Arroyo Seco Projects

Infrastructure Program

Fiscal Year 2023-2024

Watershed Area – Upper Los Angeles River

Project Lead – City of South Pasadena

Presenter Names – Ted Gerber & Anteneh Tesfaye

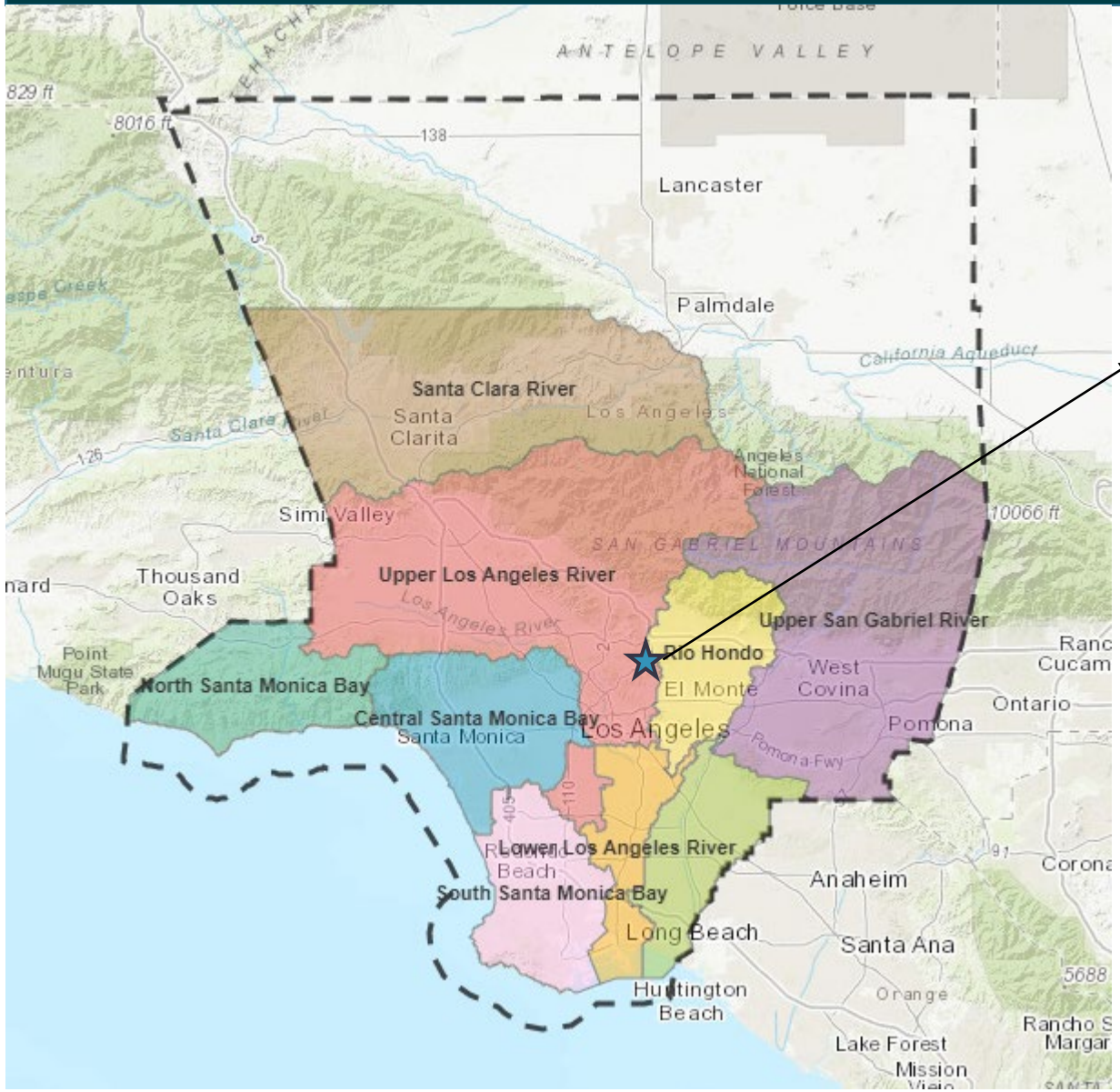
Previously Awarded TRP – Yes

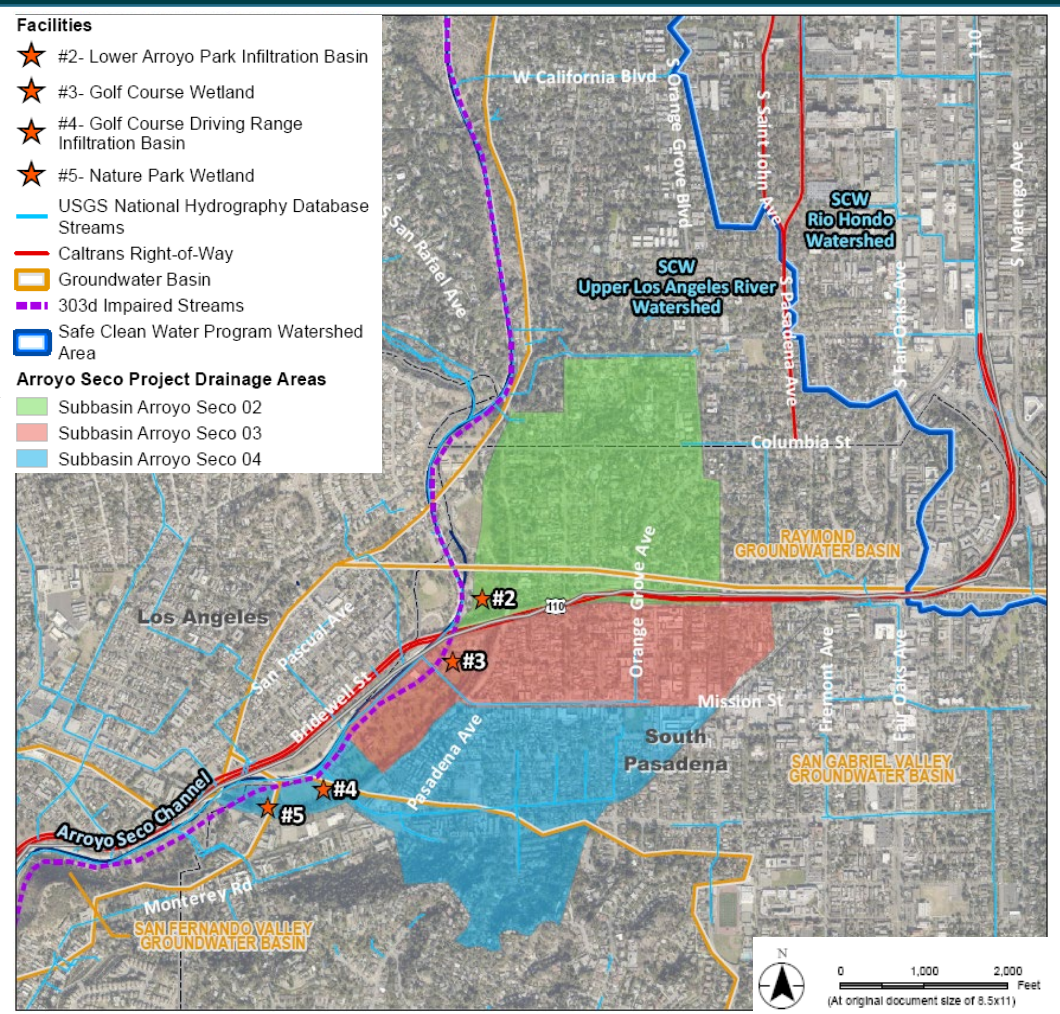
Project Overview

Three regional stormwater capture & treatment facilities located within open space near the Arroyo Seco Channel in South Pasadena.

- Primary Objective
  - Capture and/or treat stormwater runoff and dry weather flows to achieve compliance with the EWMP goals.
