

**Report to Congress for Future Water Resources Development (WRRDA 7001) Submission  
Package**

Proposal Name: San Diego River 1, 2, and 3 Levee System Assessment and Feasibility Study

Submission Date: 07/23/2017

Proposal ID Number: 55b8aad6-849e-46f3-9f6c-ed6b3c860d03

Purpose of Proposal: There have been substantial modifications to the San Diego River Levee System since construction was completed in 1958. The USACE recently inspected the Levee System and documented the modifications in a Periodic Inspection Report (PIR), completed in 2015. The City, as the Primary Sponsor, is proposing the development of a Feasibility Study to assess the potential for re-authorizing the project with a level of flood protection consistent with the current system conditions, as well as addressing habitat and recreation within the Project area. Construction adjacent to, and within the levee prism since the project was originally completed has changed the level of flood protection provided by the system. In addition, shoaling has occurred at the mouth of the San Diego River, which has also altered the flood protection provided by the system. Finally, there has been substantial growth of vegetation within the channel, which has habitat value. These and other changes to the Project require substantial permitting and capital construction modifications to restore the system to an 'as-constructed' condition. Preliminary assessments indicate that the system, in its present condition, may provide flood protection that is consistent with current USACE guidelines. A study is needed to determine if the project can be reauthorized to accommodate some or all of the changed conditions that have occurred since the project was originally constructed. The proposed study supports the USACE mission to provide flood risk management, navigation, ecosystem and habitat preservation and restoration, and active and passive recreation opportunities for the public. Please see the attachment for additional discussion on this topic. There are substantial Section 404 permitting issues associated with potential modifications to the Project, as well as required permitting from other agencies.

*1. Administrative Details*

**Proposal Name: San Diego River 1, 2, and 3 Levee System Assessment and Feasibility Study**

**by Agency: City of San Diego**

**Locations: CA**

**Date Submitted: 07/23/2017**

**Confirmation Number: 55b8aad6-849e-46f3-9f6c-ed6b3c860d03**

*Supporting Documents*

<b>File Name</b>	<b>Date Uploaded</b>
Supplemental Documentation.pdf	07/23/2017
Location-map-SDR1-SDR2-SDR3.pdf	07/23/2017

**2. Provide the name of the primary sponsor and all non-Federal interests that have contributed or are expected to contribute toward the non-Federal share of the proposed feasibility study or modification.**

Sponsor	Letter of Support
City of San Diego(Primary)	<p>The San Diego River Levee System (Project) is an important part of the City’s flood control infrastructure, and plays a vital role in protecting the City’s residents from flood damages. The City is the local sponsor of this federally constructed project, responsible for operation and maintenance of the system. The Project has undergone physical changes since it was originally completed. There are several changed conditions within the watershed effecting the Project. The City is seeking the USACE assistance in determining the best approach to maintain Federal status of this important infrastructure asset. The City strongly desires for the Project to remain in the Federal Rehabilitation Program, but the approach to resolve existing encroachments and deficiencies identified in the 2015 Periodic Inspection Report (PIR) is unclear. The City would like to partner with the USACE to study the project and determine the most appropriate plan to ensure an appropriate level of flood protection, protect and restore the ecosystem, protect and restore recreation uses and maintain federal status of the levee system. The City will provide the necessary resources, including staff time and funding, for the completion of this project.</p>

**3. State if this proposal is for a feasibility study, a modification to an authorized USACE feasibility study or a modification to an authorized USACE project. If it is a proposal for a modification, provide the authorized water resources development feasibility study or project name.**

Feasibility Study

***4. Clearly articulate the specific project purpose(s) of the proposed study or modification. Demonstrate that the proposal is related to USACE mission and authorities and specifically address why additional or new authorization is needed.***

There have been substantial modifications to the San Diego River Levee System since construction was completed in 1958. The USACE recently inspected the Levee System and documented the modifications in a Periodic Inspection Report (PIR), completed in 2015. The City, as the Primary Sponsor, is proposing the development of a Feasibility Study to assess the potential for re-authorizing the project with a level of flood protection consistent with the current system conditions, as well as addressing habitat and recreation within the Project area. Construction adjacent to, and within the levee prism since the project was originally completed has changed the level of flood protection provided by the system. In addition, shoaling has occurred at the mouth of the San Diego River, which has also altered the flood protection provided by the system. Finally, there has been substantial growth of vegetation within the channel, which has habitat value. These and other changes to the Project require substantial permitting and capital construction modifications to restore the system to an 'as-constructed' condition. Preliminary assessments indicate that the system, in its present condition, may provide flood protection that is consistent with current USACE guidelines. A study is needed to determine if the project can be reauthorized to accommodate some or all of the changed conditions that have occurred since the project was originally constructed. The proposed study supports the USACE mission to provide flood risk management, navigation, ecosystem and habitat preservation and restoration, and active and passive recreation opportunities for the public. Please see the attachment for additional discussion on this topic. There are substantial Section 404 permitting issues associated with potential modifications to the Project, as well as required permitting from other agencies.

