South El Monte High School Stormwater Improvement Project

Los Angeles County Safe, Clean Water Program

(Technical Resources Program)

Fiscal Year 2024-2025

Rio Hondo Watershed Area

Lena Luna

Jesse Williams

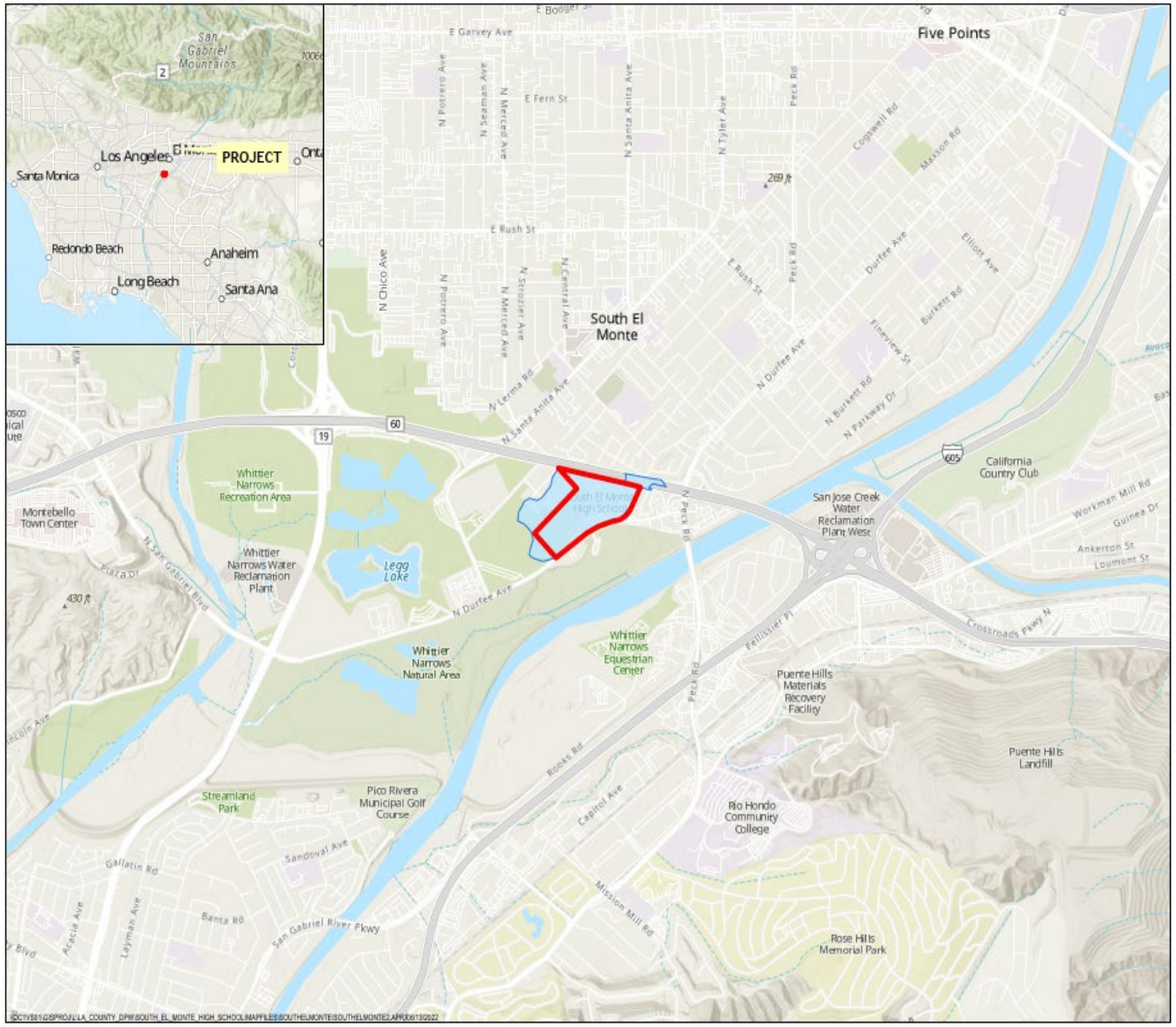
Previously TRP Award: Planning Support

Project Overview

The South El Monte High Stormwater Improvement Project provides nature-based solutions to treat and detain camps, highway, and neighborhood runoff.

- Primary Objective:
  - Improve water quality and contribute to attainment of water quality requirements.
- Secondary Objectives:
  - Improve flood management of the school.
- Project Status: SCW funding is being requested for Design, Construction, O&M
- Total Funding Requested: $8,867,600

Project Location



Notes:
1) Project area includes U.S. Army Corps of Engineers (USACE) property leased to school - boundary TBD.

South El Monte High School Feasibility Study
Vicinity Map
South El Monte, CA

Jacobs

County of Los Angeles, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, Esri, NASA, NGA, USGS, FEMA, Esri, CGIAR, USGS, County of Los Angeles, California State Parks, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS

Capture Area

Capture Area (Tributary Area)

Municipalities that will Benefit

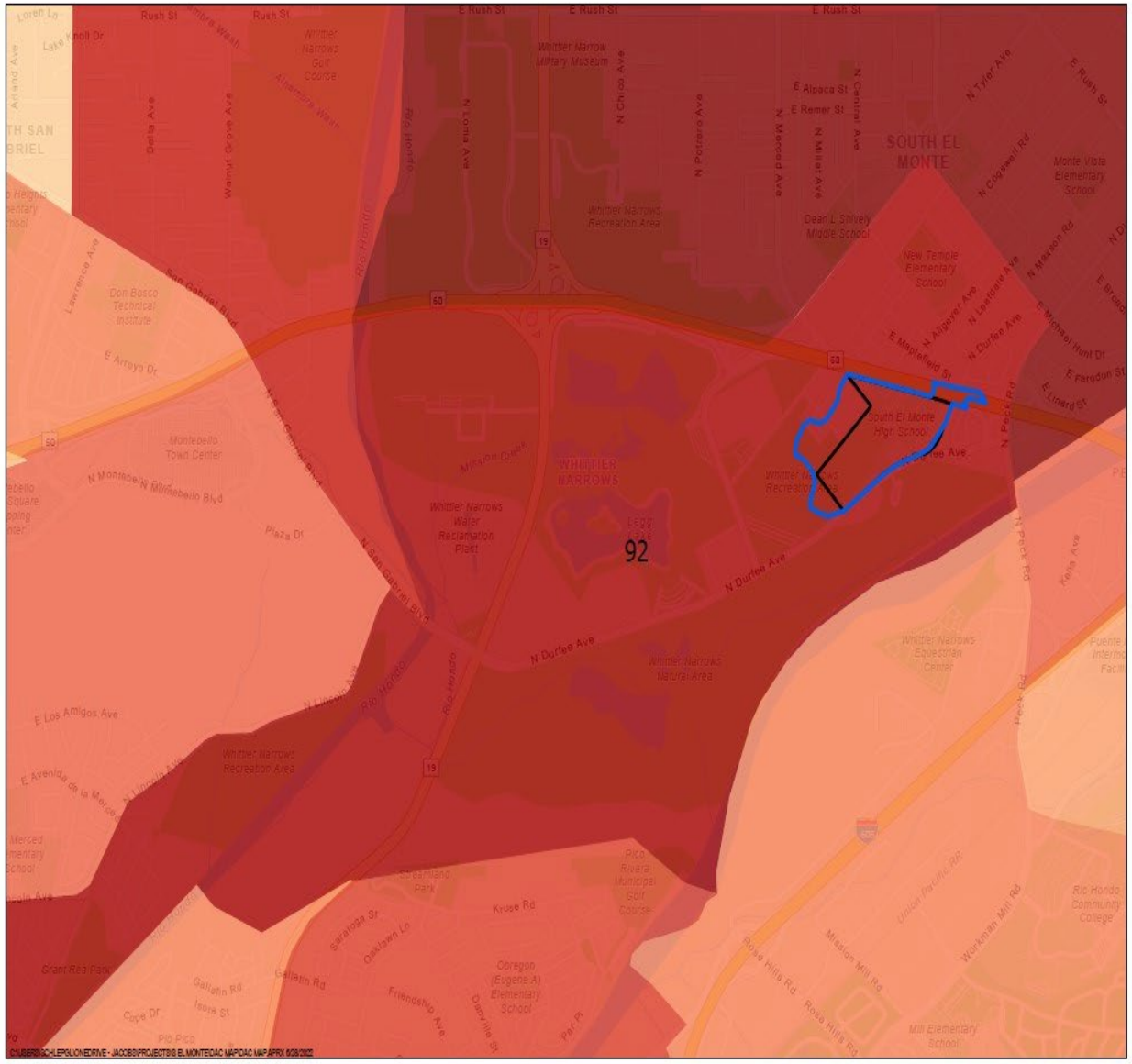
AREA	ACRES
Capture Area	65.87
Impervious Area	29.67
Pervious Area	36.20

