

Heartwell Park at Palo Verde Channel Stormwater Capture Project

Funding Program - Infrastructure Program
Fiscal Year 2023-2024
Lower San Gabriel River

Project Lead: City of Long Beach

Project Proponent: Los Cerritos Channel Watershed Group

Presenters: Richard Watson (Richard Watson & Associates)

Merrill Taylor (Craftwater Engineering)

Previously Awarded TRP? - No



Project Overview

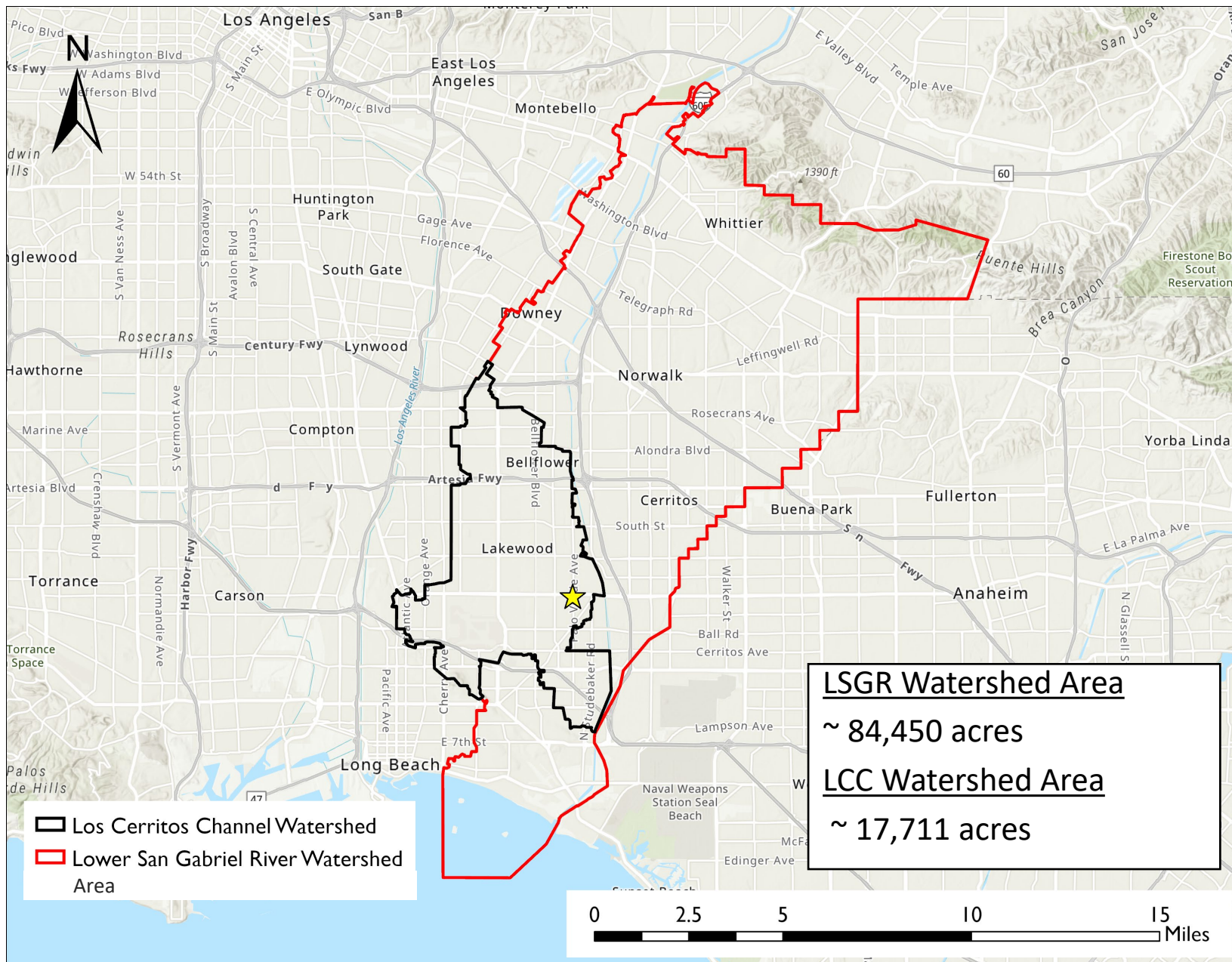
Regional stormwater capture and filtration/sewer diversion facility located at Heartwell Park beneath the open space of the existing park

- **Primary Objective:** Improve WQ in LCC through nature-based solution
- **Secondary Objectives:** Offset potable use/recycling & public education
- **Project Status:** SCW funding request for **Design of Phases I and II & Construction Funding for Phase I only**
- **Total Funding Requested:** \$3,313,865