5. To the extent practicable, provide an estimate of the total cost, and the Federal and non-Federal share of those costs, of the proposed study and, separately, an estimate of the cost of construction or modification.

	Federal	Non-Federal	Total
<b>Study</b>	\$1,500,000	\$1,500,000	\$3,000,000
<b>Construction</b>	\$0	\$0	\$0

**Explanation (if necessary)**

The purpose of the study will be to support, on a technical basis, demonstrate that the existing modifications to the levee system are consistent with Corps guidelines, and are consistent with a continued federal interest in the project. A successful study will also substantiate that no further capital construction modifications to the levee system are needed. Therefore, there are no construction costs shown.

***6. To the extent practicable, describe the anticipated monetary and nonmonetary benefits of the proposal including benefits to the protection of human life and property; improvement to transportation; the national economy; the environment; or the national security interests of the United States.***

The Periodic Inspection Report (PIR) identified several modifications to the levee system that will require substantial capital improvement projects to return the levee system to an ‘as-constructed’ condition. These capital projects may not be consistent with current Corps regulatory guidelines, and may also be inconsistent with habitat and coastal recreation uses associated with the Project. The study will benefit the public by providing a comprehensive assessment and determination of the best approach to provide flood risk management, ecosystem protection and restoration, wetland and habitat protection, maintain water quality and provide for passive and active recreation opportunities for the public. Monetary benefits will include the elimination of the currently anticipated capital and maintenance projects. These include: construction of a flood wall, and dredging approximately 1 million cubic yards of material from the floodway, or modification of an existing side-weir. These costs are expected to be approximately \$8 million. It will also be important to accommodate flood risk management without disturbing the substantial habitat that has developed in the bed of the San Diego River. To maintain the original hydraulic capacity of the system, substantial removal of wetland areas would be required. A re-study of the system, with current hydrology and a more robust hydraulic analysis may reveal multi-benefit options that could support flood risk management and habitat and water quality objectives.

**7. Does local support exist? If 'Yes', describe the local support for the proposal.**

Yes

### **Local Support Description**

This application is being submitted by the City of San Diego. The City is the local project sponsor, and fully supports the submission of this application. There are no other local or regional agencies directly involved with the project.

**8. Does the primary sponsor named in (2.) above have the financial ability to provide for the required cost share?**

Yes

# Primary Sponsor Letter of Support

(As uploaded)

## Supplemental Documentation.pdf

*The proposed project supports the Corps mission in the following areas:*

- *Section 404 of the Clean Water Act*
- *Section 10 of the Rivers and Harbors Act*
- *Emergency Response under PL 84-99*
- *Civil Works Program under the Water Resources Development Act (WRDA)*

#### ***Section 404 of the Clean Water Act***

*Substantial vegetation has accumulated in the River since improvements were completed in the 1950's. Vegetation is dense in the reach from Interstate 5 east to the project terminus. The Manning's roughness factor for the original design of this section was 0.04. A roughness coefficient that would represent current conditions is estimated to be 0.08. To maintain the as-constructed level of flood protection, the existing vegetation would need to be substantially removed. An objective of this project will be to determine if there are alternatives to maintain the existing vegetation while also providing the desired level of flood risk management.*

#### ***Section 10 of the Rivers and Harbors Act***

*The Rivers and Harbors Act regulates the excavation and fill and condition of navigable waters of the US. Shoaling has occurred at the mouth of the River since construction of the levees was completed. This shoaling has degraded the as-constructed conveyance capacity of the system. The proposed study will assess options to dredging the shoaled material, including the feasibility of a sand-bypass system, to forestall future accumulation of material. The study would assess the impacts of both dredge and non-dredge options on this navigable waterway.*

#### ***Emergency Response under PL 84-99***

*The Rehabilitation Program is very important to the City of San Diego in the future operation of the Levee System. The City anticipates the need for Federal assistance for flood fighting during extreme events, as well as to assist in repairs to the levees should they be damaged during a flood. A primary purpose of this project is to ensure that the Levee System remains in the Rehabilitation Program. The project will explore options for making the corrective actions noted in the Periodic Inspection that are the most economical, provide the highest level of protection, and provide for habitat, water quality and recreation improvements.*

