



Imperial Highway Green Infrastructure Project

Funding Program

Fiscal Year 2023 – 2024

Santa Monica Bay J2/J3 and Central Santa Monica Bay Watersheds

Project Lead: LASAN

Kevin Ho, Acting Civil Engineer



Project Overview

The Imperial Highway Green Infrastructure Project adds new green infrastructure and street highway improvements to Imperial Highway between California Street and Dockweiler State Beach. The project will benefit the City of Los Angeles, the City of El Segundo and multiple DACs that are adjacent to the project. Drywells and bioswale medians will be installed to capture, reuse and recycle stormwater runoff from the adjacent neighborhoods, and remove stormwater pollutants, including sediments, metals, bacteria, and trash before reaching Dockweiler State Beach. Street trees will also be installed within the center median which will help reduce pollutants, increase shade and decrease the heat island effect. The projects green infrastructure will help to alleviate flooding at the intersection of Imperial Highway and Main Street that occurs during light to moderate storms. This will help reduce slow traffic and the possibility of an accident during and after storm events. In addition to enhancing water quality the Project will also provide safe pedestrian and bicycle access to the beach and Los Angeles International Airport facilities for all the surrounding communities.

- Primary: 92% zinc, Secondary: 100% trash
- Project Status: Feasibility
- SCW funding requested for Planning, Design, Construction, O&M
- Total Funding Requested \$5,232,000



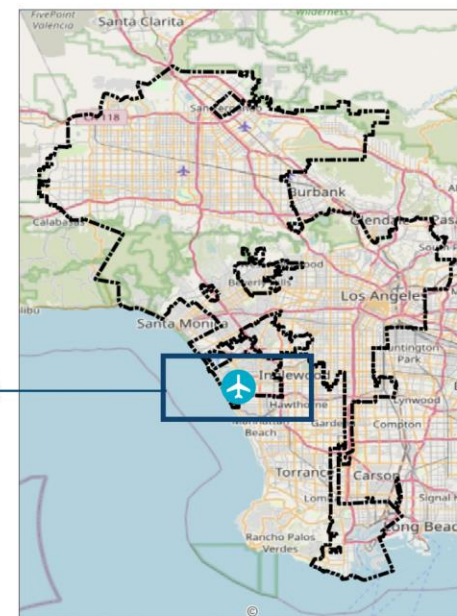
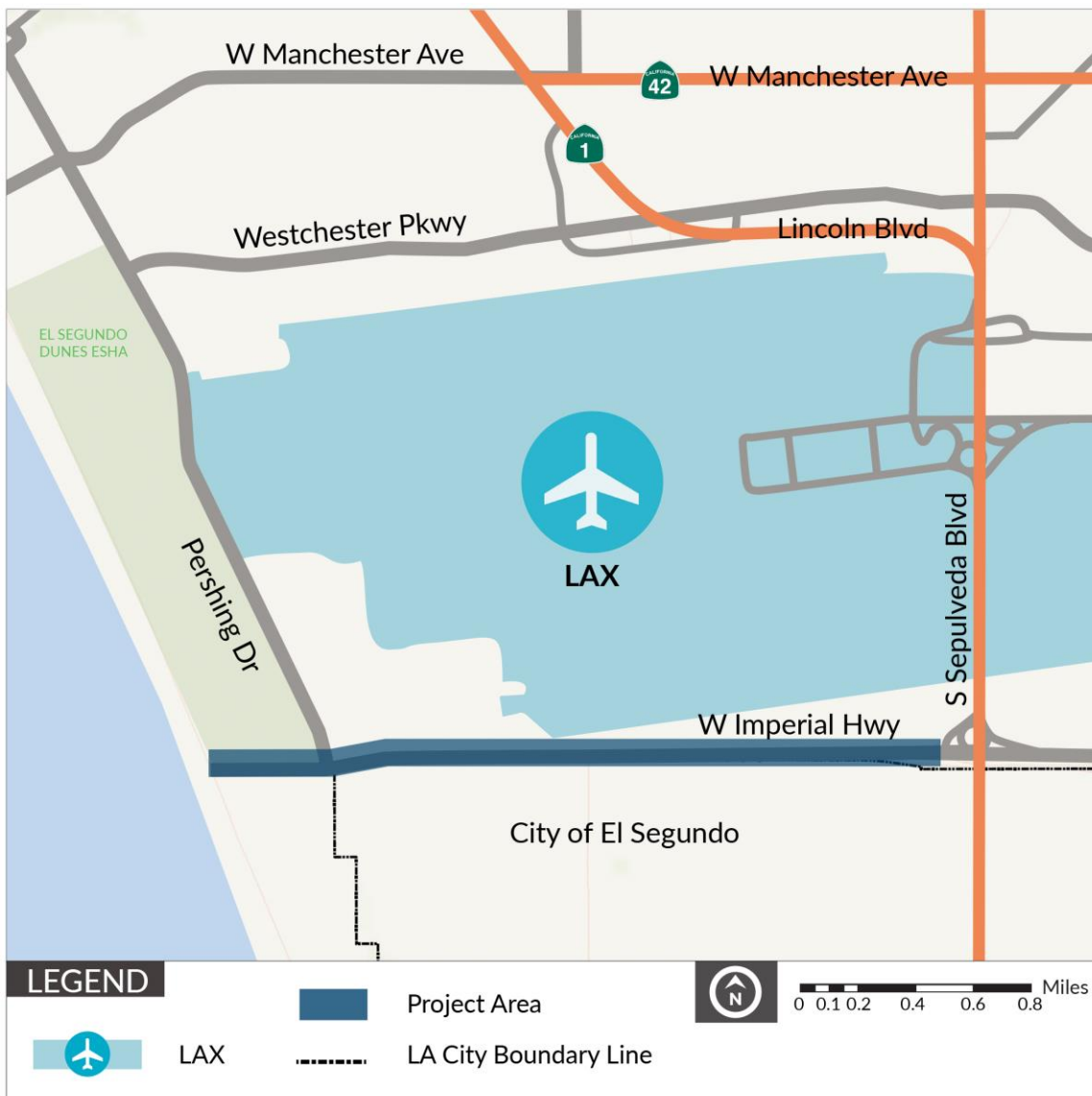