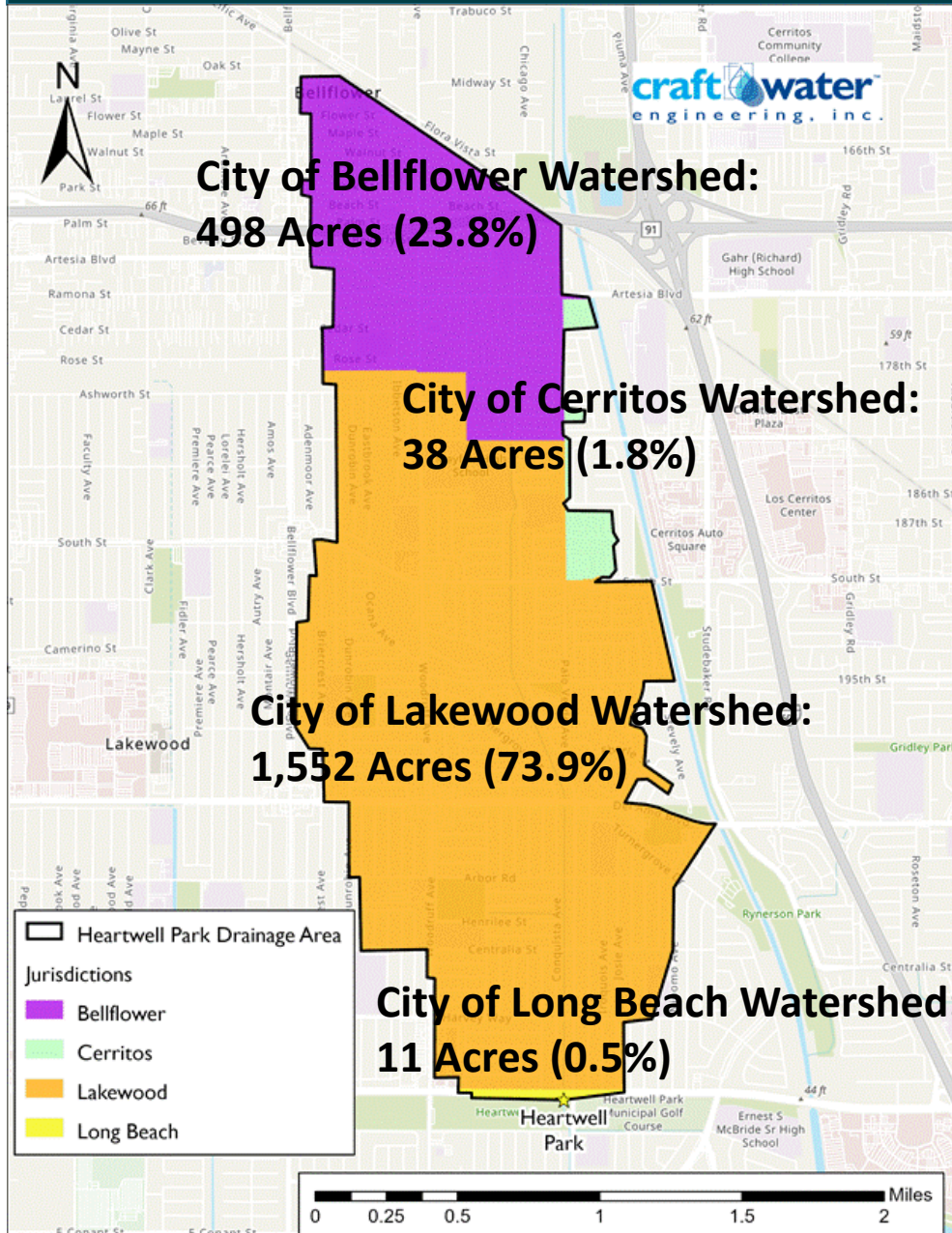


Project Location – Watershed Map





Project Location – Total Capture Area



• Capture Area Jurisdiction

- City of Bellflower
- City of Cerritos
- City of Lakewood
- City of Long Beach

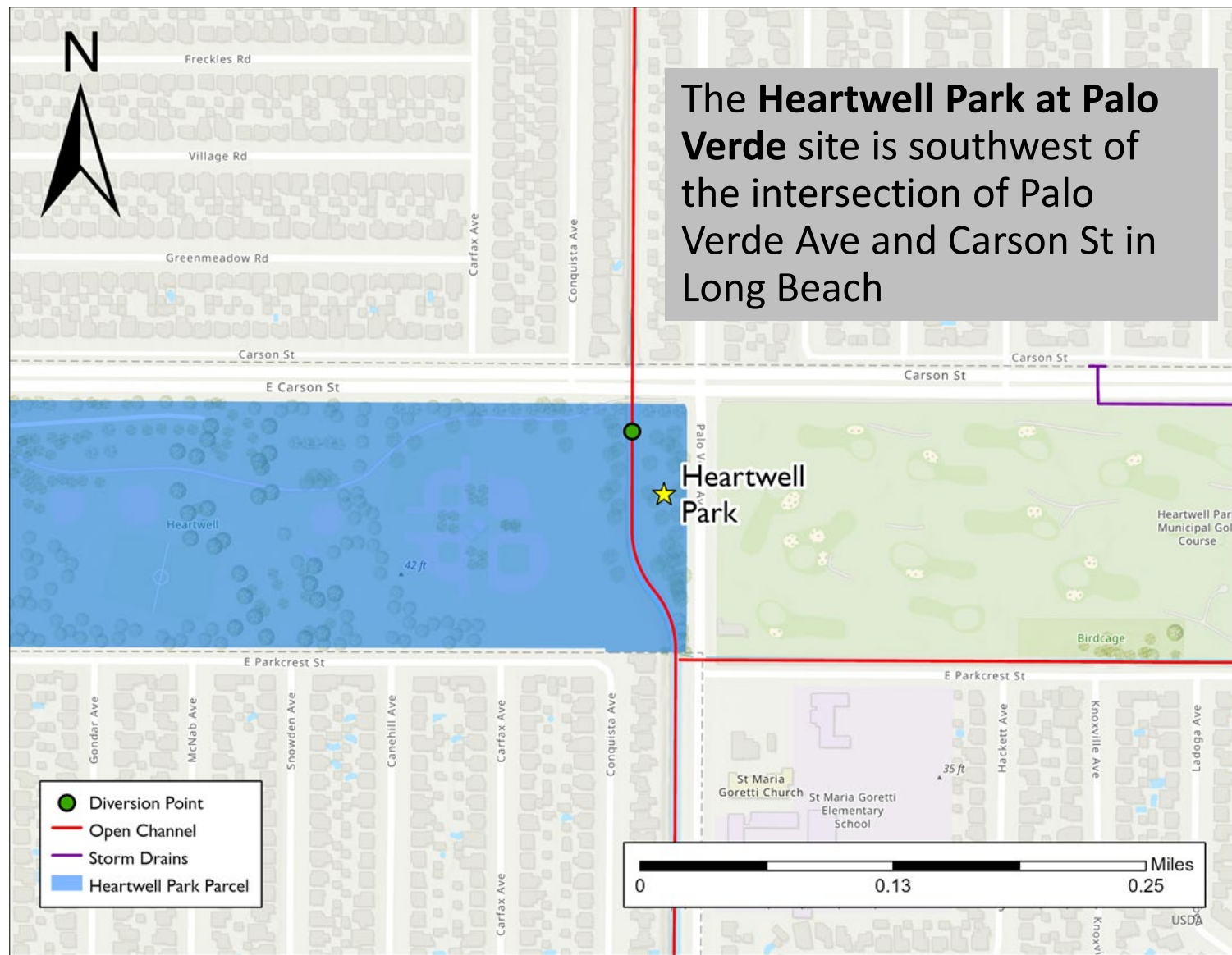
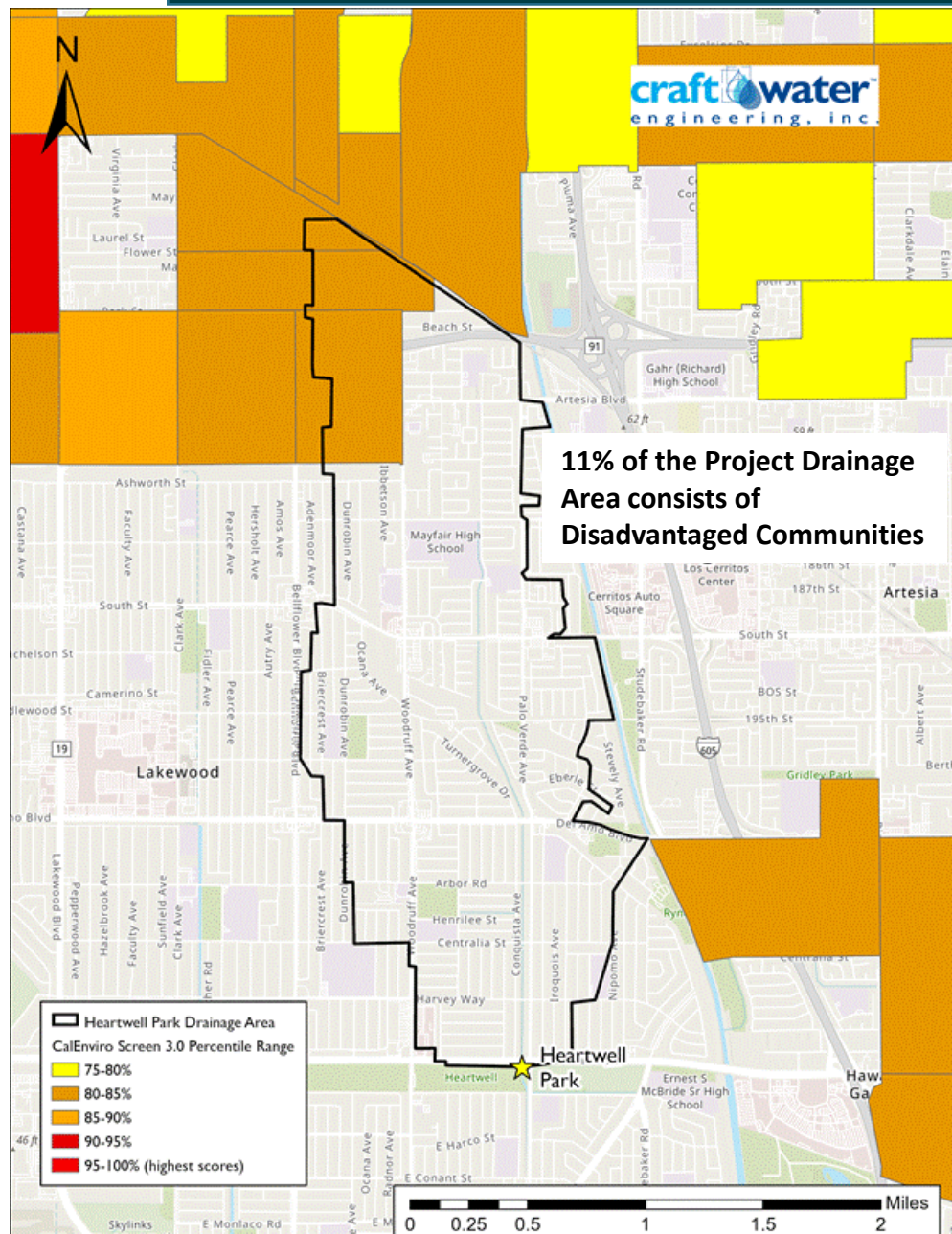
• Drainage Area: 2,099 acres