#### ***Civil Works Program and Water Resource Development Act***

*The Civil Works program supports the protection and restoration of the nation's waters. These objectives are achieved while providing flood damage reduction, flood risk management, disaster preparation and response, recreation, navigation, ecosystem restoration. The City is requesting planning assistance in response to a Periodic Inspection under the levee program. The Levee System provides flood protection, but also has important passive and active recreation elements with the trail system on the levees, and the beach that has developed at the river mouth. The middle river levee supports navigation for the entrance to Mission Bay, and the River is classified as a navigable water. Finally, there are ecosystem restoration opportunities for riparian and nearshore habitats. Each of these objectives will be balanced as a part of the proposed project.*

# Map Document

(This is as uploaded, a blank page will show if nothing was submitted)

**Location\_map\_SDR1\_SDR2\_SDR3.pdf**



**N**

**Legend**

- SDR 1 Levee System
- Leveled Area

0 0.25 0.5 Miles

Source: National Levee Database

**SAN DIEGO RIVER 1  
LEVEE SYSTEM**

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**LOCATION MAP**

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**U.S. ARMY CORPS OF ENGINEERS  
LOS ANGELES DISTRICT**

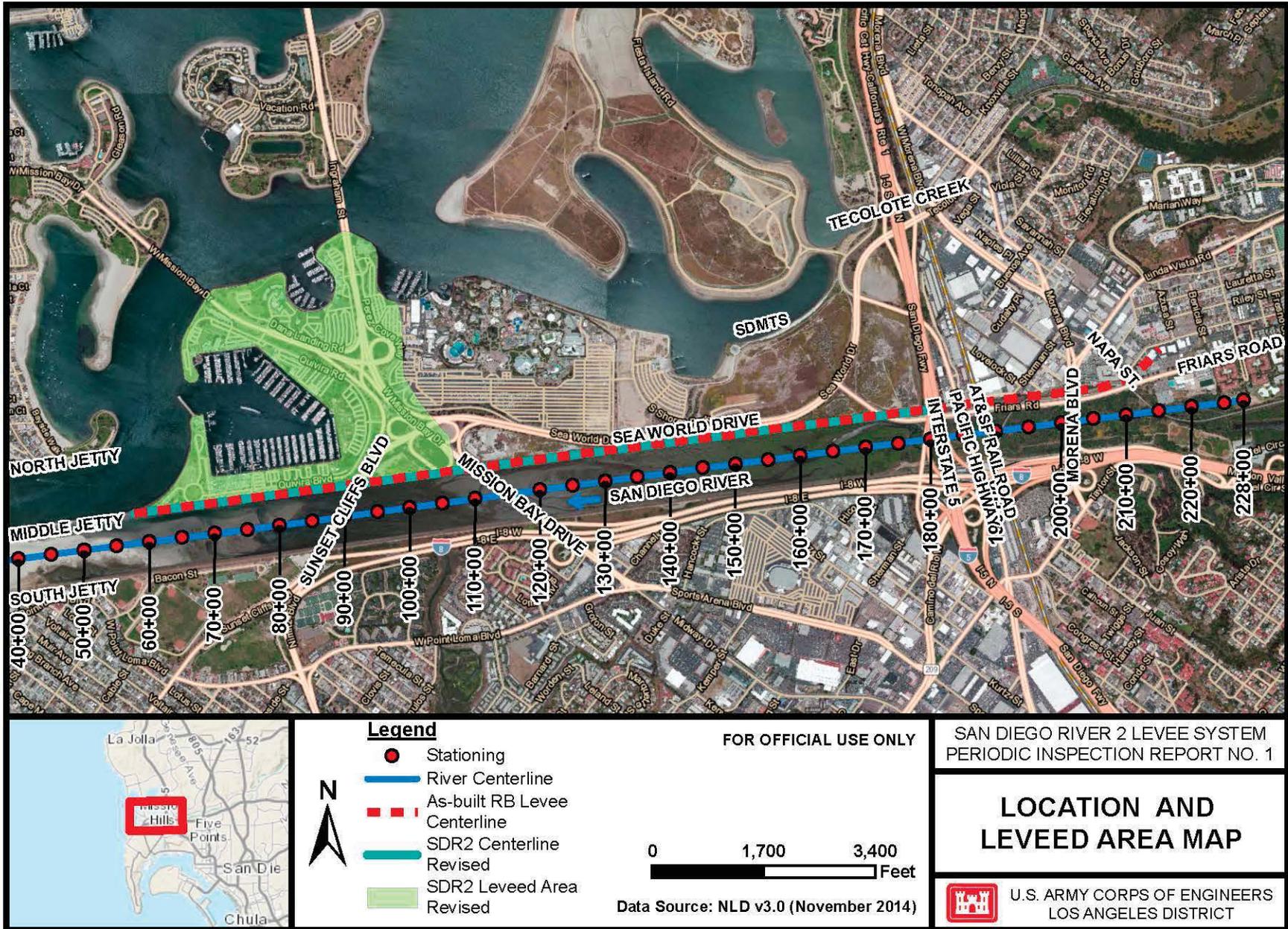


Figure 1.1

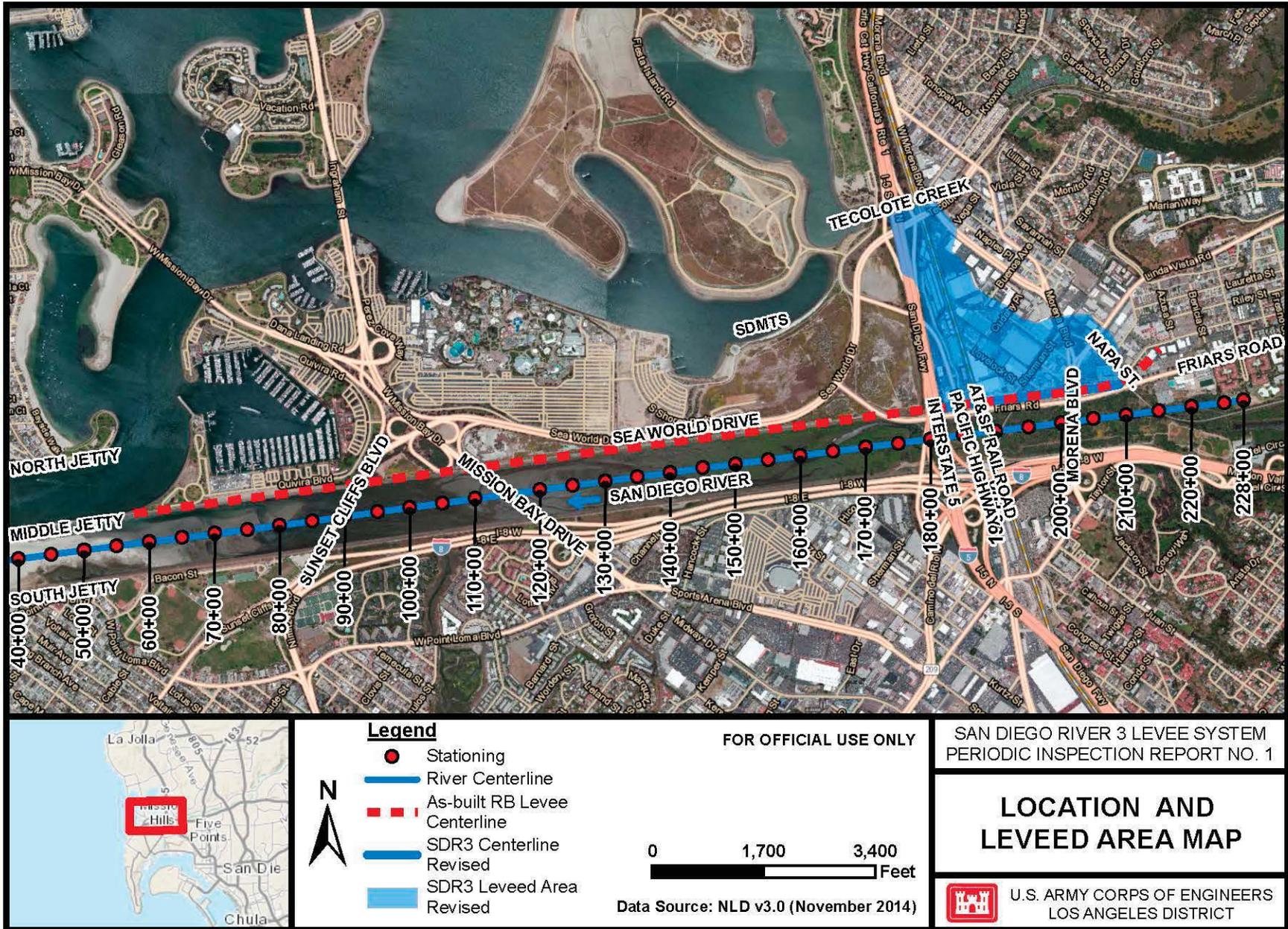


Figure 1.2