Watershed Area





Project Location



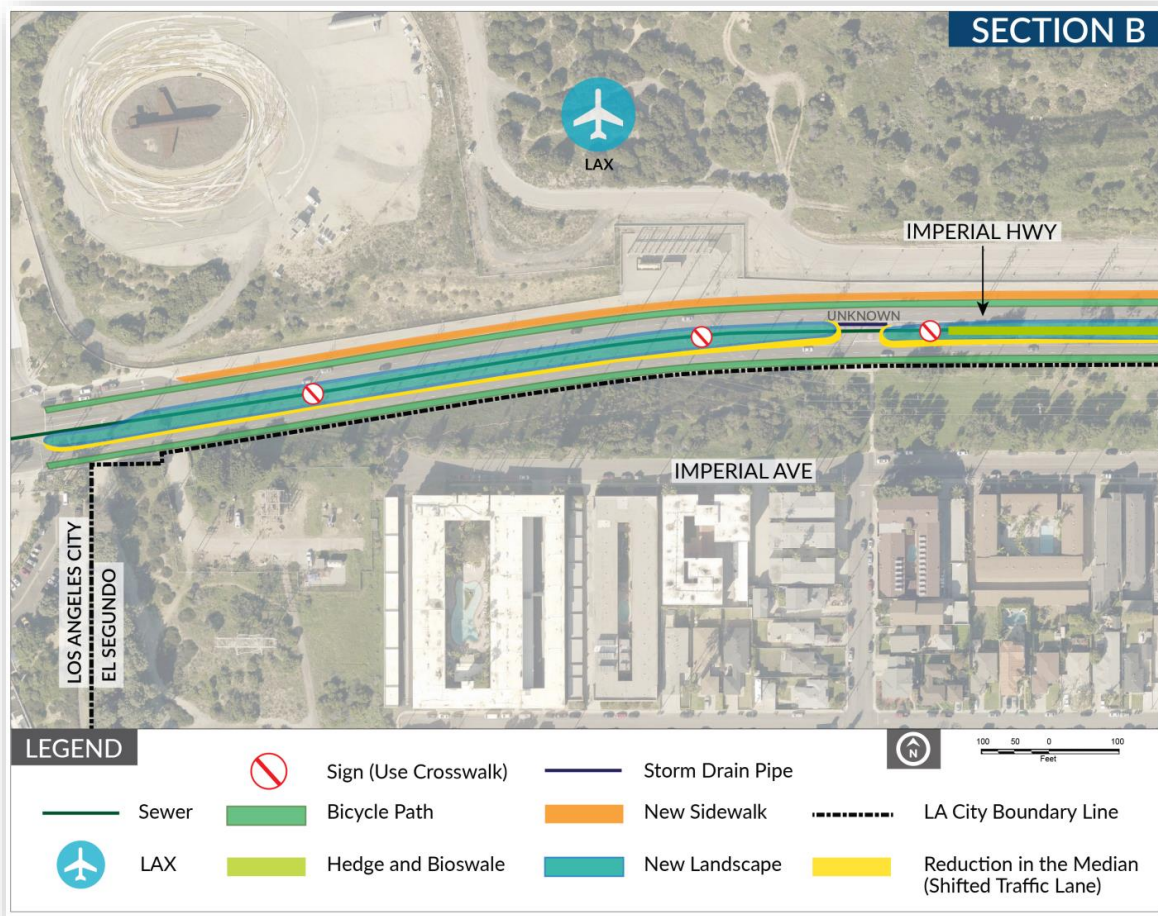


Capture Area



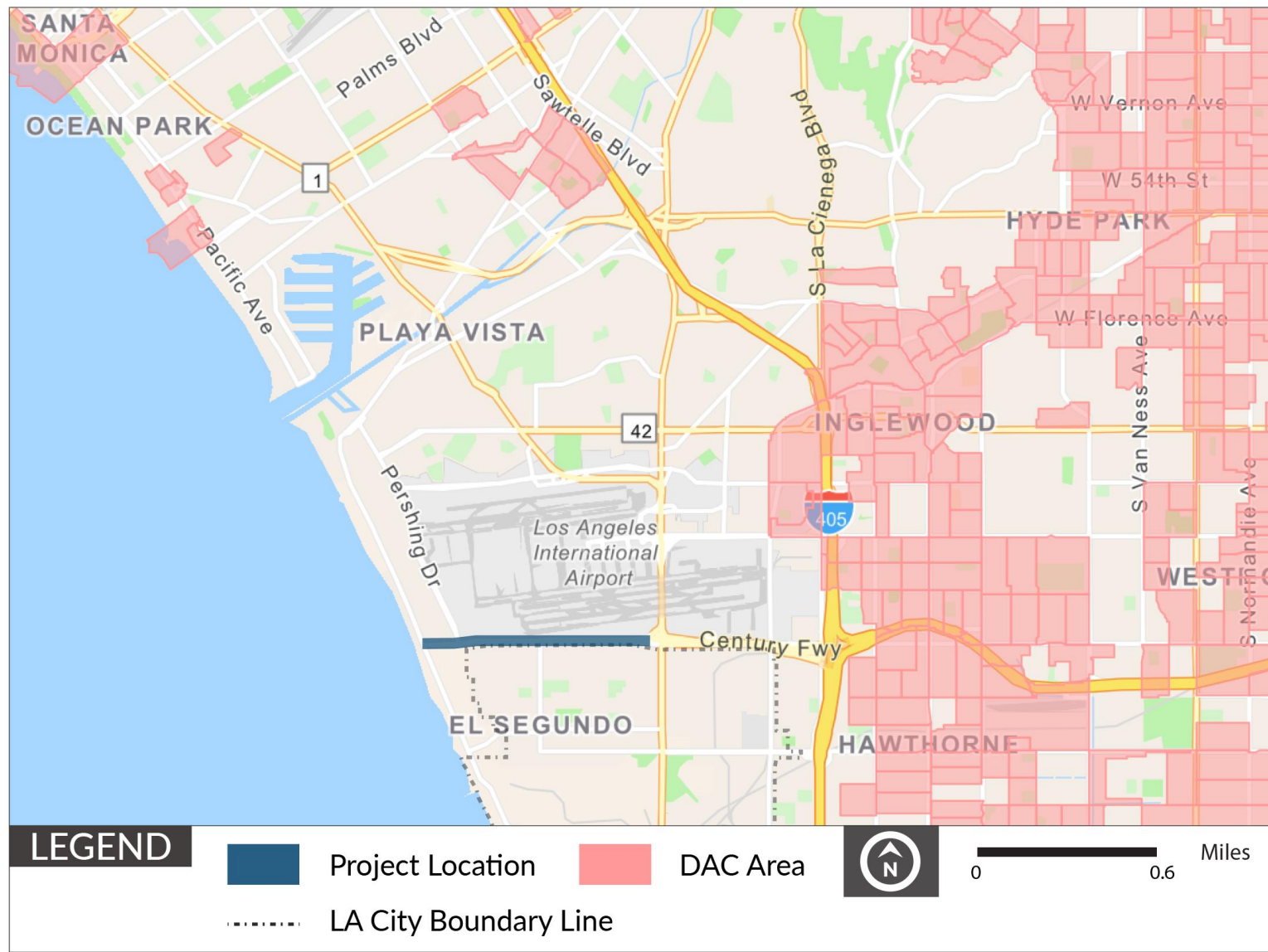


Municipality Benefits





Disadvantaged Community (DAC)





Project Background

- **Why was the Project location selected?**
 - The Project is in an area of greatest need and highest potential for cost-effective implementation of BMPs.
- **How was the Project developed?**
 - A feasibility study was developed for this project using community input on the needs in the project area. Using the input received multiple alternatives for stormwater quality enhancement and reuse were evaluated to determine a cost-effective solution.
- **Which regional water management plan includes the proposed project?**
 - This Project is included in the City of LA strategic plan for compliance. It will also benefit the Santa Monica Bay J2/J3 Watersheds and the Central Santa Monica Bay Watershed.
- **Description of benefits to municipality/municipalities**
 - Improved flood mitigation, enhanced habitat, enhanced recreational opportunities, increased shade, improve pedestrian safety, provide safe access to local water bodies (Dockweiler State Beach), and increased vegetation.
- **Disadvantaged Community (DAC) Benefits**
 - Addition of trees and other landscaping will improve air quality through natural processes
 - Reduced flooding will also improve the mobility of pedestrians and bicyclists along Imperial Highway during and after storm events.
 - Recreational improvements include improved walkability and bikeability of Imperial Highway, securing safe routes and safety corridors, and improved water quality at Dockweiler State Beach.
 - New green infrastructure will be added to Imperial Highway between California Street and Dockweiler State Beach.



Partners

- Who are the implementation partners already identified?
 - Los Angeles World Airports And City of El Segundo
- What communities or groups have expressed support for the project?
 - Federal Aviation Administration, City of El Segundo, El Segundo Public Works/Environmental Committee, El Segundo Chamber of Commerce, El Segundo Unified School District, California Native Plant Society, and residents from Cities of El Segundo and Los Angeles.
- Have you yet engaged the appropriate vector control district about the project concept?
 - No, the vector control district will be contacted during the predesign phase