Capture Area Summary

MUNICIPALITY	TRIBUTARY PERCENT	ACRES
South El Monte	60.30	39.72
Unincorporated Los Angeles County	39.70	26.15

Municipal Jurisdictional Areas within the Project Capture Area

Disadvantaged Communities that will benefit



Project Background

- Why was the Project Location selected?
  - South El Monte High School was selected to improve water quality, conserve water supply, and reduce flooding that occurs in the ball fields.

- How was the Project developed?
  - The Stormwater Investment Plan for the Rio Hondo Watershed Area identified a Technical Resource Program to develop a feasibility study for the South El Monte High School Stormwater Improvement Project.

Project Background

- Which regional water management plan includes the proposed project?
  - Integrated Regional Water Management Plan
- Description of benefits to municipality/municipalities
  - Improved water quality through the treatment of stormwater
- Description of benefits to Disadvantaged Communities
  - Improved water quality through the treatment of stormwater
  - Stormwater flood management, which will improve the reliability of access to sports fields
  - Enhanced park space and recreational opportunities, creating green spaces, increasing the number of trees, and improving public health

Partners

- Who are the implementation partners already identified?
  - Caltrans, City of South El Monte
- What communities or groups have expressed support for the project?
  - Active San Gabriel Valley, Eco Urban Gardens, Day One, El Monte – South El Monte Chamber
- Received a letter of concurrence from the municipality:
  - Letter of support from City of South EL Monte City Council
  - Letter of support and commitment from School District that includes concurrence with the plan for O&M and agreement to perform the O&M.
- A letter of concurrence from the Flood Control District is not needed
- Have engaged the appropriate vector control district about the project concept:
  - The local vector control agency has been engaged and comments incorporated.
  - The Project incorporates vector minimization in design, operations, and maintenance.
- The Project demonstrates strong local, community-based support.
  - See support Letters

Project Details – Site Plan

Current Site Conditions

- A geotechnical investigation was performed at the site in December 2017 where silty sands, lean clay, sandy silts, and poorly graded sands were discovered.
- Although no groundwater was encountered, the historical high groundwater depth is five feet below ground surface.
- Due to high groundwater table, infiltration is assumed to be infeasible.
- Additional geotechnical investigations will be performed during design to confirm infiltration feasibility.

Completed Studies/Analysis

- Geotechnical Investigation (for solar canopy foundations)
  - Performed by Moore Twining Associates, Inc
- Hydrology
  - Calculated using the Los Angeles County Watershed Management Modeling System (WMMS) 2.0
- Right-of-Way
  - School District is in the process of obtaining permit from the U.S. Army Corps of Engineers for improvements on their property
- Utilities
  - Existing as-built maps were used to map the project area

Description of BMP Alternatives

- Option 1 – Stormwater Harvesting
- Option 2 – Discharge To Sanitary Sewer
- Option 3 – Discharge to Whittier Narrows Nature Area
- Option 4 – Nature-Based BMPs
  - Option 4a – Distributed Nature-Based BMPs only
  - Option 4b – adds Stormwater Harvesting

- **Option 4a with an optional water capture component was selected as the preferred alternative.*

Cost & Schedule

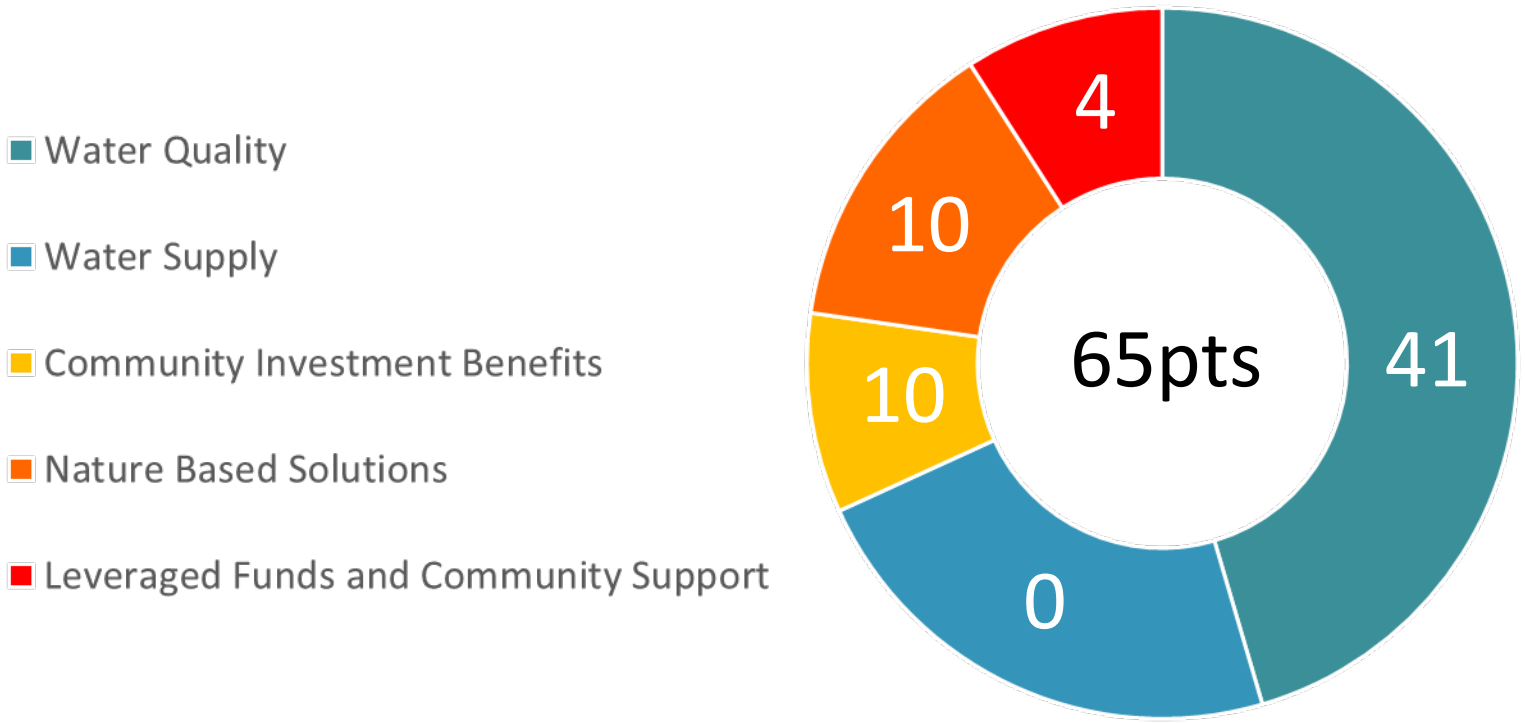
Phase	Description	Cost	Completion Date
Planning	Feasibility Study (Completed)	$300,000	11/2023
Design	Public Outreach	$50,000	03/2026
Design	Pre-Construction Monitoring	$50,000	03/2026
Design	Final Design (30/60/90/100)	$966,000	04/2026
Design	Environmental Planning (CEQA) and Permitting	$56,800	06/2026
Design	Agency Management (Design)	$142,000	06/2026
Construction	Construction	$ 5,680,000	11/2027
Construction	Construction Administration and Design Support	$ 568,000	11/2027
Construction	Agency Management (Construction)	$ 85,200	11/2027
Funding:	**Planning, Design, & Construction**	**$ 7,898,000**	