- Impervious: 1,269 acres (60.5%)
- Pervious: 830 acres (39.5%)

Land-use	Area (acres)	% of Impervious
Single Family Residential	632	49.8%
Multi-Family Residential	82	6.5%
Commercial	90	7.1%
Institutional	104	8.2%
Industrial	18	1.4%
Highway & Interstates	22	1.7%
Secondary Roads & Alleys	321	25.3%
TOTAL IMPERVIOUS	1,269	100%



Project Location – Project Area & DAC Communities





Project Background

- Why was the Project Location selected?
 - Identified within the Los Cerritos Channel WMP to provide new WQ improvements to LCC and LSGR due to the large drainage area and ability to divert dry-weather flows to the sanitary sewer
- How was the Project developed?
 - Site diversion and layout alternatives, community input, and incorporation of potential stormwater features
- Which regional water management plan includes the proposed project?
 - LCC WMP
- Description of benefits to municipality/municipalities
 - Revitalized park space, increased tree canopy and habitat, treat dry- and wet-weather flows
- Description of benefits to Disadvantaged Communities
 - Indirect: Better community connectivity with sidewalk extension to Carson Street and enhanced public access to open space and recreational facilities



Partners

- Who are the implementation partners already identified?
 - City of Long Beach, Los Cerritos Channel Watershed Group
- What communities or groups have expressed support for the project?
 - Los Cerritos Wetland Authority, Conservation Corps of Long Beach
- Have you received a letter of concurrence from the municipality (if needed)
 - Yes. Led by the City of Long Beach
- Have you received a letter of concurrence from the Flood Control District (if needed)
 - Yes
- Have you yet engaged the appropriate vector control district about the project concept?
 - Yes



Project Details – Existing Conditions



Existing Conditions

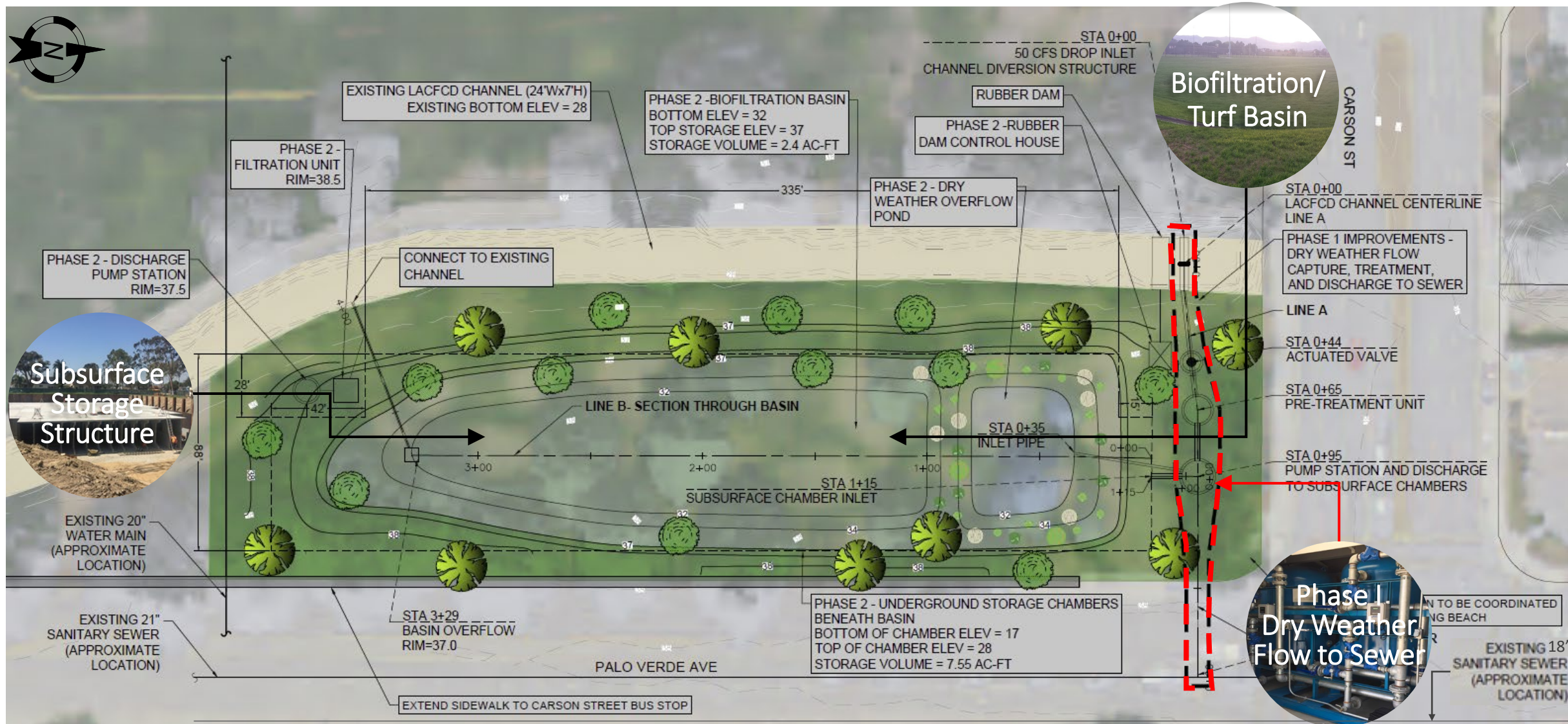
- *Design* Infiltration Rate: 0.1 in/hr
- Groundwater Depth: 29 ft BGS
- Current Use: Park Space
- Owner: City of Long Beach