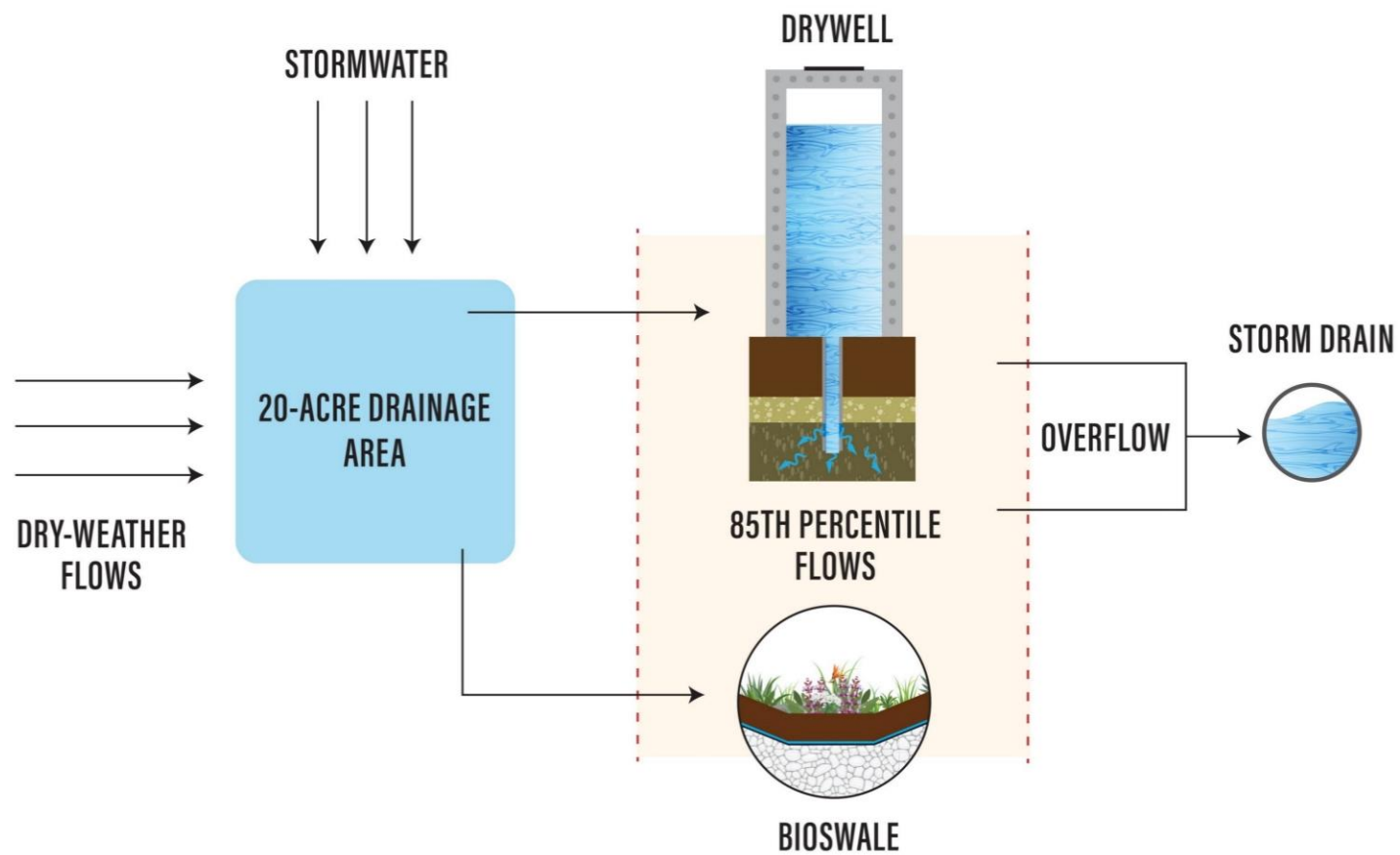


Project Details

- **Description of current site conditions**
 - The Project site is located in a 1.7-mile section of the Imperial Highway within the City of Los Angeles. This section of the highway consists of two lanes traveling west and two lanes traveling east. Both the eastbound and westbound lanes of the highway were constructed with a crown in the middle so that approximately half of the flow is carried to the shoulders and half is carried to the median. This portion of the highway is located within a predominantly high-density residential area, which provides commuter access to Dockweiler State Beach, LAX facilities, and City of El Segundo. The Project area is bounded by LAX in the north, by City of El Segundo in the south, and by Dockweiler State Beach on the west.
- **Completed studies/analysis**
 - Feasibility study
- **Description of any alternatives considered**
 - **Alternative 1.** This alternative will enhance the median along Pershing Drive with green infrastructure such as bioswales and street trees to infiltrate surface flows. It includes pedestrian and traffic safety additions along Imperial Highway, and recreational benefits from safety additions to the existing bike lane. Alternative 1 has a total estimated cost of \$12M to \$14M, and a potential to achieve a maximum SCW regional score of 65 points.
 - **Alternative 2.** This alternative will implement green infrastructure along Pershing Drive with enhancements to the existing median and the addition of parkway bioswales. It includes pedestrian and traffic safety additions along Imperial Highway, and recreational benefits from safety additions to the existing bike lane. Alternative 2 has a total estimated cost of \$14M to \$16M, and a potential to achieve a maximum SCW regional score of 60 points.