Funding Request

Year	SCW Funding Requested	Phase	Efforts during Phase and Year
Total Year 1 (FY24-25)	$1,264,800	Design	Environmental Planning (CEQA), Final Design (30/60/90/100), Public Outreach, Agency Management, Pre- Construction Monitoring
Total Year 2 (FY25-26)	$6,333,200	Construction	Construction, Construction Administration and Design Support, Agency Management
Total Year 3 (FY26-27)	$423,200	O & M; Monitoring	First year of project O&M; first year of project monitoring
Total Year 4 (FY27-28)	$423,200	O & M; Monitoring	Second year of project O&M; second year of project monitoring
Total Year 5 (FY28-29)	$423,200	O & M; Monitoring	Third year of project O&M; second year of project monitoring
Total Funding Requested: $8,867,600			

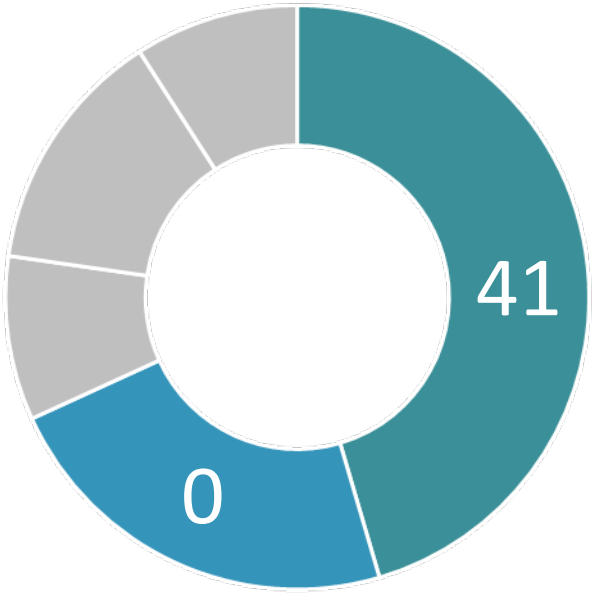
Additional funding requested beyond 5 years (beyond FY29- 30+) will be requested in the future

Preliminary Score (Not confirmed by the Scoring Committee)



The Scoring Committee confirmed this score on 12/7/2023

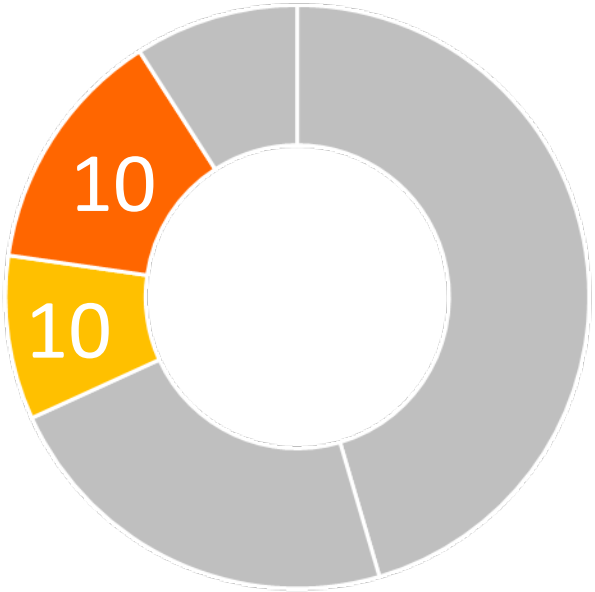
Water Quality & Water Supply Benefits



The Scoring Committee confirmed this score on 12/7/2023.

- Wet Weather Water Quality
  - Primary mechanisms for Water Quality: flow & volume reduction, filtration, and biological activity
  - Wet weather flow
  - Tributary Area = 65.87 acres
  - 24-hour BMP Capacity Cost in $Millions = 4.1664 acre-feet/$5.68 Million = 0.734 (not including Construction Administration/Design Support or Agency Management)
- Primary Pollutant: 96.9% load reduction in zinc (12.75lb/yr)
- Secondary Pollutant: 87.7% load reduction in E. coli (4.027e+12)
- Yearly additional annual Water Supply Volume = N/A
- Water Supply Use (irrigation, water recycling, water supply aquifer) = N/A
- Water Quality Cost Effectiveness: Score 41

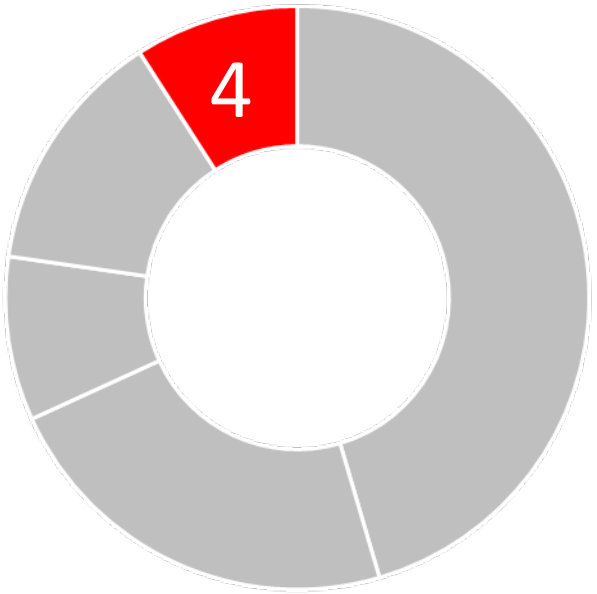
Community Investment Benefits and Nature Based Solutions



The Scoring Committee confirmed this score on 12/7/2023

- Community Investment Benefits
  - Provides 6 community investment benefits:
    - Improves flood management
    - Enhances open park space
    - Enhances recreational opportunities
    - Provides greening of schools
    - Reduces heat island effect/increases shades
    - Increases carbon reduction/sequestration and improves air quality
- Nature Based Solutions
  - Mimics natural processes to slow, detain, and capture water in a manner that protects and enhances habitat and usable open space
  - Utilizes natural materials including soils and native vegetation

Leveraging Funds and Community Support



The Scoring Committee confirmed this score on 12/7/2023

- Leveraging Funds
  - ➢Cost Share: N/A
- Community Support
  - Local Support: strong local, community-based support


Questions?
Jesse Williams
Lena Luna

Washington Park Stormwater Capture Project

Funding Program (Infrastructure Program/Technical Resources Program)

Fiscal Year 2024-2025

Rio Hondo Watershed Area

James Tong, PE, Engineer

Christian Herencia, PE, QSD/QSP, QISP

WASC Approved TRP

Project Overview

The Project Will Provide An Underground Storage/Infiltration Gallery, Dry Wells, An Enhanced Ephemeral Basin & Drainage System Improvements.

