US Army Corps of Engineers ®
Los Angeles District

SWEETWATER RIVER 1 LEVEE SYSTEM

SAN DIEGO COUNTY, CALIFORNIA
NLD SYSTEM ID # 3805010003

PERIODIC INSPECTION REPORT NO. 1
GENERALIZED EXECUTIVE SUMMARY

FINAL SYSTEM RATING: MINIMALLY ACCEPTABLE

FINAL RATING DATE: SEPTEMBER 30, 2015

PERIODIC INSPECTION REPORT PREPARED BY THE 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 28-29, 2015

EXECUTIVE SUMMARY

This Executive Summary provides the scope and purpose of the periodic inspection, an overview of the Sweetwater River 1 (SWR1) Levee System, a summary of major findings from this periodic inspection, and the overall levee rating.

Stations referenced in this report are based on stationing adopted in the as-built drawings which run along the centerline of Sweetwater River (USACE, 1988b, 1990a, and 1990b).

1.1 Scope and Purpose of Periodic Inspection

The purpose of the SWR1 Levee System Periodic Inspection (PI) 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 SWR1 Levee System is based on available data and visual inspections. Detailed investigation and analysis involving hydrologic and hydraulic design, topographic mapping, subsurface investigations, testing, and detailed computational evaluations are beyond the scope of this PI.

1.2 System Summary

The SWR1 Levee System was constructed as part of the Sweetwater River Channel Improvement Project. The Sweetwater River Channel Improvement Project was a part of a combined highway and flood control project that also constructed State Highway Route 54.

The SWR1 Levee System was federally authorized and jointly designed and constructed by the United States Army Corps of Engineers (USACE) and the California Department of Transportation (Caltrans). It is now operated and maintained by the San Diego County Flood Control District (SDCFCD). The SWR1 Levee System has a system name of Sweetwater River 1 and a segment name of Sweetwater River 1 in the National Levee Database (NLD). Its NLD System ID number is 3805010003 and its NLD Segment ID number is 3804010088.

The SWR1 Levee System is located along the left/south bank of Sweetwater River in San Diego County as shown in Figure 1. It lies in both the cities of and National City and Chula Vista. The SWR1 Levee System has an upstream system limit at station 185+38.37 and a downstream system limit at station 69+90. From station 185+38.37 to station 175+50, SWR1 is strictly a flood damage reduction channel. From station 175+50 to station 69+56, SWR1 includes a reach of levee with a corresponding leveed area. The SWR1 Levee System is approximately 12,040 feet (2.28 miles) long.

Thirteen drainage structures were constructed as part of the Sweetwater River Channel Improvement Project for the SWR1 Levee System for interior drainage purposes. One of these drainage structures consists of three 66-inch reinforced concrete pipes (RCPs). One drainage structure, with six 36-inch RCPs, was constructed by the State Highway Route 54 Project. Two unpermitted drainage structures were constructed since original project completion. Along its alignment, the SWR1 Levee System flood reduction channel has five channel stabilizers and three drop structures. The SWR1 Levee System has 13 bridge crossings, five utility crossings, and three pipeline crossings.

1.3 Summary of Major Deficiencies Found

A team of three professionals from USACE, San Francisco District (SPN) inspected the SWR1 Levee System on 28 and 29 January 2015. Representatives from the SDCFCD accompanied the inspection team. An engineer from USACE, Los Angeles District (SPL) acted as the Site Safety and Health Officer.

Each item on the levee system inspection checklist observed during the site inspection was rated "Unacceptable" (U), "Minimally Acceptable" (M), "Acceptable" (A) or "Not Applicable" (NA) following criteria incorporated in the Levee Inspection System (LIS). During the periodic inspection of the system, any deficiencies ("Unacceptable" or "Minimally Acceptable" observations) were noted for which remedial actions are required. The following major deficiencies were noted during the periodic inspection of the SWR1 Levee System features:

- Levee Embankments
    - Non-Compliant Vegetation Growth: Significant vegetation was observed on the both the riverside and landside slopes consisting of trees and bushes. Trees observed had trunk diameter as large as 36 inches.
- Interior Drainage System
    - Flap Gates / Flap Valves / Pinch Valves: A flap gate was found to be broken.

SDCFCD is currently addressing deficiencies noted during the periodic inspection of the SWR1 Levee System.

1.4 Overall Rating

The Levee Safety Out-Brief Meeting for the SWR1 Levee System was held on May 13, 2015 at the USACE-SPL headquarters, with representatives of the local sponsor. An engineering determination has concluded that the observed deficiencies would not prevent the systems from performing as intended during the next significant runoff event. Therefore, the Levee Safety Officer, Los Angeles District, has determined the overall rating of the SWR1 Levee System to be "Minimally Acceptable."

> *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.