- Secondary Objectives
  - Enhance water supply by providing opportunities for groundwater recharge through infiltration
- Project Status: Planning, Design, Construction
- Total Funding Requested: $33,995,086.06

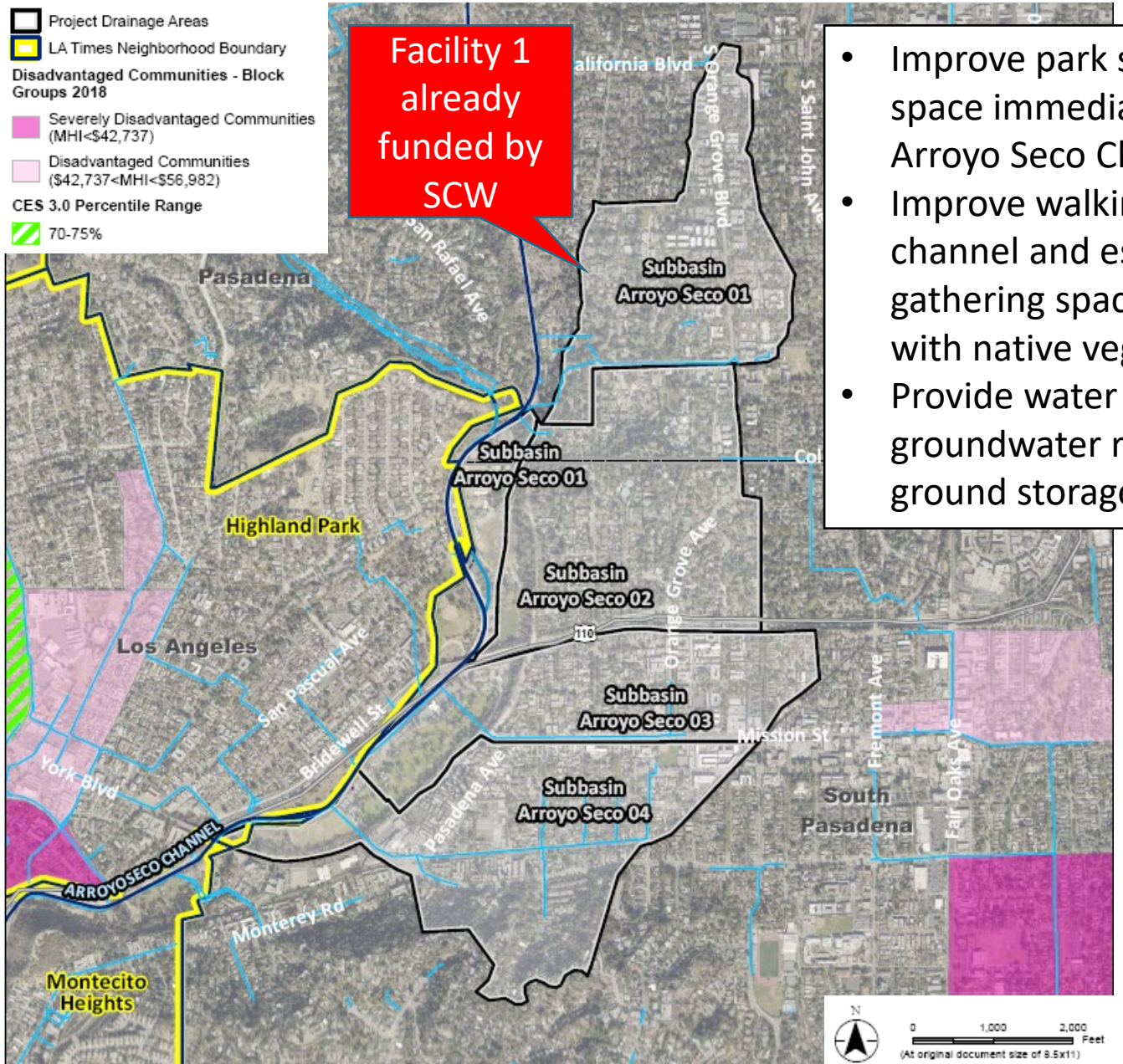
Project Location





- Proposed facilities are located along the Arroyo Seco Channel within an existing sports field and park, golf course, driving range and nature park with open space to develop infiltration galleries and wetlands.