- *Primary Objective: Improving Local Water Quality, Restoration & Rehabilitation*
- *Secondary Objectives: Provide Flood Control Management*
- *Project Status: SCW Funding Request For Planning, Design, Construction & Initial O&M.*
- *Total Funding Requested: $12,649,271*

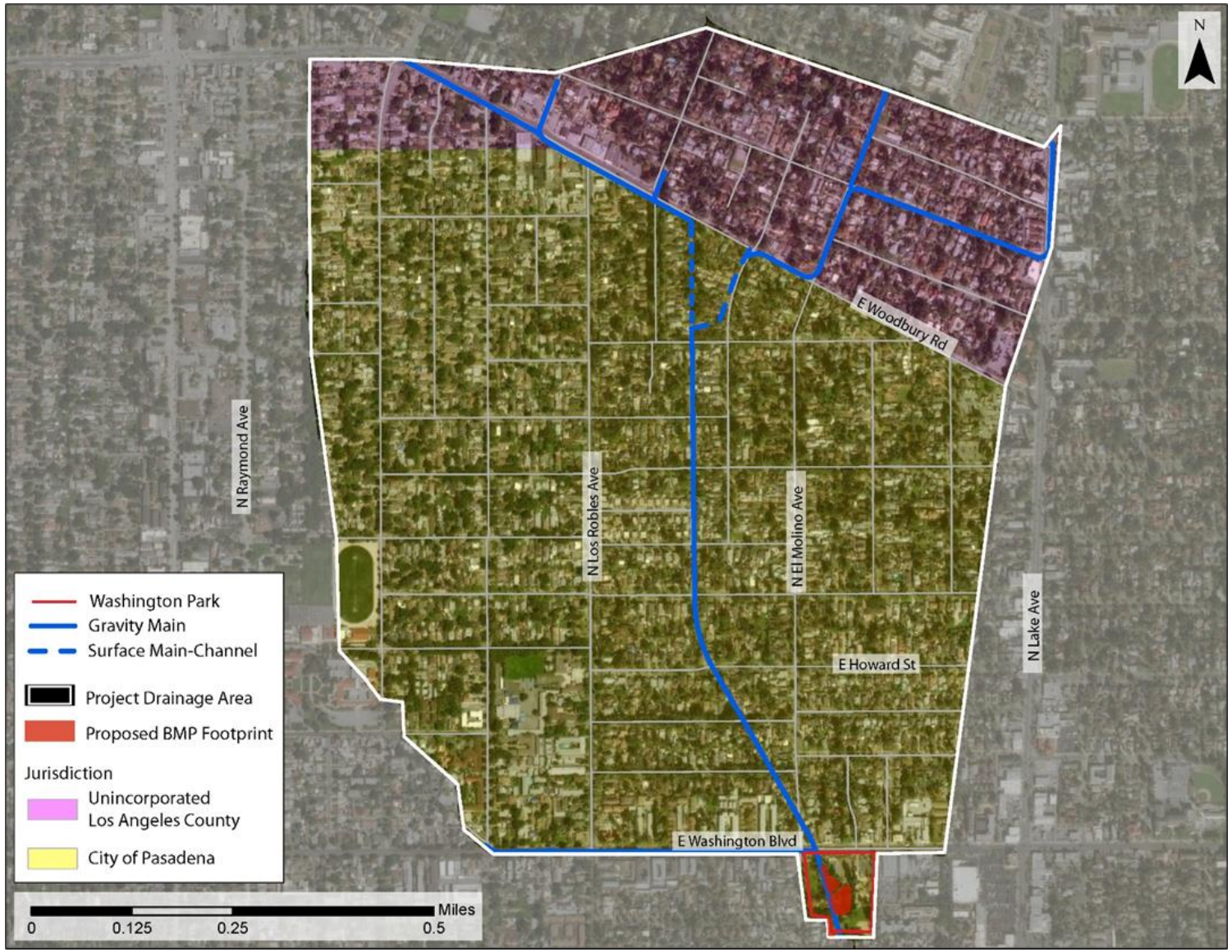
Project Location

700 E. Washington Boulevard - Google Earth Imagery, 2023

Existing Site Conditions:

- *Open Green Area*
- *Tennis Court*
- *Basketball Court*
- *Handball Court*
- *Retention/infiltration Basin*
- *Youth Baseball Field*
- *Playground*
- *Picnic Areas*
- *Parking Lot*
- *New Community Center*

Watershed Area



Location of Washington Park within the Hydrologic Tributary Footprint

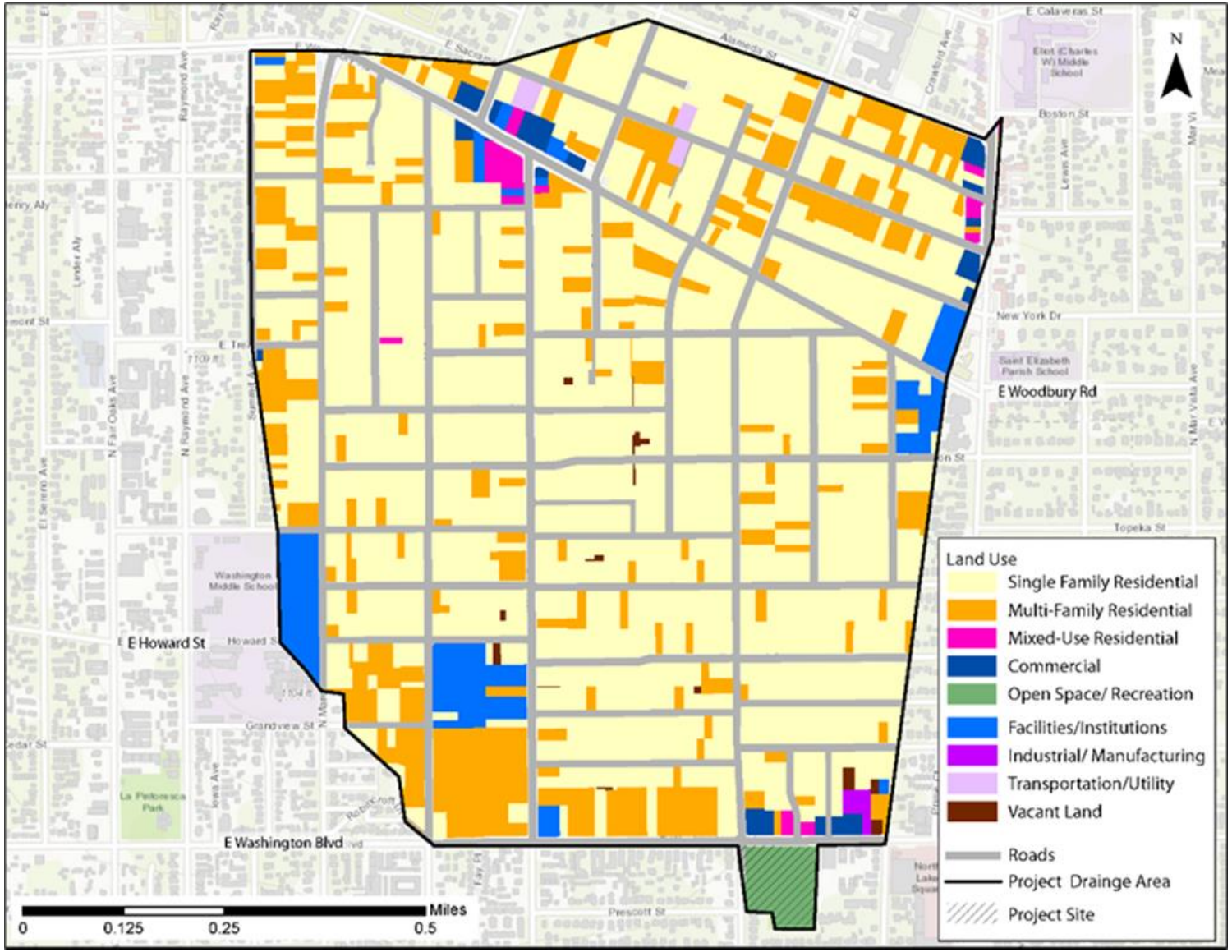
MAP SHOWING PROJECT DRAINAGE AREA:

- *Total Capture Area 527 Acres*
  - *245 acres Impervious*
  - *282 acres Pervious*

MUNICIPALITIES THAT WILL BENEFIT

- *Unincorporated Los Angeles County (22.7% Tributary)*
- *City of Pasadena (77.3% Tributary)*

Land Use Map



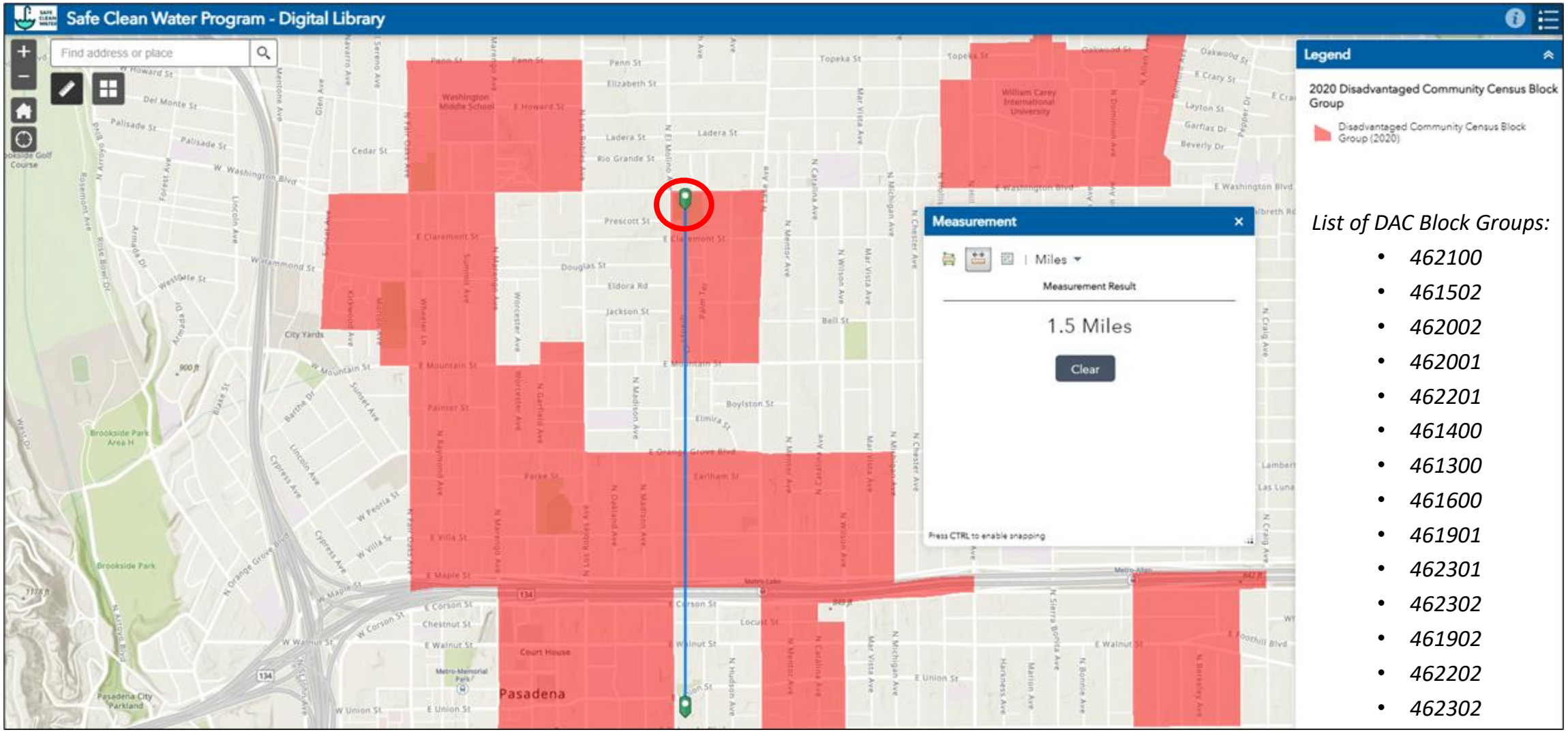
Land Use Within Hydrologic Tributary Area

Land Use Map

Land Usage Types:

- *Single Family Residential*
- *Multi-Family Residential*
- *Mixed-Use Residential*
- *Open Space/Recreation*
- *Commercial*
- *Facilities/Institutional*
- *Industrial/Manufacturing*
- *Transportation/Utility*
- *Vacant Land*

Disadvantaged Communities Map



Disadvantaged communities relative to Washington Park (SCWP, 2023).

Project Background

- Why was the Project Location selected?
  - *Identified as a medium priority project in Pasadena's Stormwater Master Plan, the CIP, and identified as a critical need in the **Upper Los Angeles River Enhanced Watershed Management Plan (EWMP)**.*
- How was the Project developed?
  - *Diversion of Eastside Drain, to **improve water quality, and provide community benefits**.*
- Which regional water management plan includes the proposed project?
  - *Pasadena Drainage Master Plan**, UPSGR/RH Rivers Integrated Regional Water Management (IRWM) Plan**.*
- Description of benefits to municipality/municipalities
  - ***Improve water quality** to the Rubio Wash & Rio Hondo River.*
  - *Will achieve >97% **reduction in pollutant loads** for the Primary Pollutant Zinc and >96% reduction for the secondary pollutant, Copper.*
  - ***Increased resiliency to flooding** by providing additional green infrastructure and capacity to mitigate existing flooding issues between the park and the adjacent properties.*
- Description of benefits to Disadvantaged Communities
  - *Enhanced habitat and aesthetic value through the planting of **native vegetation and new trees**.*
  - *Increase in shade, reduction of the heat island effect and provide for carbon sequestration.*
  - *Additional benches enhance **passive recreational** uses to the park.*
  - ***Educational signage** to promote environmental stewardship and community awareness.*