*Feasibility and stormwater capture studies done

*Alternative footprint sizes, treatment methods and diversion rates examined

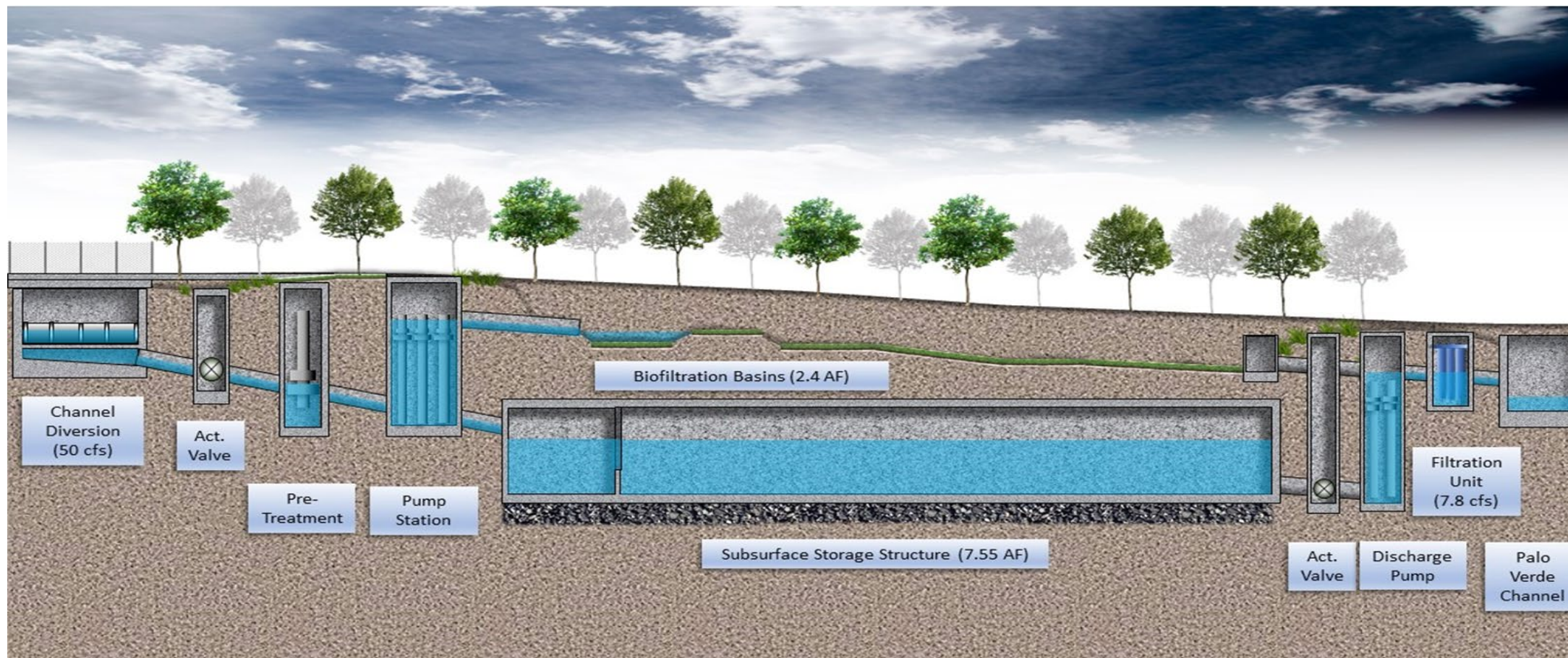


Project Details - Site Plans





Project Details – Site Plans



Diversion Rate	Storage Capacity	Filtration Unit	24-Hour Capacity	Primary Pollutant Reduction (Zinc)	Secondary Pollutant Reduction (Copper)
50 cfs	9.88 ac-ft (3.2 MG)	7.88 cfs	25.5 ac-ft	51.8% (133 lbs)	55.6% (15 lbs)



Project Benefits



- **Water Quality** Improvement in the Palo Verde Channel and the Los Cerritos Channel by removing trash, metals, bacteria, and nutrients in stormwater and urban runoff
- **Nature-Based** biofiltration basin with sustainable native landscaping
- **Park Recreational Enhancements** including a biofiltration/habitat area with walking trails
- **Public Access to Waterways** with the extension of the sidewalk to provide access to the project site from Carson Street with the development of the pedestrian pathways along the Palo Verde Channel



Cost & Schedule

Phase	Description	Cost	Completion Date
Planning	Feasibility Study and 10% Design, Sanitary Sewer Capacity Study*	\$172,258	10/2022
Design	Final Design (30/60/90/100), Environmental Planning (CEQA) and Permitting, Public Outreach during Design	\$1,336,936	06/2024
Construction	Construction Cost, Agency Management, Survey, Construction Administration	\$11,956,920	12/2028
TOTAL		\$13,466,114	

*Previously funded by the Los Cerritos Channel Watershed Group

Annual Costs

Maintenance Cost:	\$124,000
Operation Cost:	\$50,000
Monitoring Cost:	\$25,000
Project Life Span:	50

Life-Cycle Costs

Life-Cycle Cost for Project:	\$18,240,900.24
Annualized Cost for Project:	\$760,230.71



Funding Request

Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	\$1,485,048	Design	Professional design services (30/60/90/100) Environmental planning (CEQA), Permitting, Community outreach, agency project management (design phase)
2	\$1,828,817	Construction	Construction Phase 1 , Agency project management, construction administration, staking, survey
TOTAL	\$3,313,865		

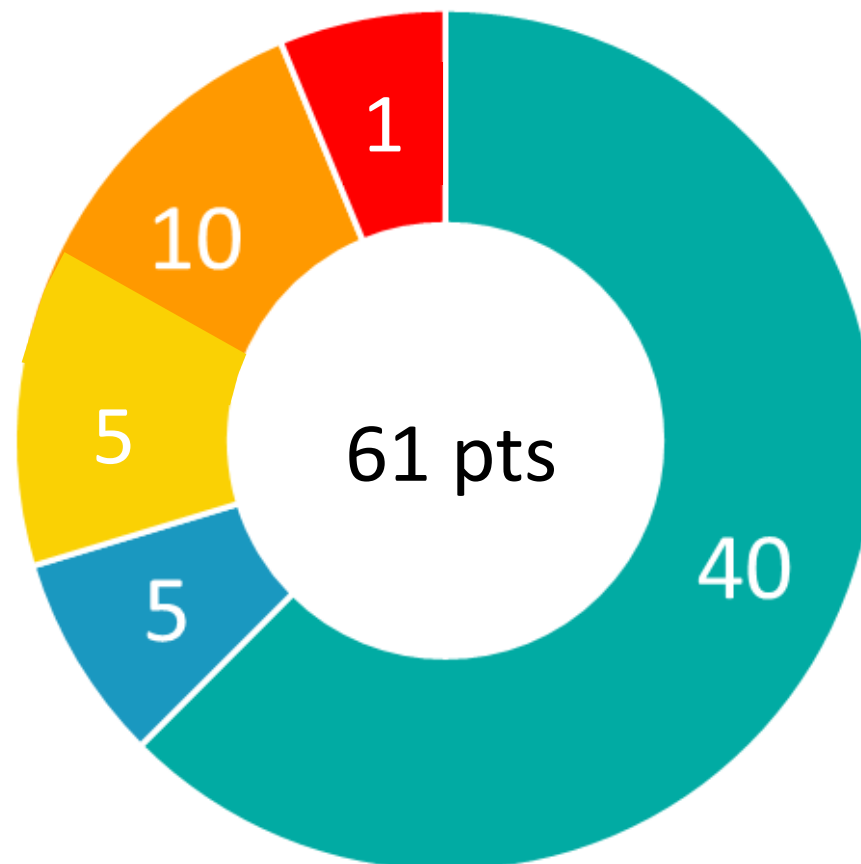
- Cost Share = The LCC Watershed Group funded the Feasibility Study & Sewer Capacity analysis for this project. Future funding opportunities to be explored.
 - \$10,152,249 for Phase 2 Construction – Year 3 to 5
 - \$199,000 for O&M/Monitoring – Year 5 and beyond