Disadvantaged Community Map



- Improve park space and golf course space immediately adjacent to the Arroyo Seco Channel
- Improve walking trail alongside the channel and establishment of gathering spaces and rest areas with native vegetation and trees.
- Provide water supply benefits by groundwater recharge and above-ground storage

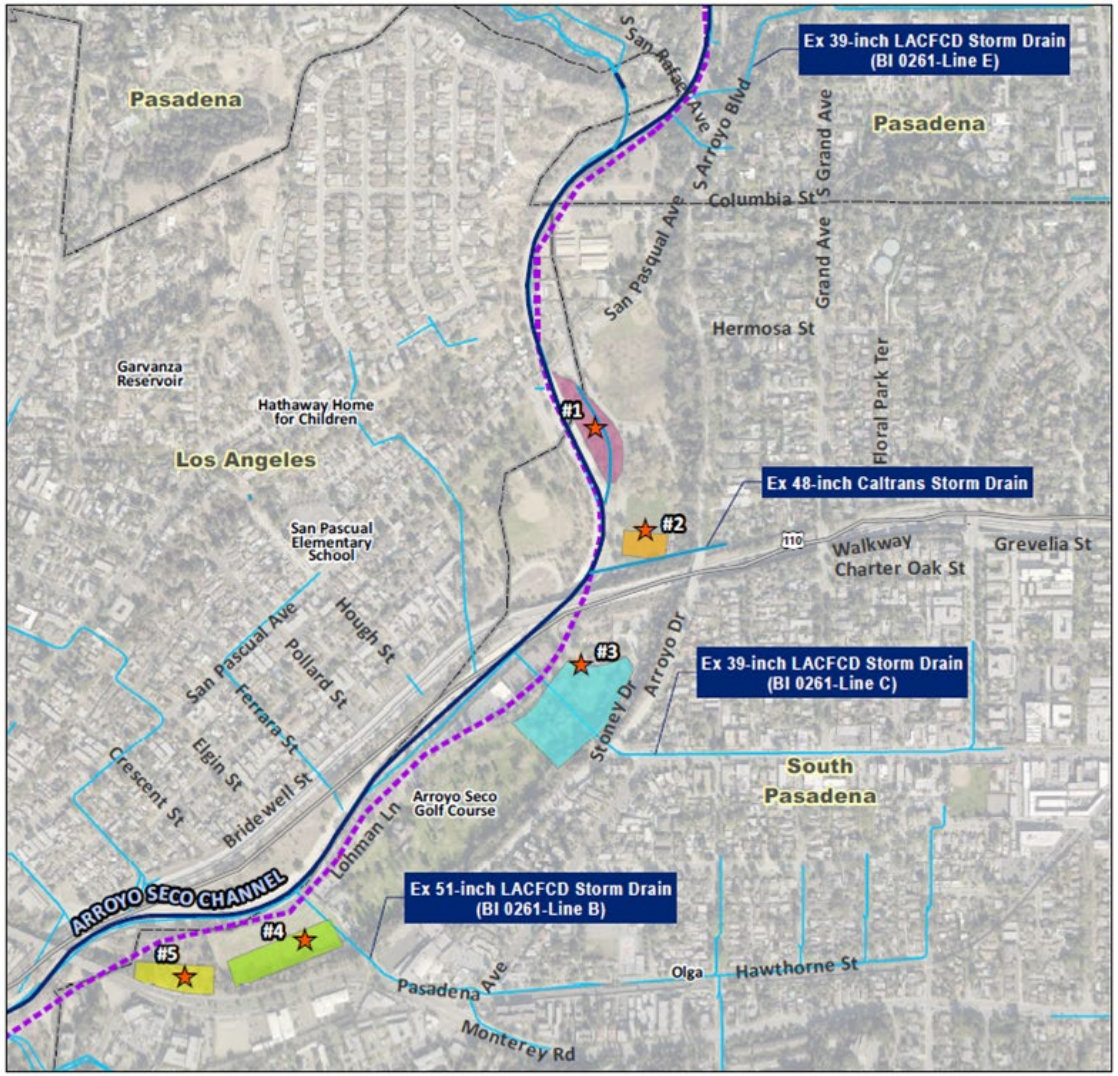
Project Background

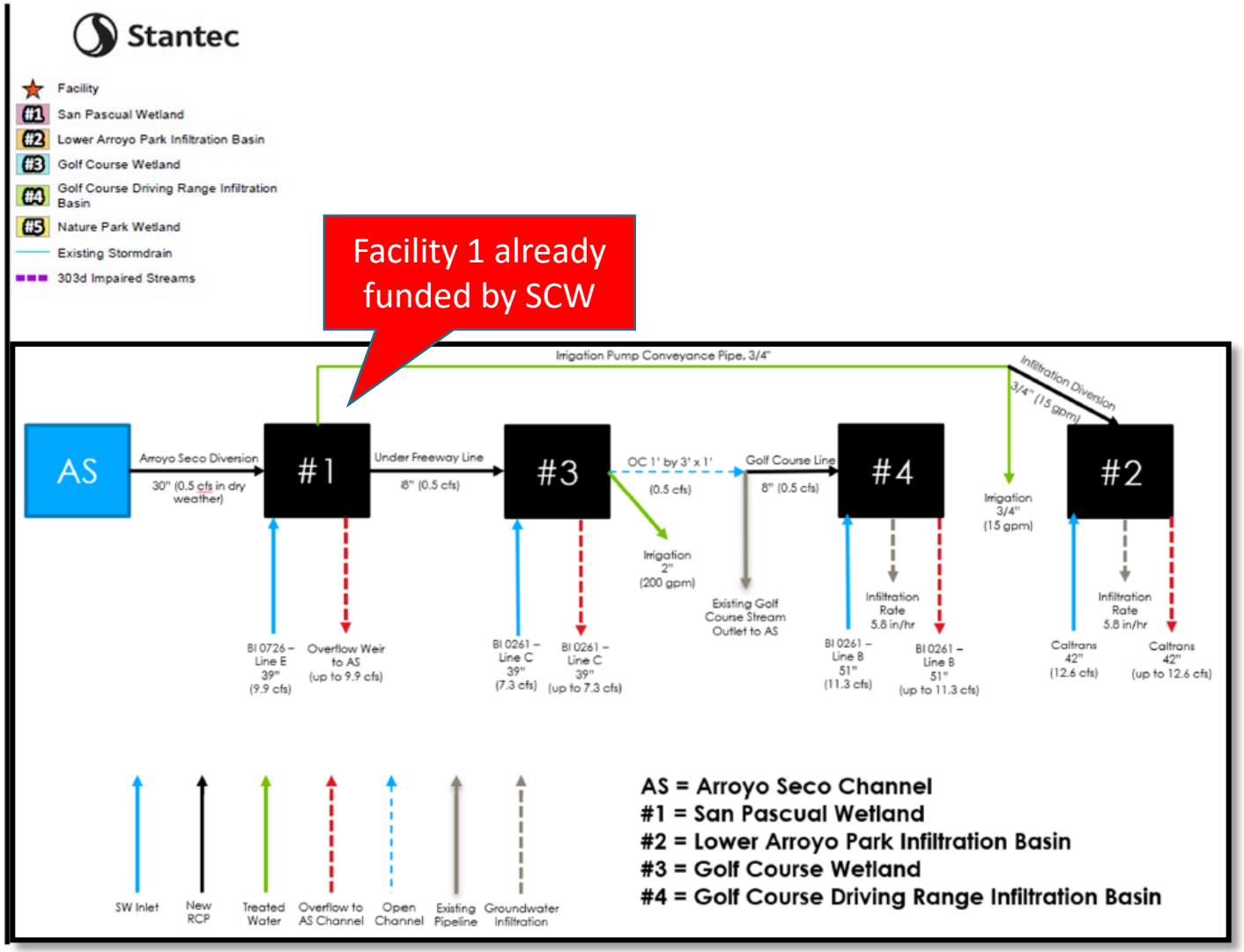
- Project (Lower Arroyo Park) was mentioned in ULAR EWMP (2016).
- Then, it was modified as a set of projects proposed for funding to conduct a Feasibility Study under the SCW TRP and approved under the ULAR WASC SIP in December 2019.
- City of South Pasadena will have
  - enhanced water supply through infiltration and treatment
  - enhanced park space, soccer fields, Arroyo Seco Golf Course
  - increased drought tolerant/native landscaping
  - New native vegetation, extended walking paths and educational signage