Project Schematic





Project Details



Drywells



Median Bioswale and Street Trees

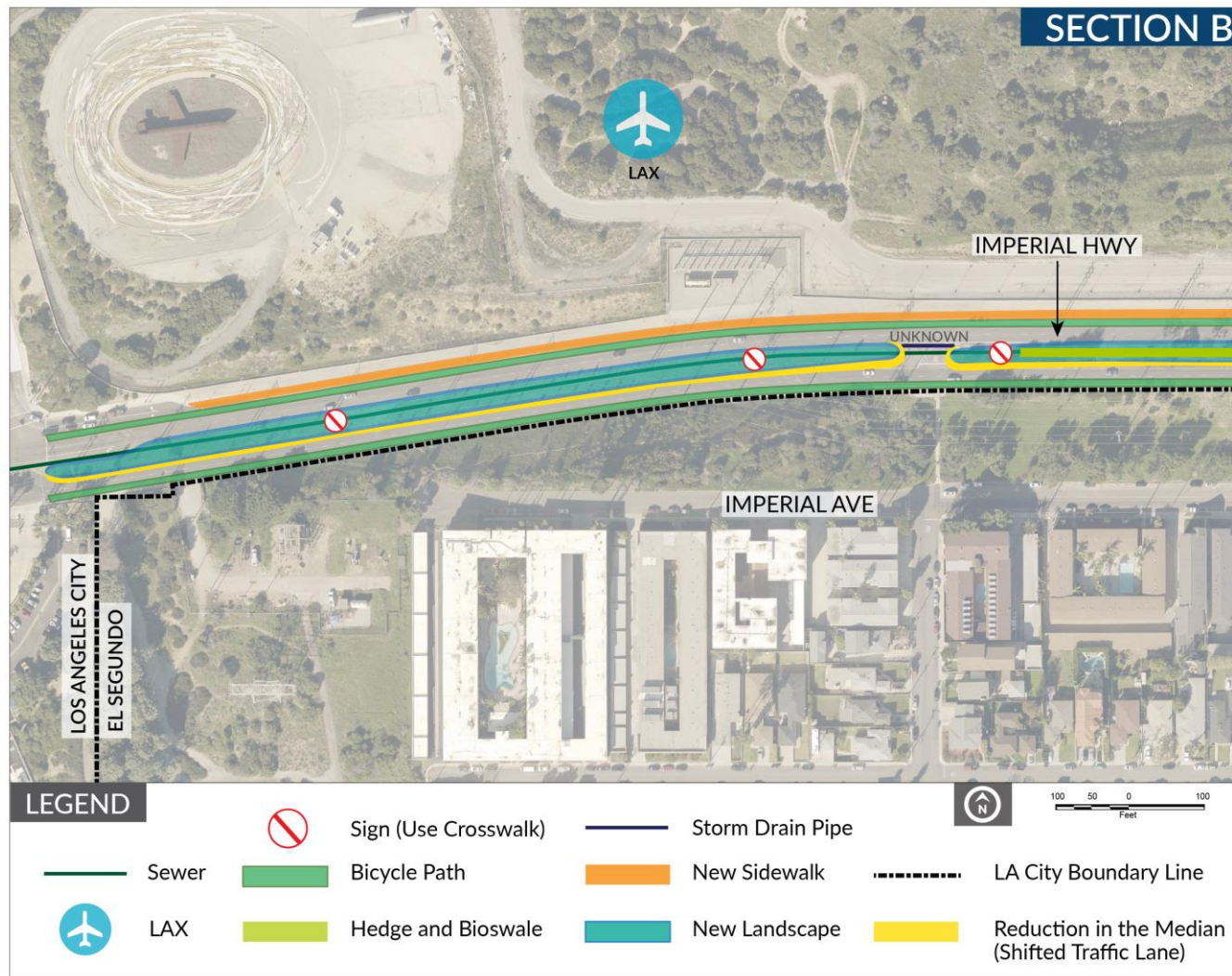


Site Plan 1/6



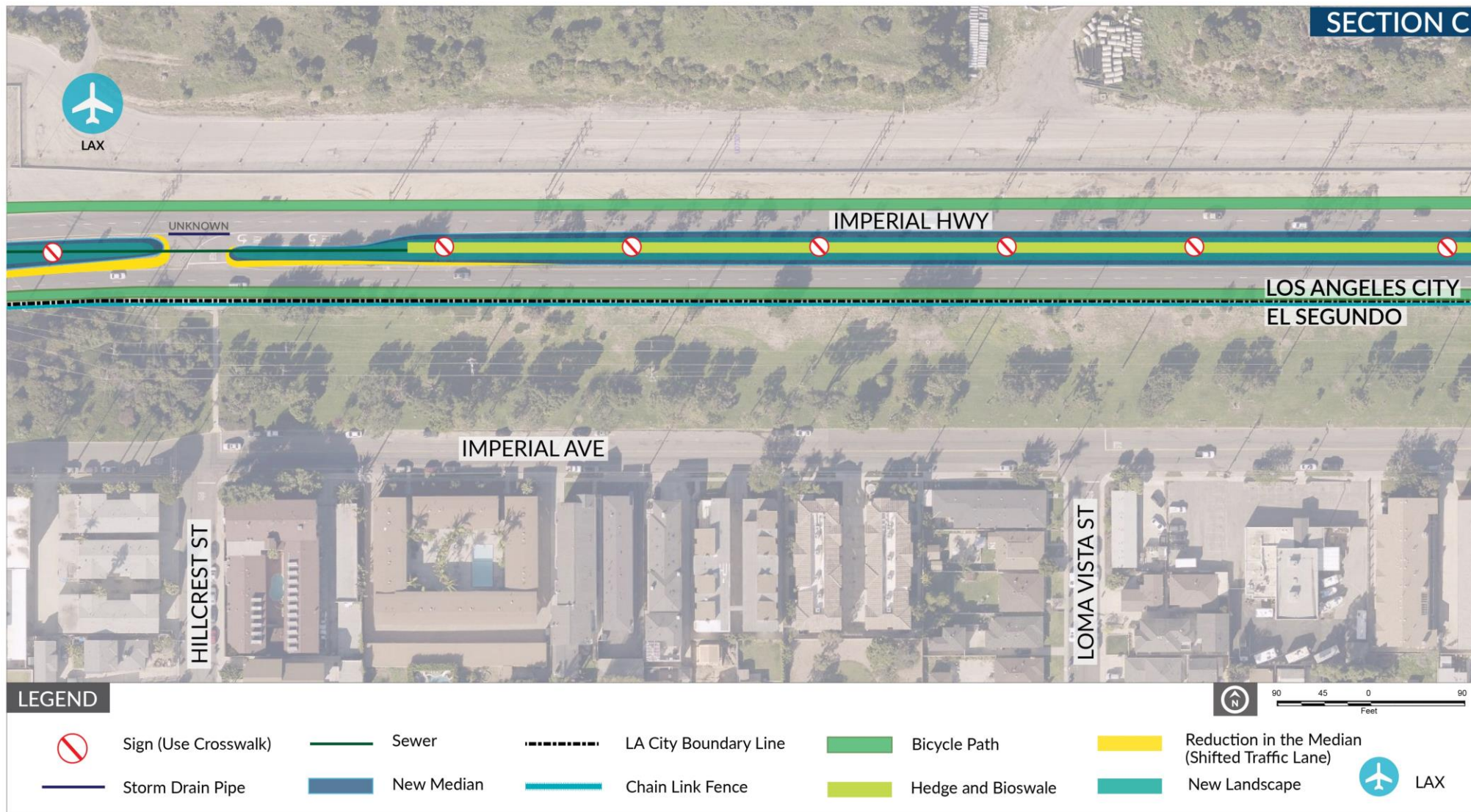


Site Plan 2/6





Site Plan 3/6



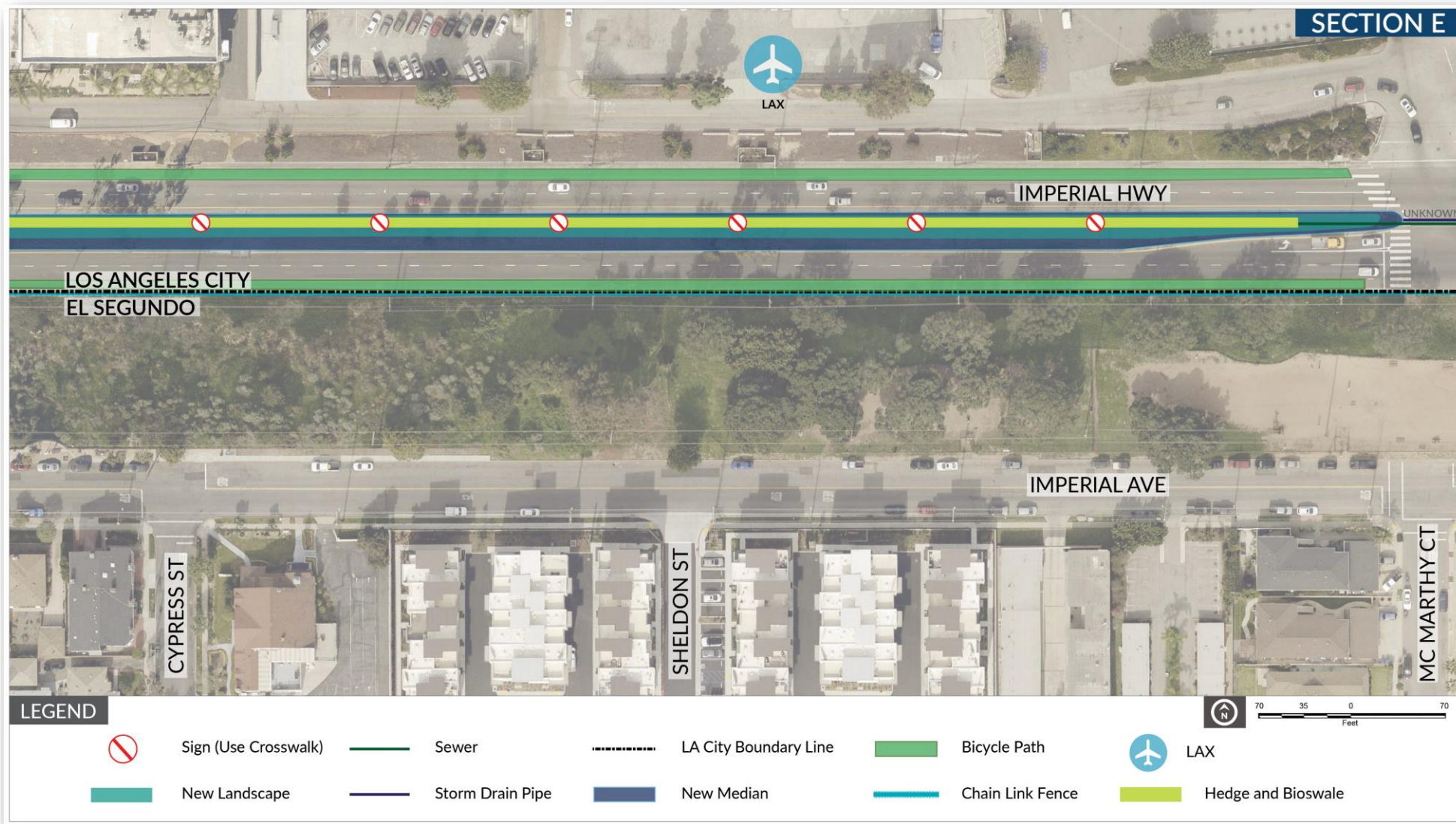


Site Plan 4/6





Site Plan 5/6





Site Plan 6/6





Cost & Schedule

Phase	Description	Cost	Completion Date