Score as confirmed by the Scoring Committee

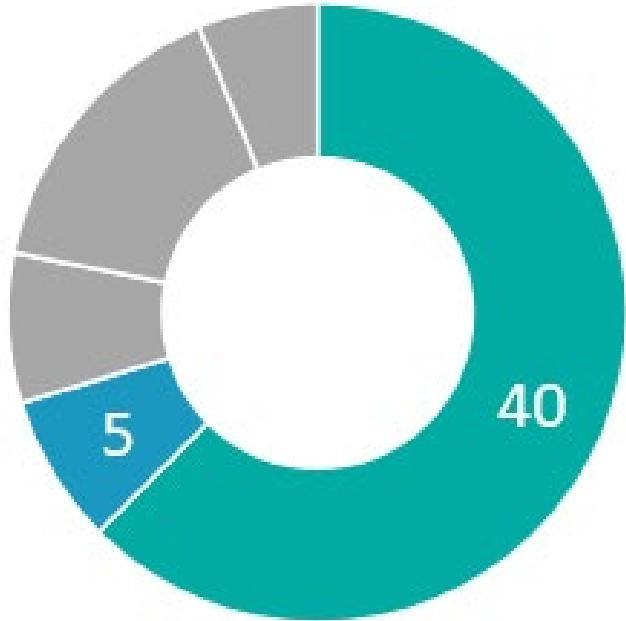
The Scoring Committee confirmed this score on 1 Dec 2022.

- Water Quality
- Water Supply
- Community Investment Benefits
- Nature Based Solutions
- Leveraged Funds and Community Support





Water Quality & Water Supply Benefits

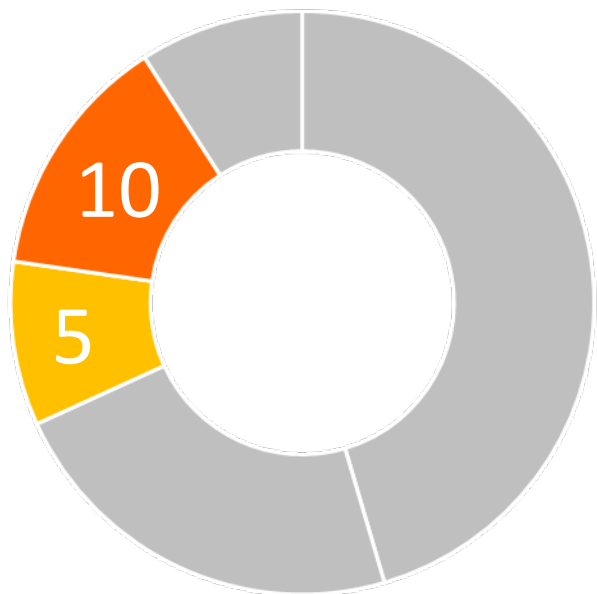


The Scoring Committee confirmed this score on 1 Dec 2022

- **Primary Mechanisms**
 - Runoff/pollutant capture
 - Filtration
 - Connection to sanitary sewer
- **Dry weather project type**
- Tributary Area: **2,099 acres**
- 24 Hour Capacity: **25.5 ac-ft**
- Pollutant Load Reduction (Dry-Weather)
 - Primary Pollutant (Zinc) – **100%**
 - Secondary Pollutant (Copper) – **100%**
- Average Annual Capture for Water Supply: **106 ac-ft**
- Water Supply Use
 - **Water Recycling** through Sewer Diversion (***Sewer Capacity Study Completed**)
- Water Supply Cost Effectiveness : **\$7,171.99/ac-ft**



Community Investment Benefits and Nature Based Solutions



The Scoring Committee confirmed this score on 1 Dec 2022

- **Community Investment Benefits**

- Creates parks, habitat or wetland
- Improves public access to waterways
- Creates or enhances new recreational opportunities
- Reduce local heat island effect
- Increase the number of trees

- **Nature-Based Solutions**

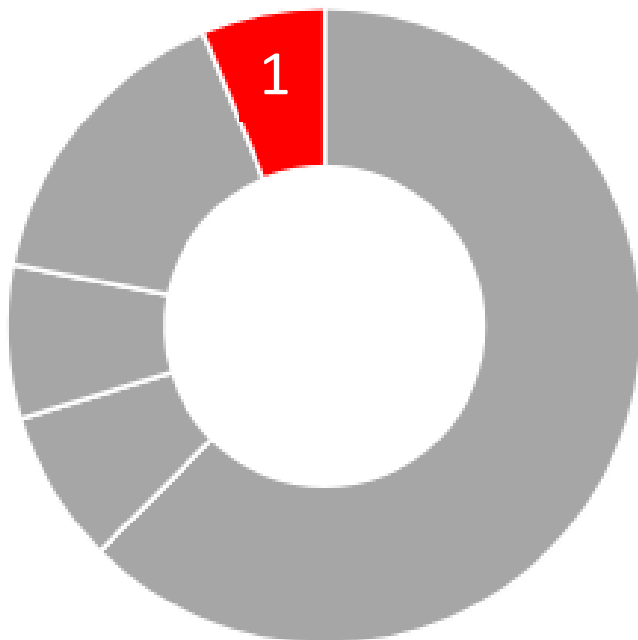
- Project implements natural processes and utilizes natural materials
 - Installation of a surface biofiltration/turf basin, permeable walkways, and bioretention planters
 - Post-construction landscaping includes native trees, shrubs, and grasses



Leveraging Funds and Community Support

- **Leveraging Funds**

- Feasibility Study Cost (\$122,258) and Sewer Capacity Study funded by the LCC Watershed Group (\$50,000).



The Scoring Committee confirmed this score on 1 Dec 2022

- **Community Support**

- City of Long Beach will conduct a thorough active Public Outreach and Engagement effort
- Strong local, community-based support from
 - Conservation Corps of Long Beach
 - Los Cerritos Wetlands Authority



Questions?