Partners

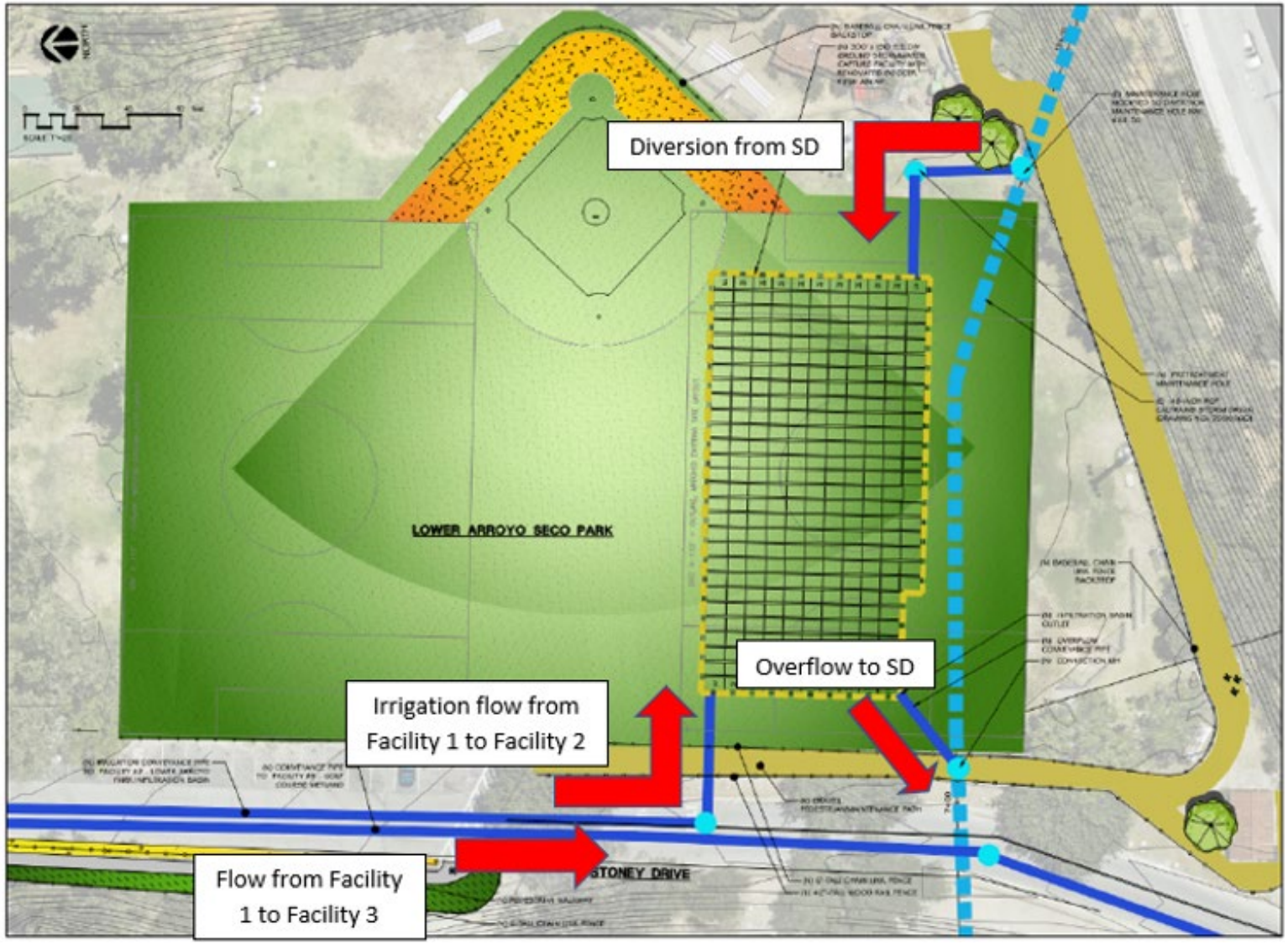
- City of South Pasadena and LACFCD are implementation partners already identified.
- Caltrans and Active SGV have expressed support for the project.
- Received a letter of concurrence from the Flood Control District on 7/28/2022.
- Appropriate vector control district (GLACVCD) has not been notified about the project concept.