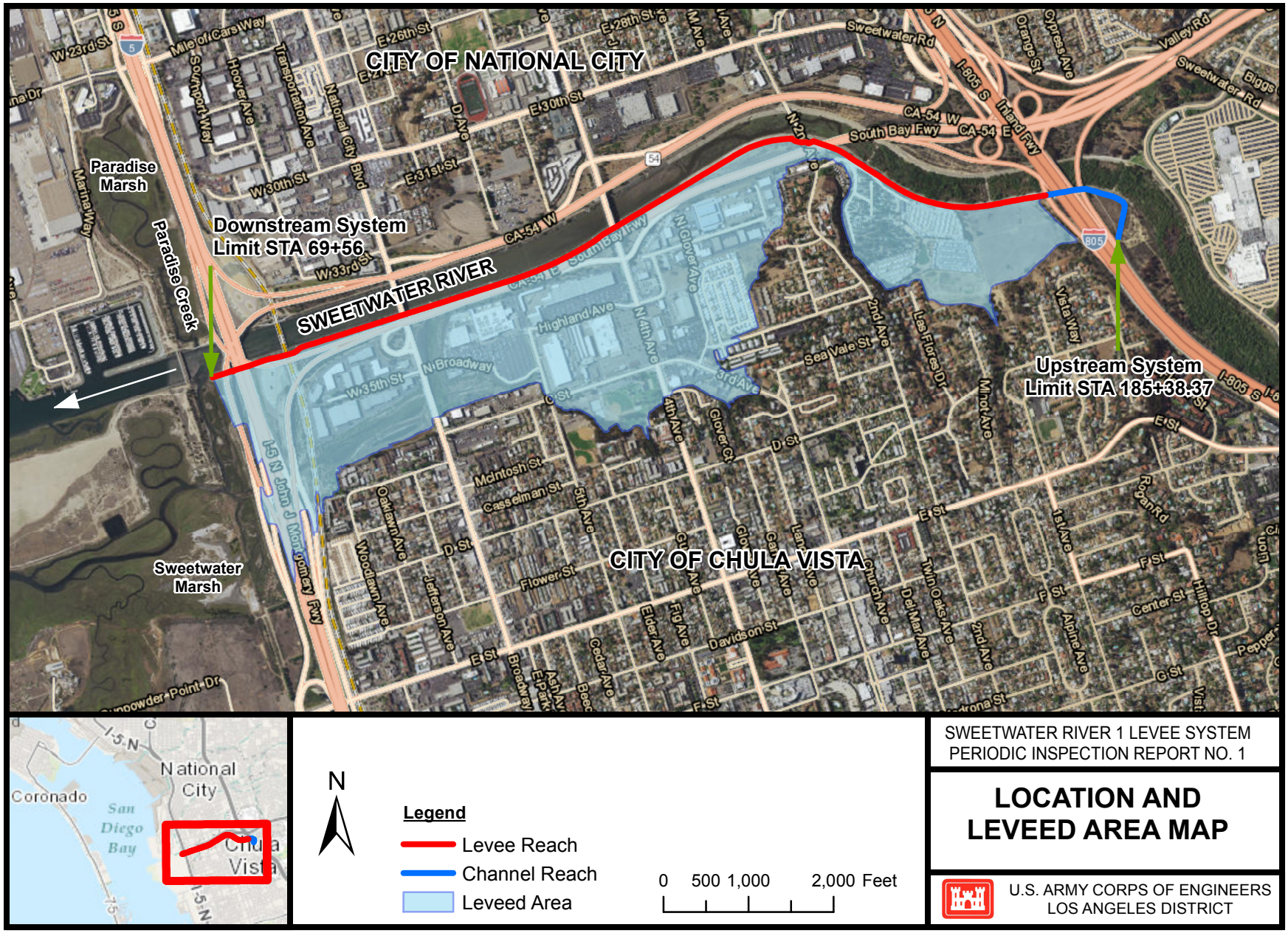
CITY OF NATIONAL CITY
CITY OF CHULA VISTA
SWEETWATER RIVER
Paradise Marsh
Sweetwater Marsh
Paradise Creek
Downstream System Limit STA 69+56
Upstream System Limit STA 185+38.37
W 23rd St
W 30th St
W 33rd St
E 30th St
E 31st St
Sweetwater Rd
South Bay Fwy
CA-54 W
CA-54 E
I-805 S
Inland Fwy
Valley Rd
Orange St
Cypress Ave
Mile of Cars Way
Marina Way
Highland Ave
N Broadway
W 35th St
Sea Vale St
Lee Flores Dr
Vista Way
Minot Ave
Glover Ct
Mcintosh St
Casselman St
Woodlawn Ave
Jefferson Ave
Flower St
Davidson St
Elder Ave
Fig Ave
Cedar Ave
Church Ave
Del Mar Ave
Twin Oaks Ave
Alpine Ave
Center St
Hilltop Dr
Rogan Rd
Broadway
E St
F St
G St
5th Ave
4th Ave
3rd Ave
2nd Ave
1st Ave
I-5 N John J Montgomery Fwy
Gunpowder Point Dr
National City
Coronado
San Diego Bay
Chula Vista
N
Legend
Levee Reach
Channel Reach
Leveed Area
0 500 1,000 2,000 Feet
SWEETWATER RIVER 1 LEVEE SYSTEM
PERIODIC INSPECTION REPORT NO. 1
LOCATION AND LEVEED AREA MAP
U.S. ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT

Figure 1