Planning	Planning, public outreach, CEQA, and permitting	\$360,000	06/2024
Design	Design and monitoring	\$3,489,000	06/2028
Construction	Construction	\$7,799,000	12/2027
TOTAL		\$11,648,000	

- The Project has a total cost of \$11,648,000 and an annual maintenance cost of \$233,000
- The Project has a lifespan of 50 years and the lifecycle cost is \$17,238,578.87



Funding Request

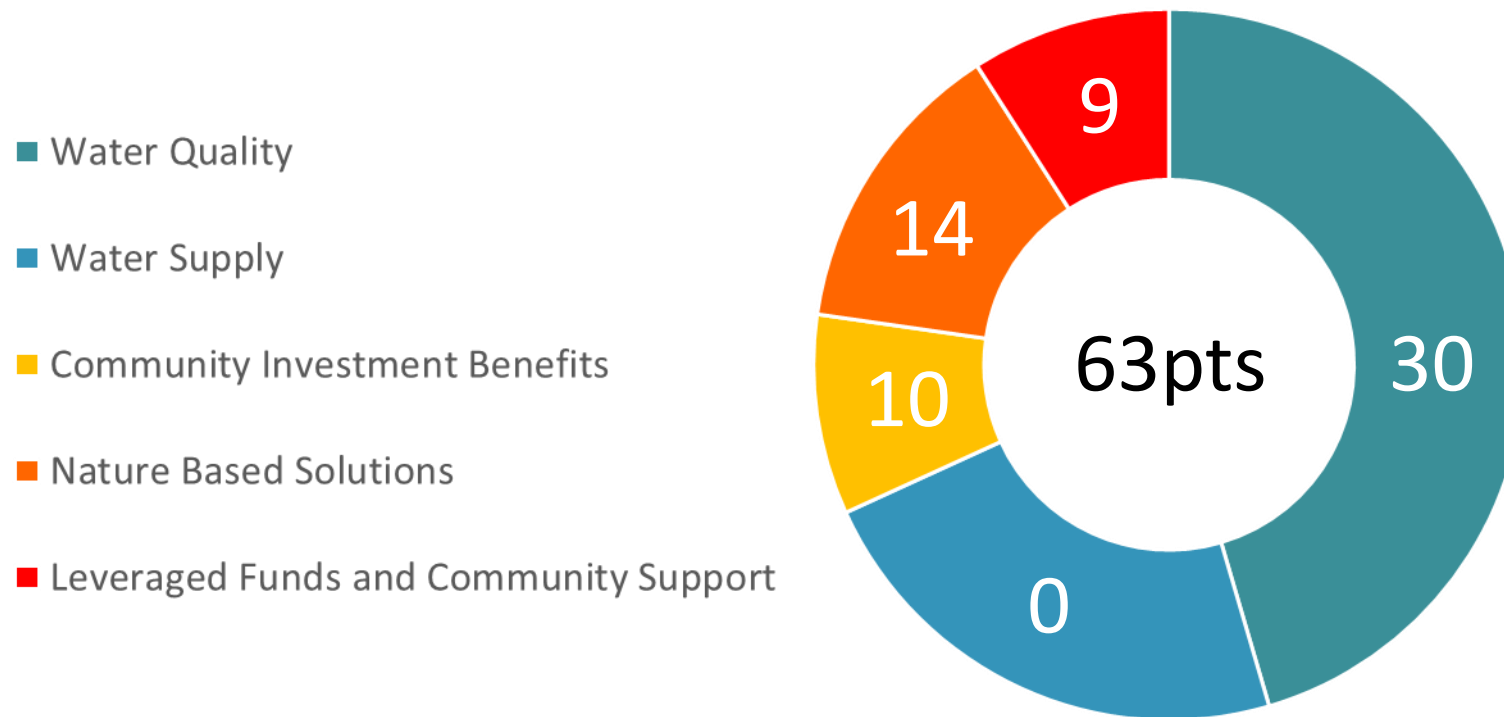
Year	SCW Funding Requested	Phase	Efforts During Phase and Year
1	\$173,000	Planning, Design	Planning and permitting, Design - 2024
2	\$216,000	Design	Design – 2025
3	\$339,000	Construction	Construction, and construction management - 2027
4	\$4,504,000	Construction, O&M, Monitoring	Construction, construction management, and O&M
TOTAL	\$5,232,000		