Project Details - Overview

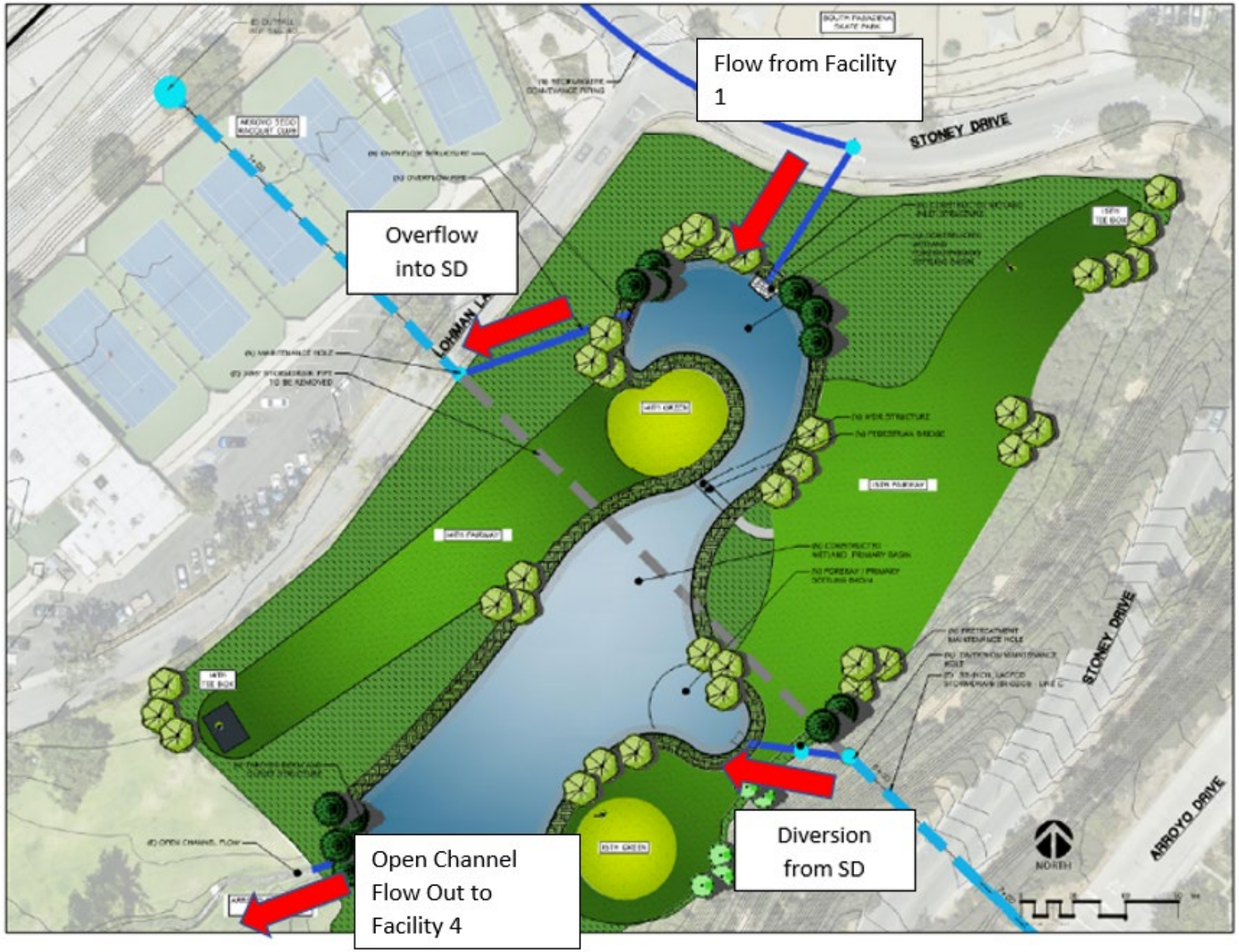




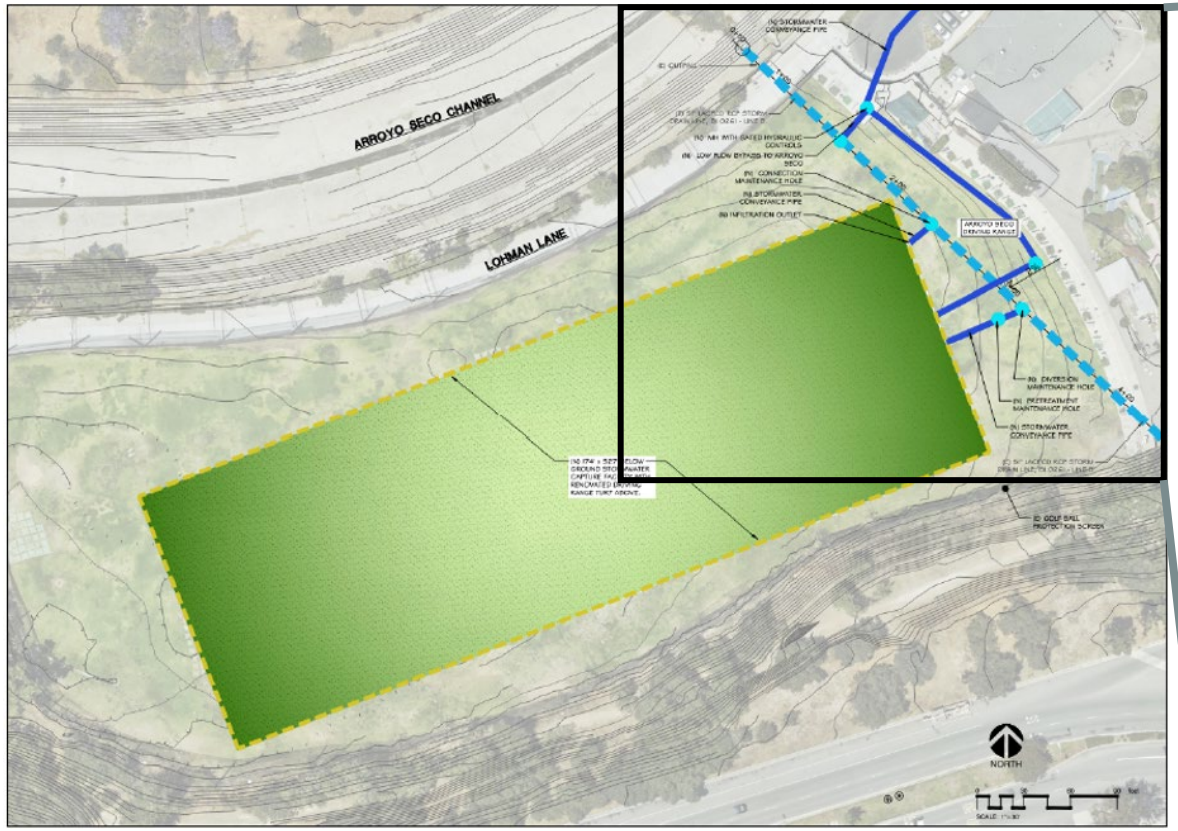
Project Details – Facility 2

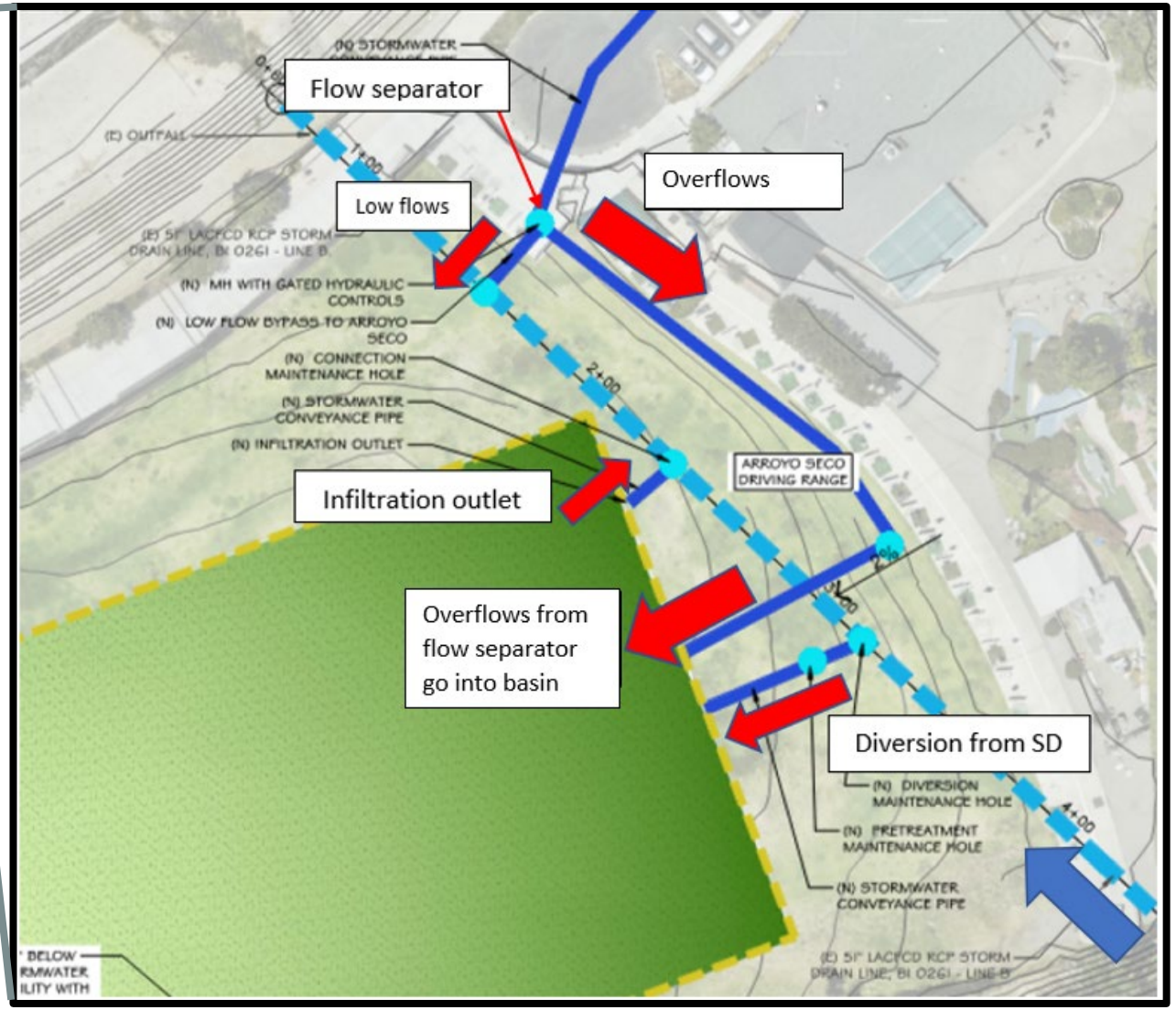


Project Details – Facility 3



Project Details – Facility 4

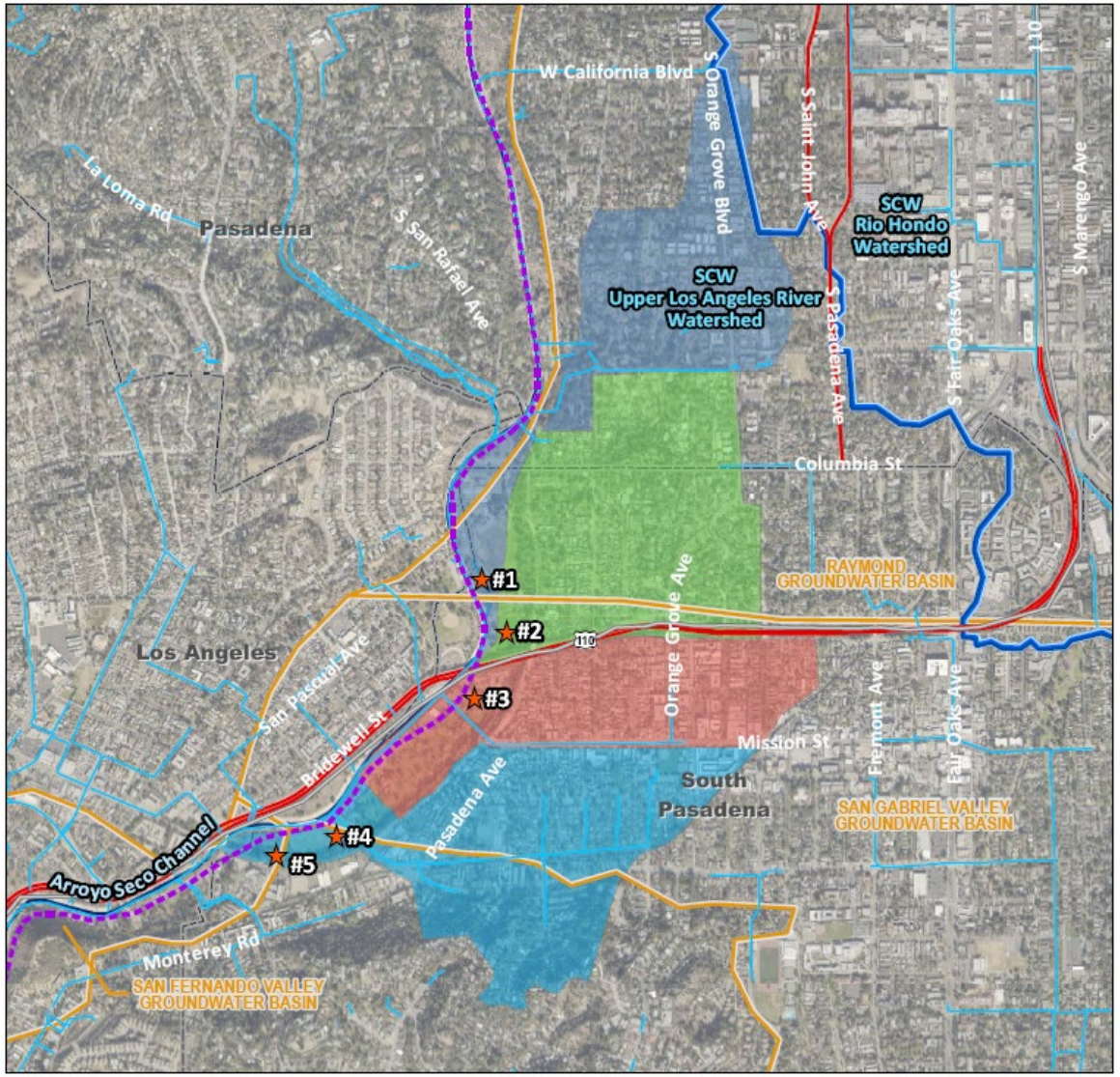




Project Details – Current Site Conditions

- A geotechnical investigation was conducted on 7/15/21
  - Infiltration Rate: 5.84 in/hr
  - Depth to Groundwater: > 50 ft
- A desktop study was completed for the initial engineering analysis of existing site conditions. This included analyzing the site ownership, slope, soil type, site size, proximity to stormwater infrastructure, depth to groundwater, and environmental challenges.
  - This site was deemed ideal due to the following:
    - The sites are located within the Main San Gabriel Groundwater Basin.
    - The sites are owned by the City of South Pasadena.
    - The sites have mild slopes (=10%).
    - The depth to groundwater is greater than 50 feet.
    - The surface soils at the sites promote infiltration.
    - The sites are in close proximity to existing storm drains.
    - The sites do not have plans for future development.

Project Details – Alternatives Evaluated



Criteria	Weight (%)	Alternative 1 (Facilities 1, 2, 3, & 4)	Alternative 2 (Facilities 1, 3, & 5)	Alternative 3 (Facilities 1 & 5)
Constructability	10%	3	4	4
Stormwater capture volume	30%	5	3	2
Prioritizing NBS	10%	5	4	2
Capital cost	20%	3	4	5
Public acceptance	15%	3	3	3
Regulatory requirements	15%	4	3	3
100% Weighted Total	**100%**	3.8	3.4	3.1
Alternative Rankings		#1	#2	#3
Criteria Rank: 1 - Least Favorable; 5 - Most Favorable				

Cost & Schedule

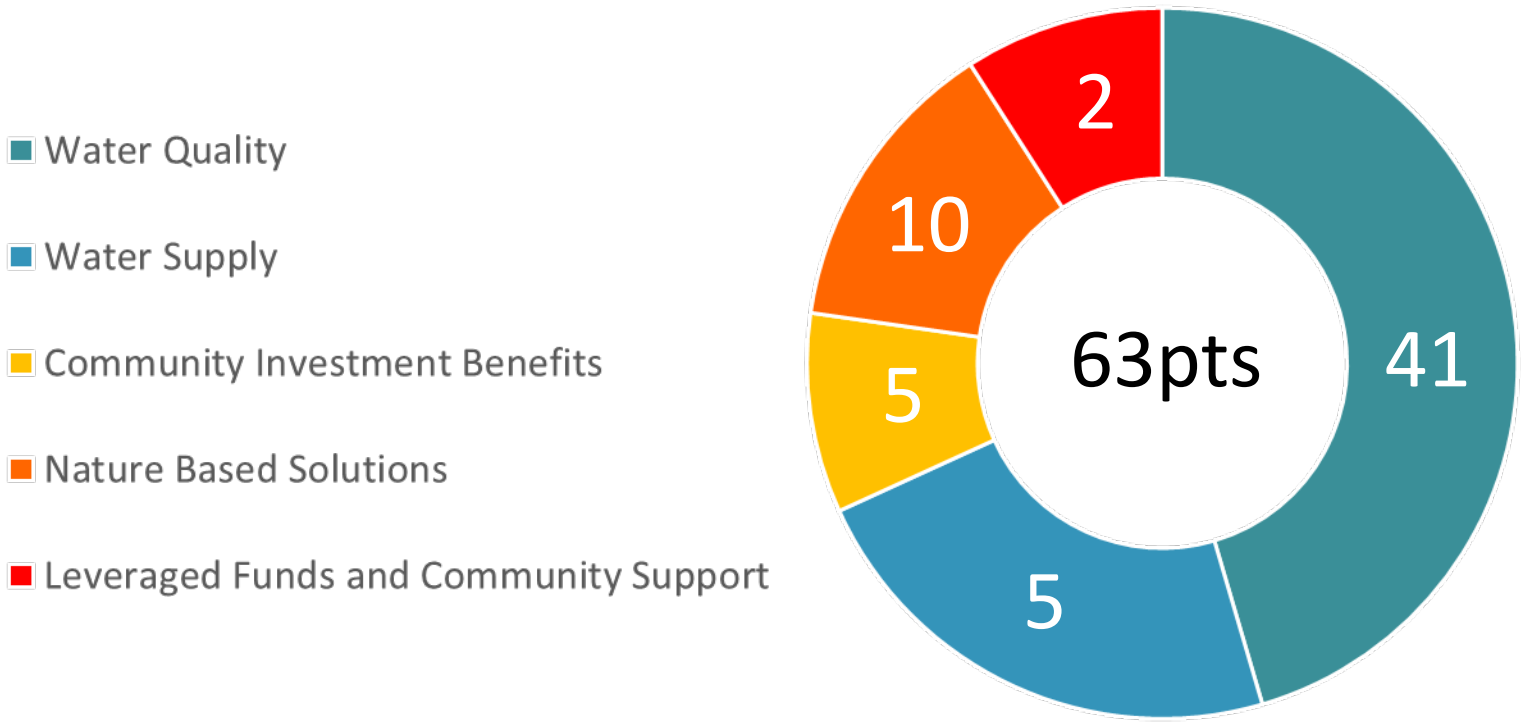
Phase	Description	Cost	Completion Date
Design	Assuming approval occurs in June 2023, the development of 30% design drawings will begin in July 2023. It is assumed that 100% design drawings will be finished by December 2025.	$2,305,000.00	12/2025
Planning	For contingency costs including construction management, permit allowance, escalation costs, environmental compliance monitoring and unallocated contingencies.	$8,205,710.00	07/2028
Construction	Assuming design finishes in December 2025, the project will be submitted to SCW for construction funding. Construction is expected to begin in July 2026.	$23,484,376.06	07/2028
TOTAL		**$33,995,086.06**	

