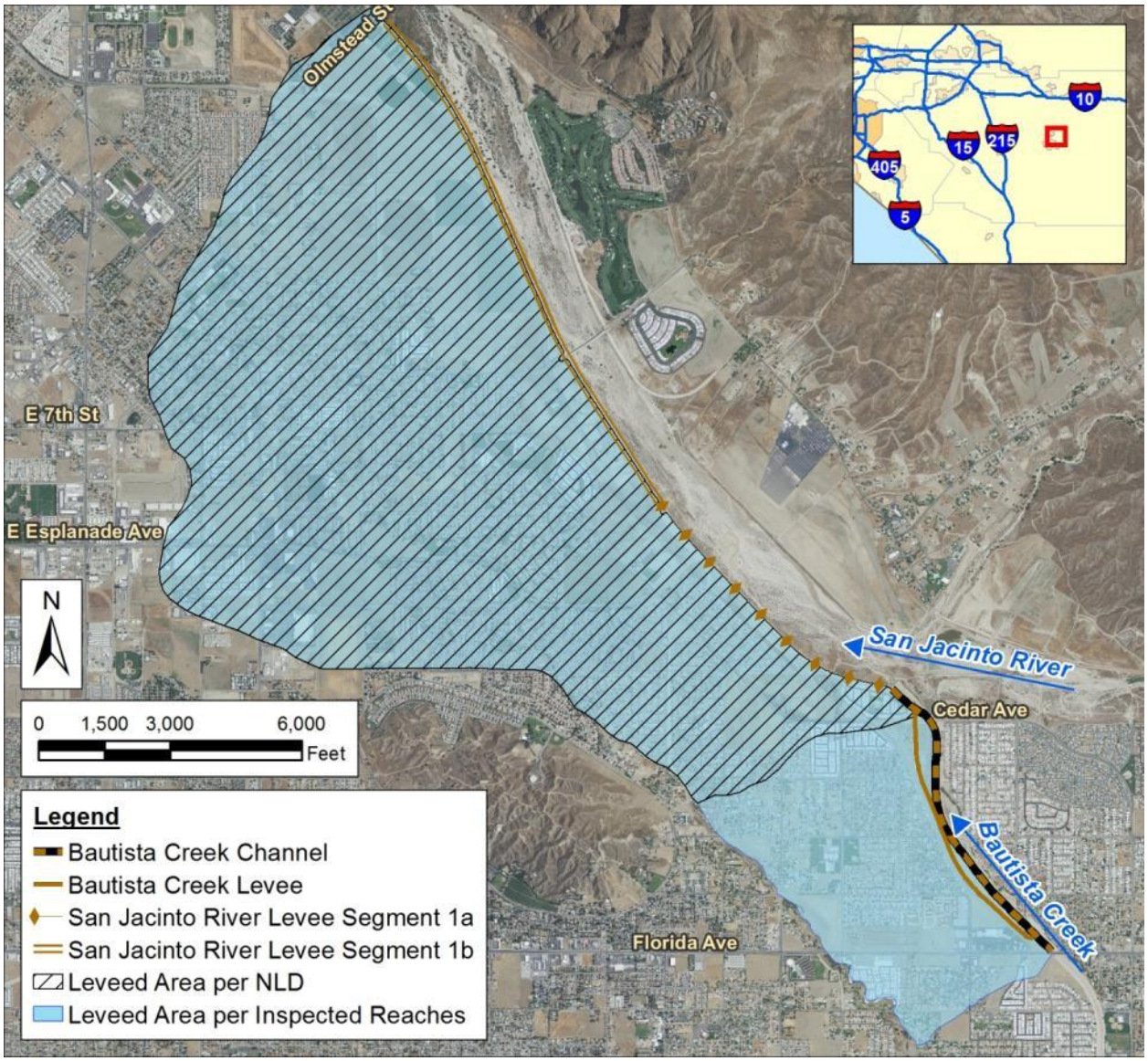

Figure 1. San Jacinto / Bautista Creek Levee System