- Leveraged funding: \$6,416,000, 55% of total project cost
- Future potential SCW funding requests: O&M and replacement/refurbishment infiltration system components



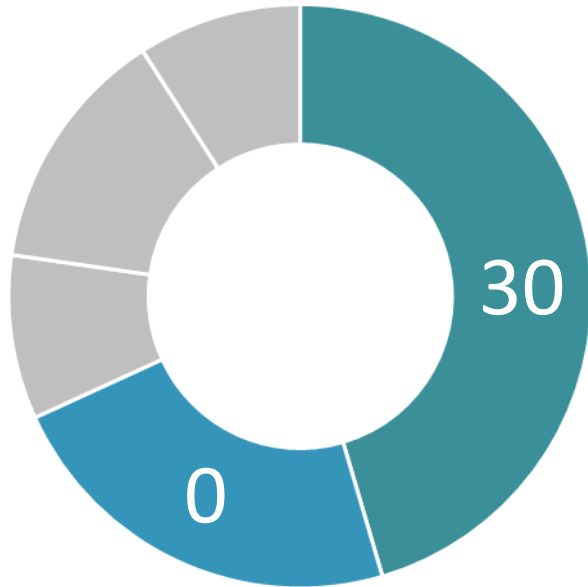
Score as confirmed by the Scoring Committee

The Scoring Committee confirmed this score on November 3, 2022





Water Quality & Water Supply Benefits

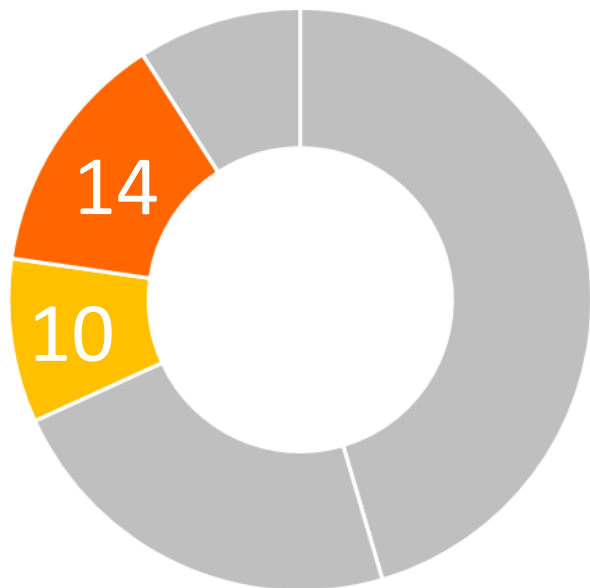


The Scoring Committee confirmed this score on November 3, 2022

- Drywells, median bioswales, and street trees
- Wet weather
- Tributary area: 19.7 acres
- Capacity: 2.92 AF
- Pollutant reduction: 92% zinc, 100% trash
- Annual Water Supply Volume: 15 AF/yr
- Water Supply Use: Water supply for West Coast Subbasin
- Water Quality Cost-Effectiveness: \$0.3 AF/\$M
- Water Supply Cost-Effectiveness: \$47,250/AF



Community Investment Benefits and Nature-Based Solutions

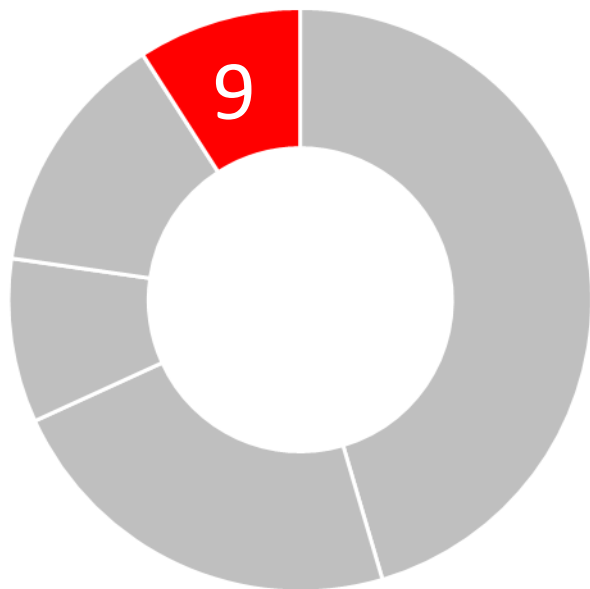


The Scoring Committee confirmed this score on November 3, 2022

- **Community Investment Benefits**
 - Improved flood management
 - Creation/enhancement of habitat
 - Improve access to Dockweiler State Beach
 - Improve recreational opportunities
 - Enhanced recreational and learning opportunities
 - Increased shade and reduction of Heat Island Effects
 - Increased trees and vegetation
- **Nature-Based Solutions**
 - Mimics natural processes in trees and bioswales
 - Utilizes natural materials in bioswales
 - Replaces impermeable surface with green space



Leveraging Funds and Community Support



The Scoring Committee confirmed this score on November 3, 2022

- Leveraging Funds
 - This project has over 50% leveraged funds
- Community Support
 - This Project received strong community support. Letters of community support were received from El Segundo City Council, El Segundo Environmental Committee, California Native Plant Society, and residents of the area.



Questions?

Kevin Ho