Richard Watson

Richard Watson & Associates

Merrill Taylor, PE

Craftwater Engineering, Inc



La Mirada Creek Park

Funding Program: Infrastructure

Fiscal Year 2023-2024

Lower San Gabriel River

Project Lead: Mark Stowell

Presenter: Brian Spindor

Previously Awarded TRP – No



Project Overview

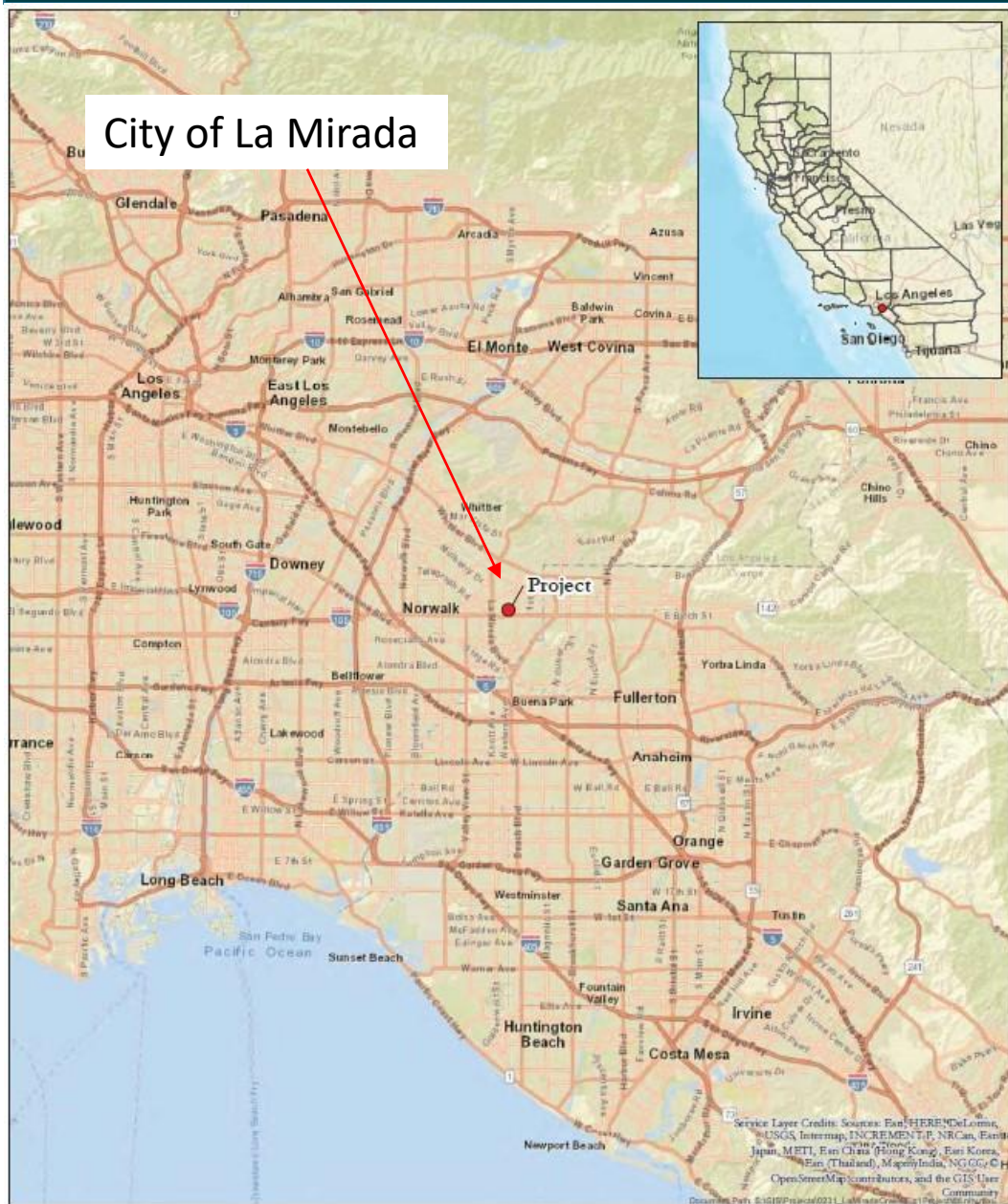
Removal of 2500 foot concrete low-flow channel and naturalization of existing La Mirada Creek Park to capture 168 AFY of dry weather flow.

- Primary Objective: Reconfiguration of La Mirada Creek
- Secondary Objectives: Aquifer recharge
Landscaping, safety, and improvements to the park
- Project Status: Construction.
- Total Funding Requested: \$5,752,200