Partners

- Who are the implementation partners already identified?
  - *City of Pasadena.*
- What communities or groups have expressed support for the project?
  - *Councilmember, District 5-J.Rivas*
  - *Orange Heights Neighborhood Association*
  - *Day One-Community Based Organization, Arlington Gardens (NPO), Community Letter-B.Bier*
  - *City of South Pasadena (PWD), Pasadena Water and Power (PWP)*
  - *The Metropolitan Water District of Southern California (MWD)*
- Have you received a letter of concurrence from the municipality (if needed)
  - *N/A. The City of Pasadena is the Primary Project Proponent.*
- Have you received a letter of concurrence from the Flood Control District (if needed)
  - *The Flood Control District has been notified. However, the project poses no impact to any of their Storm Drain facilities.*
- Have you yet engaged the appropriate vector control district about the project concept?
  - *Yes. The San Gabriel Valley Mosquito & Vector Control District has been engaged.*

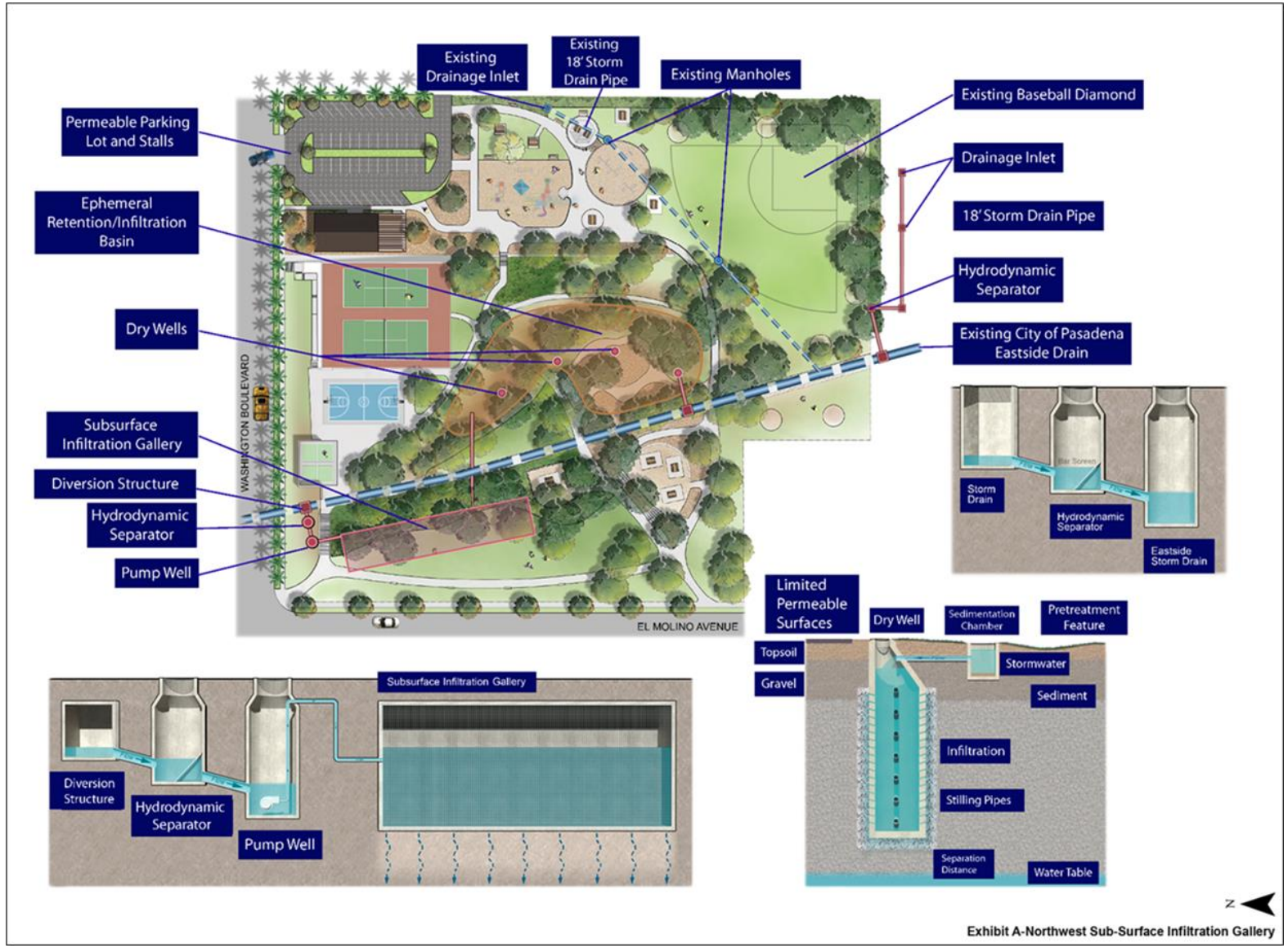
Project Details

Washington Park is owned by the City of Pasadena.

- *No right-of-way acquisition is needed*
- *A temporary construction easement may be required at the southeast portion of the property.*

Project was revised based on community input, to incorporate the following:

- *Infiltration/storage gallery under the ("GREEN" area) of the park.*
- *The enhancements to the retention/infiltration basin will remain as originally proposed.*
- *Flooding has been identified at the southeast portion of the property (adjacent to the baseball field).*



Project Conceptual Layout

Cost & Schedule

Phase	Description	Cost	Completion Date
Planning	Planning & Engineering	$1,440,900.00	06/2025
Planning	Utility Research & Coordination	$192,200.00	06/2025
Planning	Permitting & CEQA Compliance	$480,300.00	12/2025
Design	Geotechnical Report	$96,100.00	01/2026
Design	Hydrology Study	$96,100.00	05/2026
Bid/Award	Project Release, Advertisement, Contingency	$1,600,975.00	08/2026
Design	Pre-Project Monitoring	$96,100.00	08/2026
Construction	Mobilization and Demobilization	$640,390.00	08/2027
Construction	Construction Management	$960,585.00	08/2027
Construction	On-site Construction	$6,403,900.00	08/2027
TOTAL		**$12,007,550.00**	

The capital cost for the project has been determined to be at **$12,007,550.00**.

The anticipated Annual Operations and Maintenance Costs is **$452,601.00**, while the anticipated Annual Monitoring Costs is **$94,560.00**.

The Life Cycle Cost (50-year life span) equates to approximately **$1,047602.76** annualized life-cycle cost, based on the SCWP module.

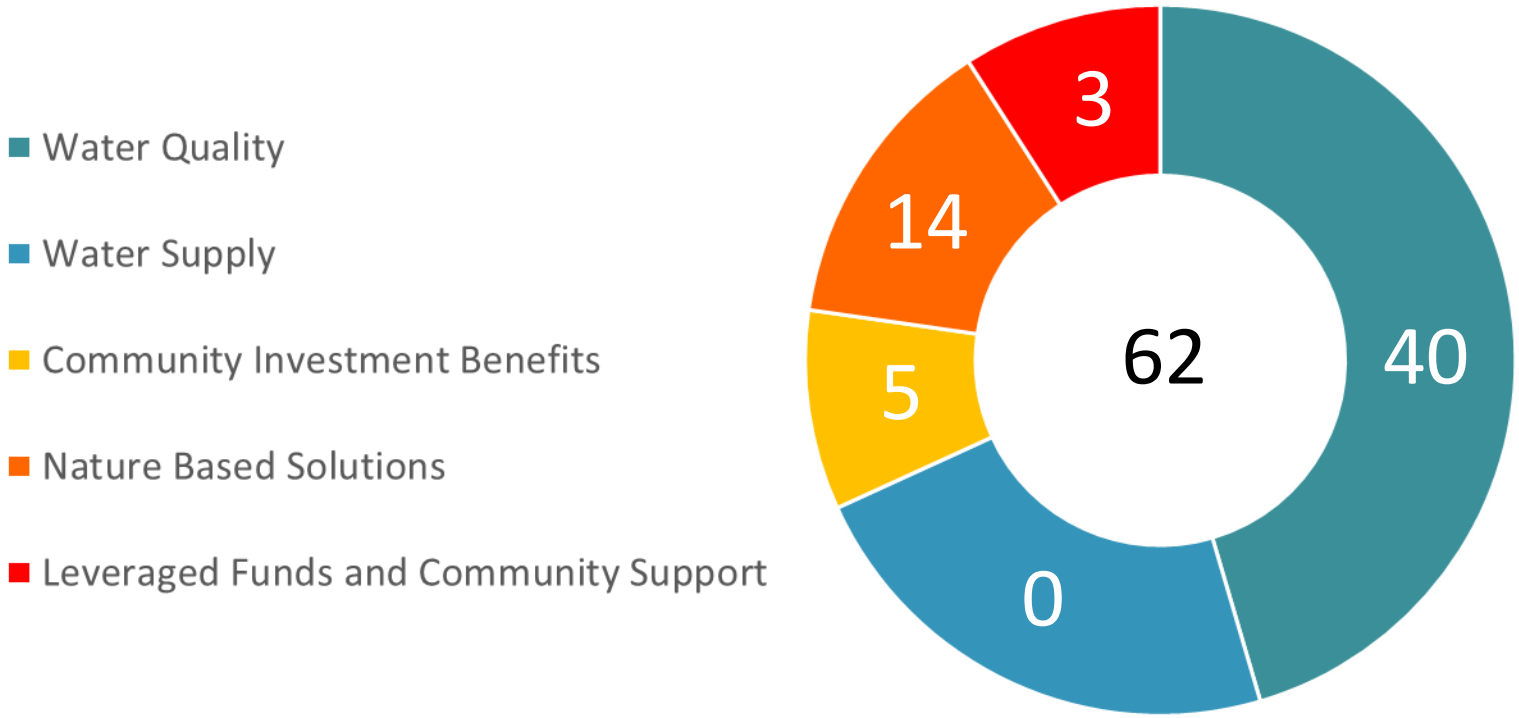
Funding Request

Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	$2,113,400.00	Planning	• Planning & Engineering 2024-2025 • Utility Research & Coordination 2024-2025 • Permitting & CEQA Compliance 2024-2025
2	$288,300.00	Design	• Geotechnical Report 2025-2026 • Hydrology Study 2025-2026 • Pre-storm Monitoring 2025-2026
3	$9,605,850.00 -$4,002,437.50 = $5,603,412.50	Bid/Award, Construction, and Contingency	• Project Release, Advertisement, 2026-2027 • Mobilization & Demobilization 2026-2027 • Construction Management 2026-2027 • On-site Construction 2026-2027
4	$320,860.50 +$4,002,437.50 = $4,323,298.00	Construction, O & M*, and Post-storm Monitoring	• On-site Construction 2027-2028 • Operation & Maintenance, 2027-2028 • Post-storm Monitoring 2027-2028
5	$320,860.50	O & M*, and Post-storm Monitoring	• Operation & Maintenance, 2028-2029 • Post-storm Monitoring 2028-2029
TOTAL	**$12,649,271.00**		

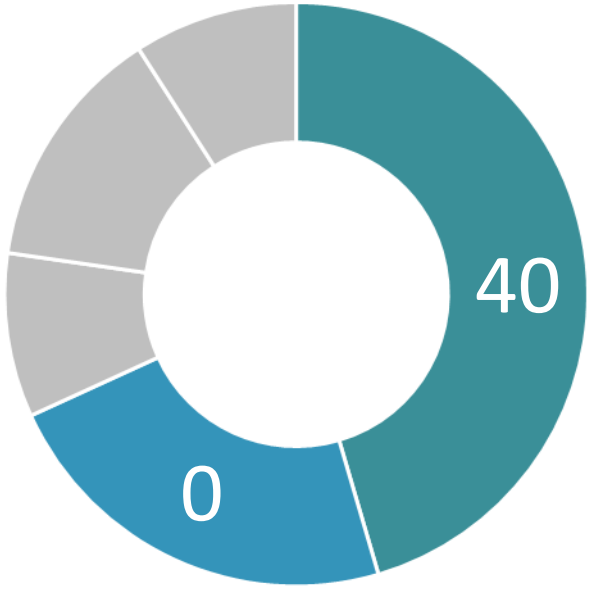
* Initial O&M request at 50% for Years 4 and 5. Long Term O & M to be requested separately for future years.

Score as confirmed by the Scoring Committee

The Scoring Committee confirmed this score on 10/23/2023



Water Quality & Water Supply Benefits

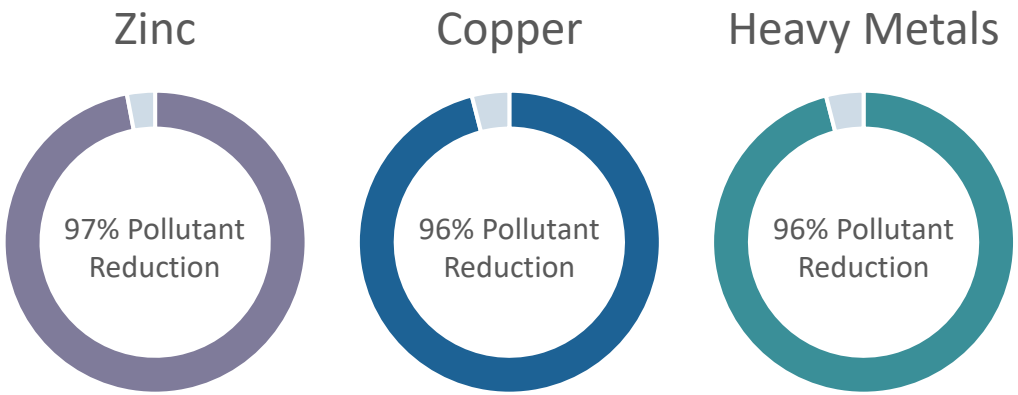


The Scoring Committee confirmed this score on 10/23/2023

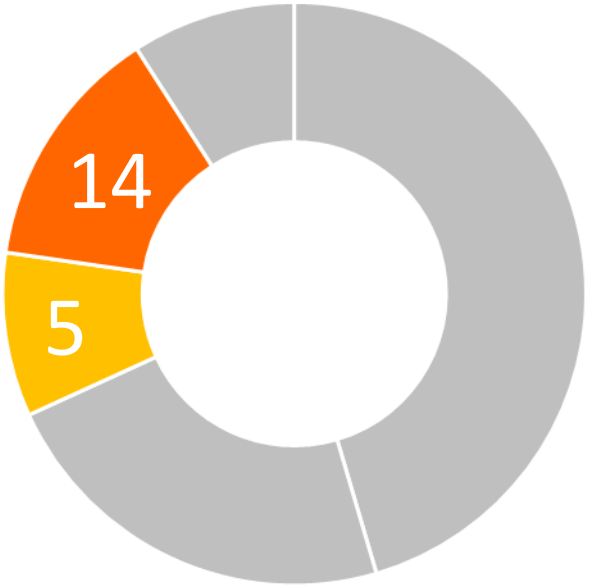
The project proposes to provide the Following:

- *A diversion to a Hydrodynamic Separator and Pump,*
- *An Infiltration Gallery with Dry Wells,*
- *Temporary Detention/Infiltration Basin w/Dry Wells,*
- *Biofiltration, and Permeable Pavement.*

- *Wet Weather Project (Recommended).*
- *Large Tributary Area (**Impervious: 245 ac, Pervious: 282 ac**).*
- *The Project can infiltrate **67% of the 85th Percent Storm Event**.*



Community Investment Benefits and Nature Based Solutions



The Scoring Committee confirmed this score on 10/23/2023

Community Investment Benefits

Community education on climate resiliency and environmental stewardship.