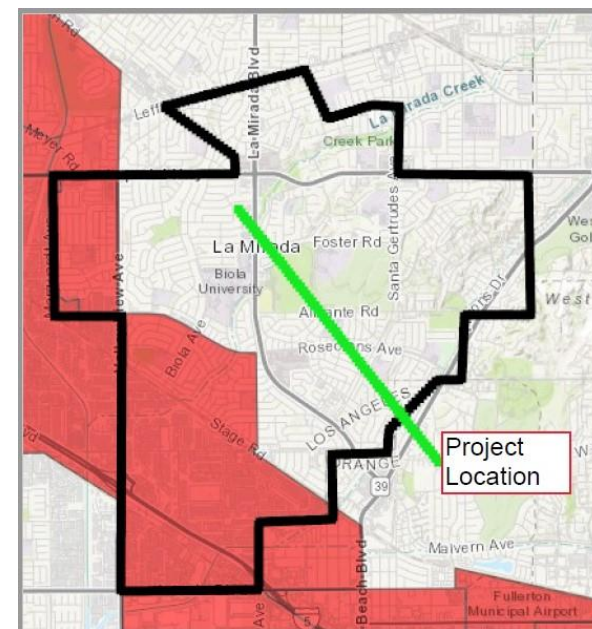




Project Location

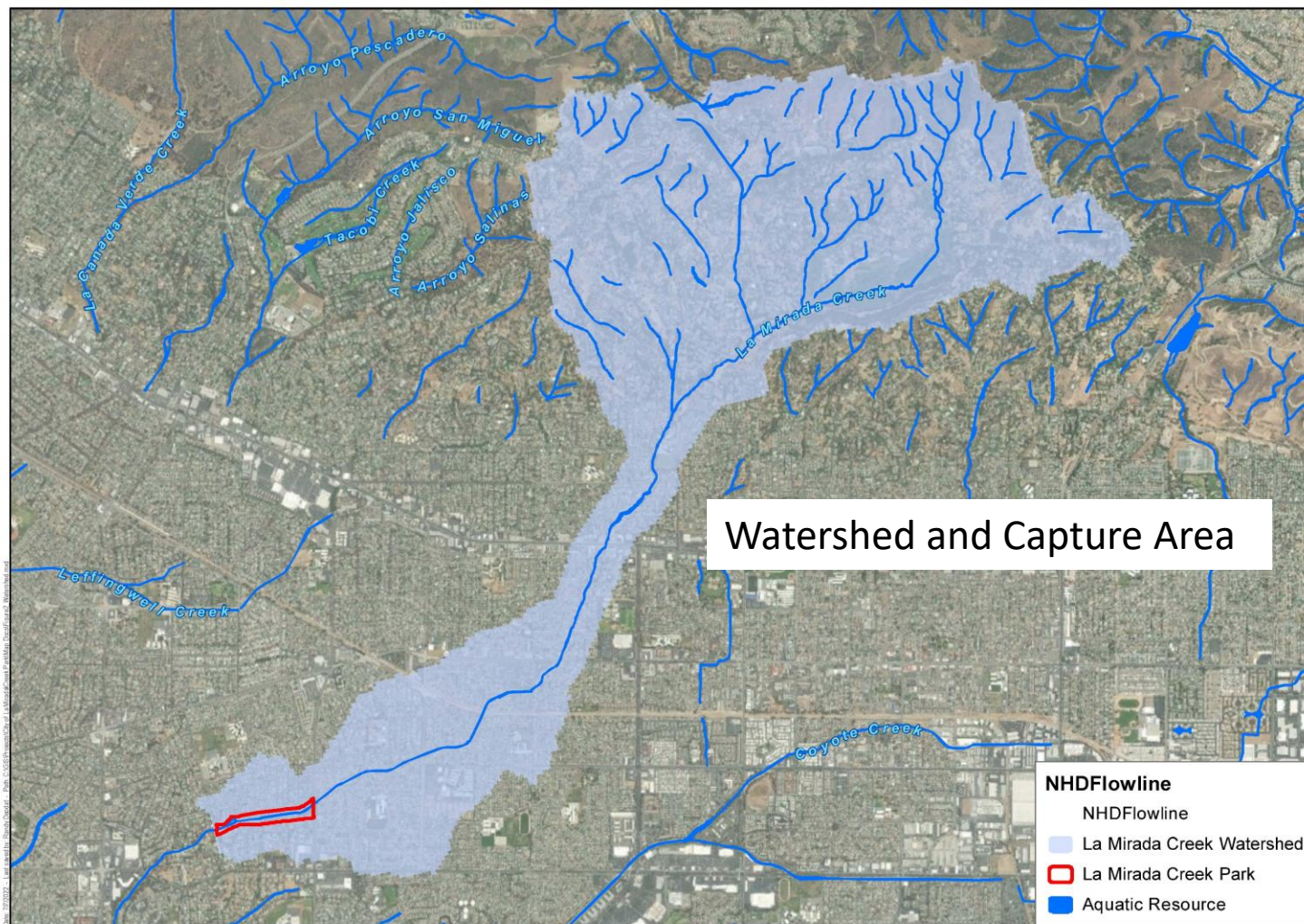


- Map(s) showing:
 - Project Location:
City of La Mirada
 - Municipalities that will Benefit
La Mirada
 - Disadvantaged Communities that will benefit
La Mirada
La Habra





Project Location



Source: County of Los Angeles 2022; Maxar Imagery 2020.



Figure 2
Watershed

La Mirada Creek Park Feasibility Study



Project Background

- **Why was the Project Location selected?**

The original intention of the project is to provide improved access to the park as well as provide enhancements that make the park more desirable for use and enjoyment of the community.

- **How was the Project developed?**

The community was invited to provide feedback and ideas from residents and park patrons regarding what they enjoy about the park and what improvements they would like to see. The most selected amenities to prioritize for improvement included naturalizing the creek channel, trail enhancements (ADA), fixing the bridges, ornamental landscaping, children's interactive play equipment, fitness stations, increased safety measures, and picnicking.

- **Which regional water management plan includes the proposed project?**

Lower San Gabriel River Watershed Management Plan, 2015



Project Background – Cont.

- Description of benefits to municipality/municipalities
 - An improved community park with requirements desired by park users
 - Sediment removal and aquifer recharge
 - Reduction of pollutants to downstream users
 - Removal of 0.5 acres of impermeable area.
- Description of benefits to Disadvantaged Communities
 - Use of Park for community enjoyment
 - Water recharge
 - Flood mitigation improvements



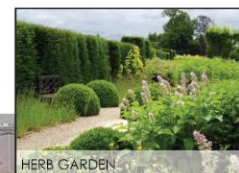
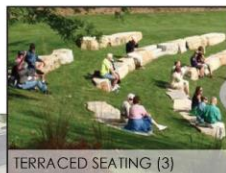
Partners

- Who are the implementation partners already identified?
 - City of La Mirada
- What communities or groups have expressed support for the project?

The City conducted extensive community outreach in 2017 – 2018 to develop the Creek Park Master Plan. Using a combination of community workshops and surveys, the City was able to garner input from its residents about the community’s needs, desires, and ideas for Creek Park.
- Have you received a letter of concurrence from the municipality (if needed)
 - Yes
- Have you received a letter of concurrence from the Flood Control District (if needed)
 - Yes
- Have you yet engaged the appropriate vector control district about the project concept?
 - The vector control district will be engaged during the design of the project.



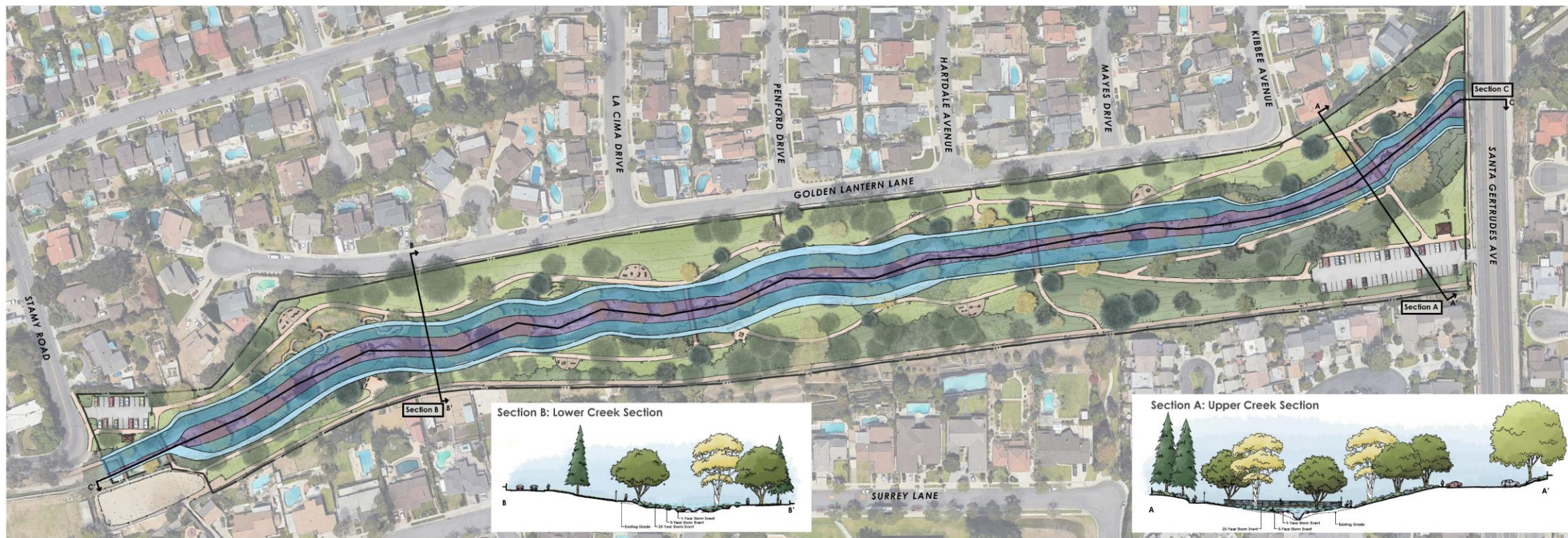
Project Details





Project Details

Section C: Creek Profile



LEGEND

- Low Flow Channel: 1-Year Storm Event
- Terrace: 5-Year Storm Event
- Channel Extents: 25-Year Storm Event



Cost & Schedule

Phase	Description	Cost	Completion Date
Planning	Development of project planning	\$286,000	June 2018
Design	Development of project design and obtain any necessary permits	\$578,000	January 2022
Construction	Project construction	\$6,760,200	December 2025
TOTAL		\$7,624,200	

- Description of Annual Costs
 - Annual Maintenance: \$5,500
 - Annual Operation Cost: \$930
 - Annual Monitoring Cost: \$2000
- Project Lifespan & Lifecycle Cost
 - Project Life Span: 50 years
 - Lifecycle Costs: \$7,826,469



Funding Request

Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	\$0	Design	Development of project design and obtain any necessary permits
2	\$5,752,200	Construction	Construction
3			
4			
5			
TOTAL	\$5,752,200		