Improving the storm water infrastructure, reduce potential flooding issues, improve flood risk mitigation and management.

Park greening (bioswales, native landscaping and replacement of impermeable surfaces).

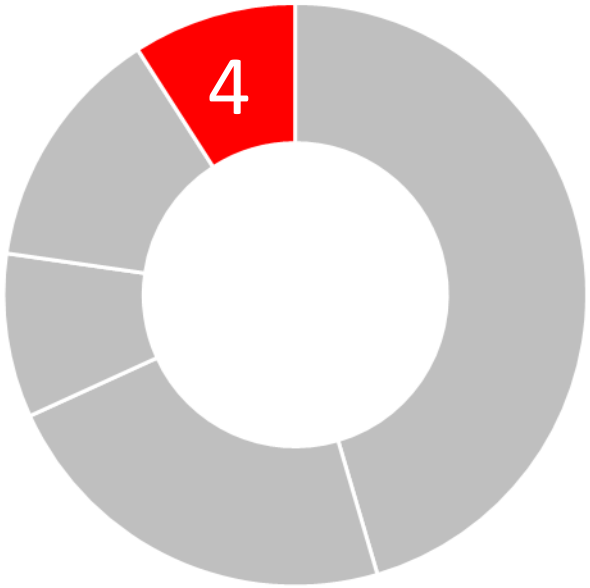
Opportunity for public education in the form of on-site educational materials, such as placards and interpretive signs that will be installed around the Project.

Nature Based Solutions

Implements natural processes or mimics natural processes to slow, detain, capture, and absorb/infiltrate water to protect, enhance habitat, green space.

The project utilizes natural materials such as soils and vegetation with a preference for native vegetation. The project also removes Impermeable Area from the existing parking lot.

Leveraging Funds and Community Support



The Scoring Committee confirmed this score on 10/23/2023

$ *Leveraging Funds*

- *Grants, local funding options and stormwater fees.*

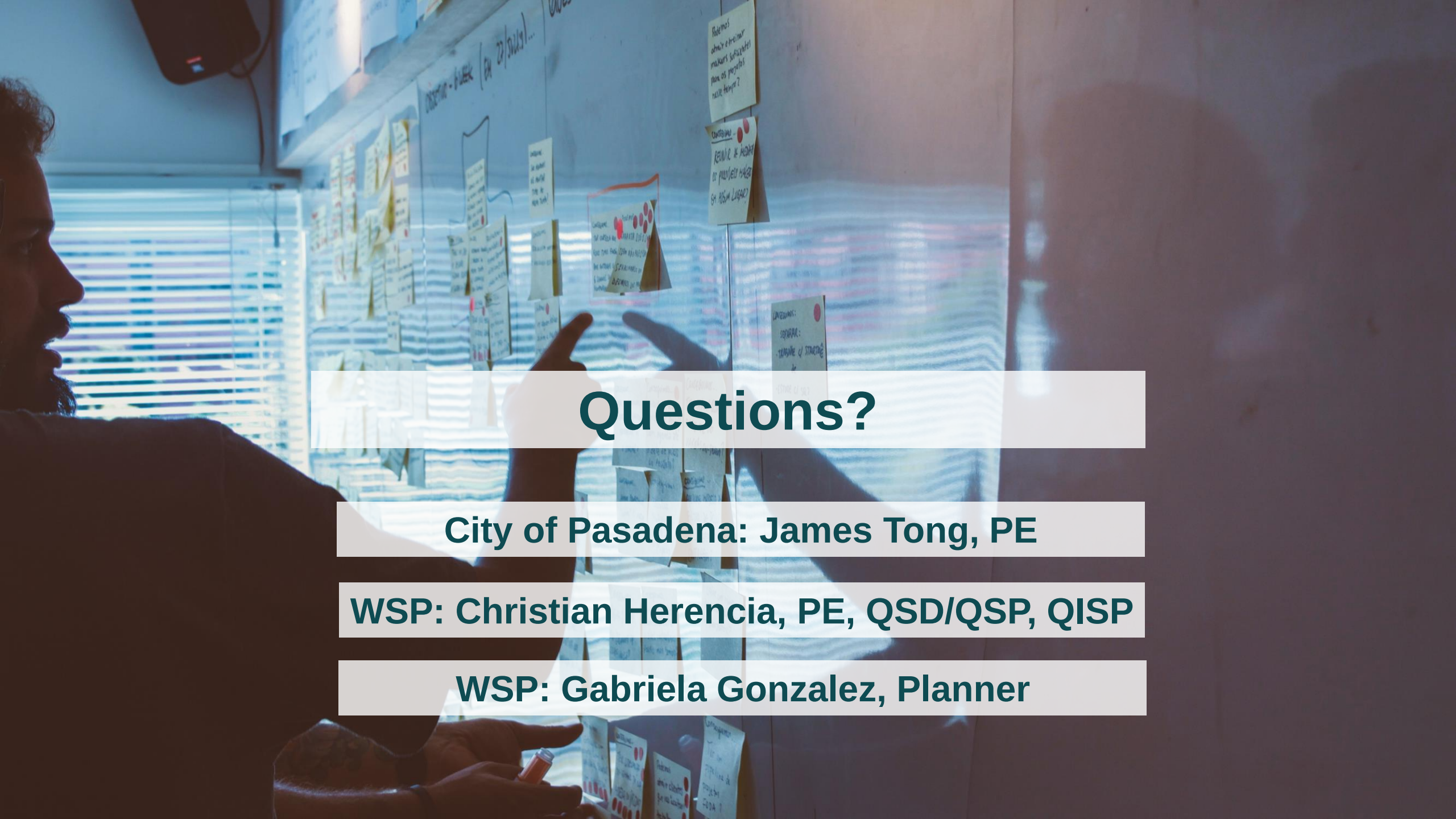
<u>Potential sources include:</u>

- *The Clean Water State Revolving Fund (CWSRF).*
- *The Water Infrastructure Finance and Innovation Act (WIFIA).*
- *Proposition 1 – Round 2 Integrated Regional Water Management (IRWM) Implementation Grant Program.*
- *The FEMA Building Resilient Infrastructure and Communities (BRIC) Grant Program.**
- *Currently 0% Funding Matched.*

Community Support

- *Community Outreach conducted on January 25, 2023.*
- *20 Minute Presentation, 4 Poster Board Stations, Open Forum for Question & Answer Session.*
- *Received 8 Community Support Letters.*

*FEMA BRIC interrupted post-NOI



Questions?

City of Pasadena: James Tong, PE

WSP: Christian Herencia, PE, QSD/QSP, QISP

WSP: Gabriela Gonzalez, Planner