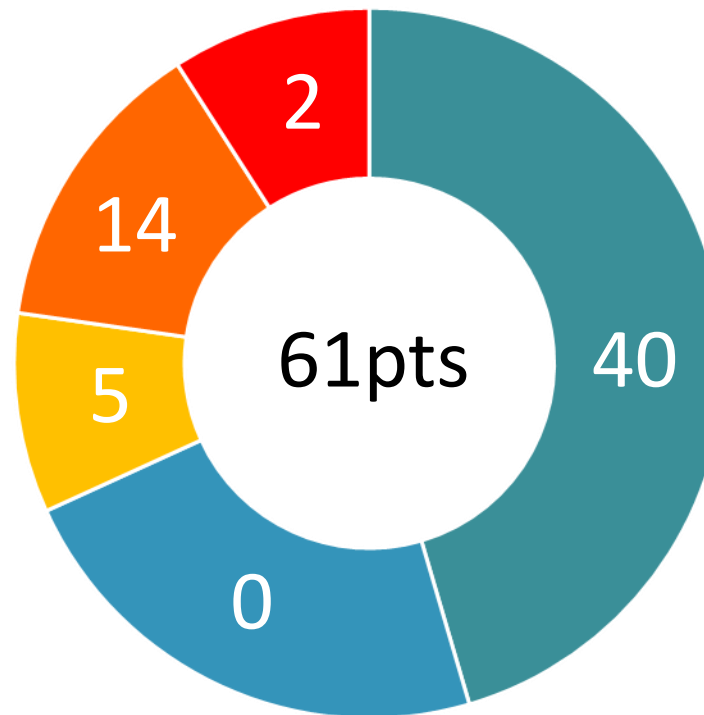
- Leveraged Funding amount and percent, if applicable
 - City of La Mirada – Resolution 20-33: \$800,000 – 12%
 - State of California Dept. of Parks and Recreation – Grant: \$208,000 – 3%



Score as confirmed by the Scoring Committee

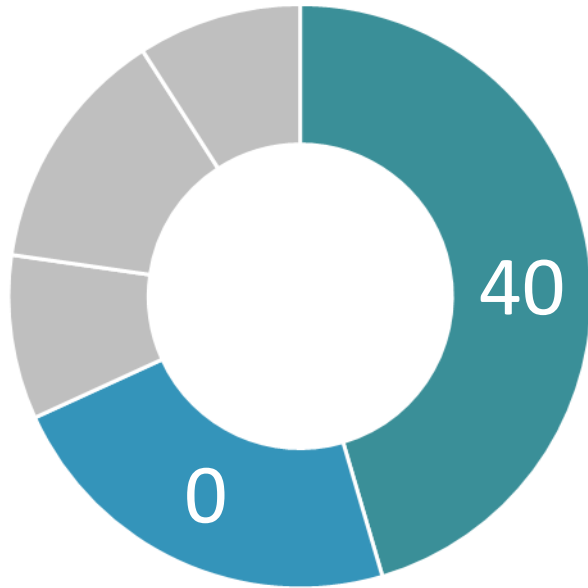
The Scoring Committee confirmed this score on 12/1/2022

- Water Quality
- Water Supply
- Community Investment Benefits
- Nature Based Solutions
- Leveraged Funds and Community Support





Water Quality & Water Supply Benefits

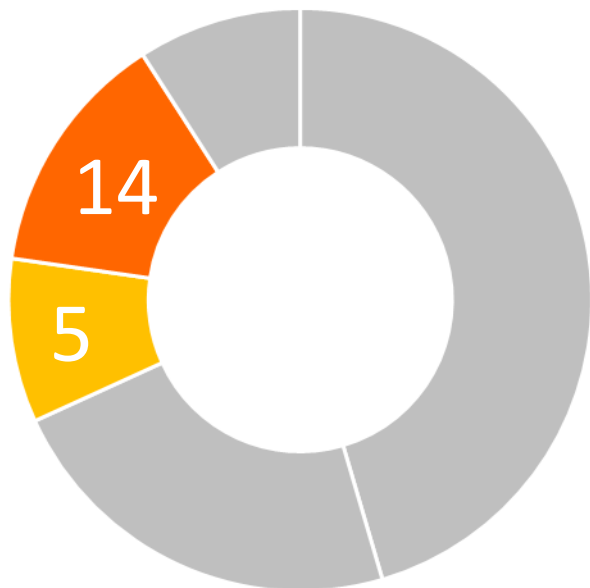


The Scoring Committee confirmed this score on 12/1/2022

- Primary mechanisms that achieve Water Quality and Water Supply Benefits claimed
- Water Quality Dry Weather Only
 - The anticipated dry weather flow is 0.27 cfs and the capability of the natural streambed to infiltrate water is anticipated to be 0.58 cfs
- Tributary Area
 - Capture area: 2,949 Ac
- Capacity
 - 168 Ac-ft/yr
- Water Supply and Water Quality Cost Effectiveness
 - \$1,941.58 per Ac-ft



Community Investment Benefits and Nature Based Solutions



The Scoring Committee confirmed this score on 12/1/2022

- **Community Investment Benefits**

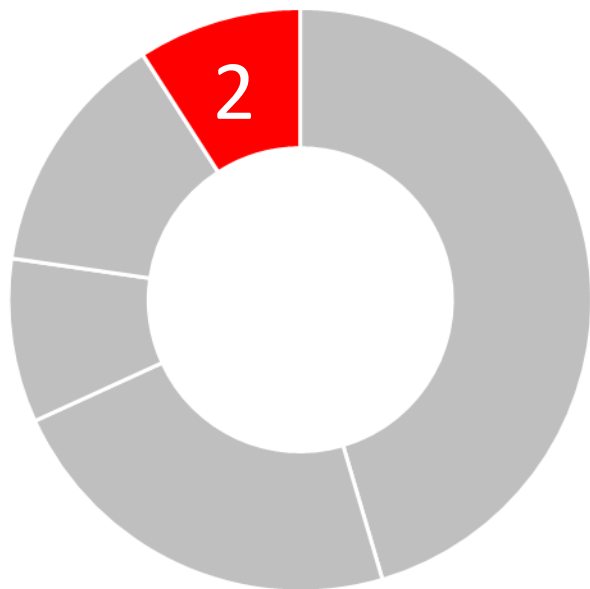
- Removes significant buildup of silt that has reduced the flood capacity of the waterway at the park site.
- Greatly enhances the existing park site by providing much more direct and safe access to the creek bed and shoreline along the creek.
- Greatly improves access to a waterway (La Mirada Creek) in several ways:
 - Creating more gently sloping creek banks to allow safe access to the streambed
 - Naturalizing and widening the streambed
 - Improving walkways and bridges within the park to provide greater, more natural, and ADA compliant access.
- Reducing side slopes of the creek/park site, additional trees and plants can be planted increasing shade in the park reducing heat island effects.

- **Nature Based Solutions**

- The project will remove an existing low-flow concrete channel through the park with a permeable streambed channel, allowing the streamflow to percolate into the ground rather than continue to flow out to the ocean.



Leveraging Funds and Community Support



The Scoring Committee confirmed this score on 12/1/2022

- Leveraging Funds
 - City of La Mirada – Resolution 20-33: \$800,000 – 12%
 - State of California Dept. of Parks and Recreation – Grant: \$208,000 – 3%
- Community Support
 - The City conducted extensive community outreach in 2017-2018 to develop the Creek Master Plan. Using a combination of community workshops and surveys, the City was able to garner input from its residents about the community’s needs, desires, and ideas for Creek Park.
 - As the project moves into the design phase, the City will keep its residents apprised of any significant changes to the project that may affect features which the public is already expecting.



Questions?

Brian Spindor

Mark Stowell