- Total Life-Cycle Cost: $41,897,069.36 over 50 years
- Annualized Life-Cycle Cost: $1,746,154.99
- Annual Cost Breakdown for Maintenance and Operation: $329,333.00

Funding Request

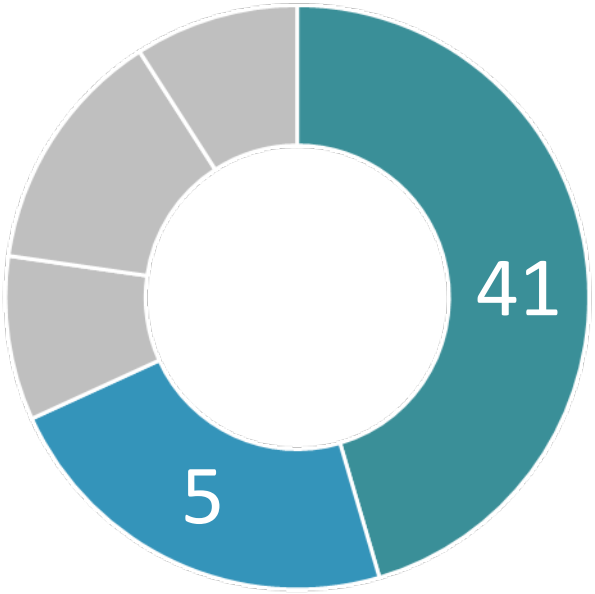
Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	$1,000,000.00	Design	Begin 30%-100% design drawing and permitting during 2023-2024.
2	$1,305,000.00	Design	Complete 30%-100% design drawing and permitting during 2024-2025.
3	$2,735,236.67	Planning	Facility 3 associated construction management, permit allowance, escalation costs, environmental compliance monitoring and contingency risk.
3	$5,988,125.35	Construction	Funding for Facility 3 construction including mobilization and demobilization allowances
4	$2,735,236.67	Planning	Facility 2 and Nature Park Bioswale associated construction management, permit allowance, escalation costs, environmental compliance monitoring and contingency risk.
4	$5,988,125.35	Construction	Funding for Facility 2 and Nature Park Bioswale construction including mobilization and demobilization Allowances
5	$2,735,236.66	Planning	Facility 4 associated construction management, permit allowance, escalation costs, environmental compliance monitoring and contingency risk.
5	$11,698,125.36	Construction	Funding for Facility 4 construction including mobilization and demobilization allowances
TOTAL	**$33,995,086.06**		

Score as confirmed by the Scoring Committee



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

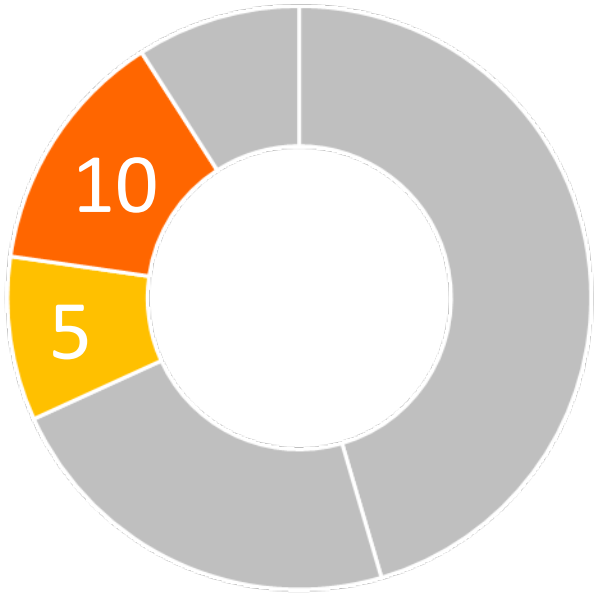
Water Quality & Water Supply Benefits



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

- Primary mechanisms that achieve Water Quality and Water Supply Benefits claimed
- The project will be sized to capture, bioretain, and infiltrate runoff associated with the 24-hour, 85th percentile storm.
- Wet Weather
- **Tributary Area:** 437 acres
- **24- hour Capacity:** 16.36 acre-feet
- **10-year Primary Pollutant Reduction (Total Copper):** 86.5%
- **10-year Secondary Pollutant Reduction (Total Zinc):** 84.5%
- **Annual Water Supply Volume:** 108.7 acre-feet/year
- Water Supply Aquifer in **San Gabriel Valley Groundwater Basin**
- Water Supply Cost Effectiveness: $11,118.60/acre-feet
- Water Quality Cost Effectiveness:

Community Investment Benefits and Nature Based Solutions

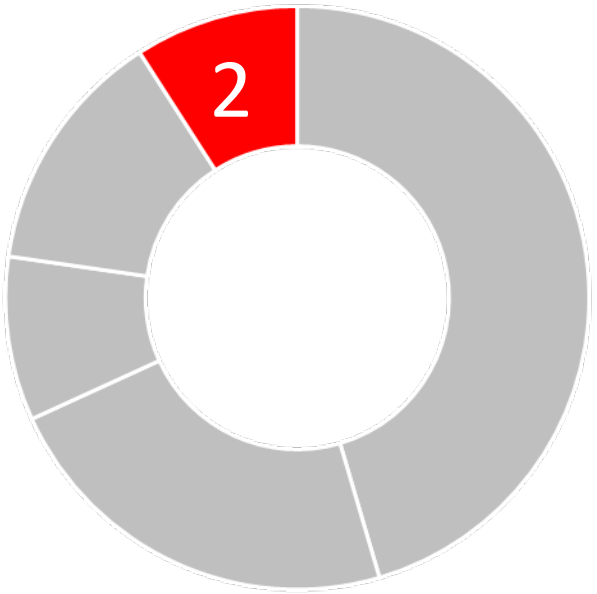


The Scoring Committee confirmed this score on **12/1/2022**

- Community Investment Benefits
  - Enhance park space through addition of native plants
  - Construction of trails along Arroyo Seco Channel for wetland projects
  - Enhance existing soccer fields, golf course and driving range
  - Increase number of trees and vegetation to increase shade and reduce local heat island effects

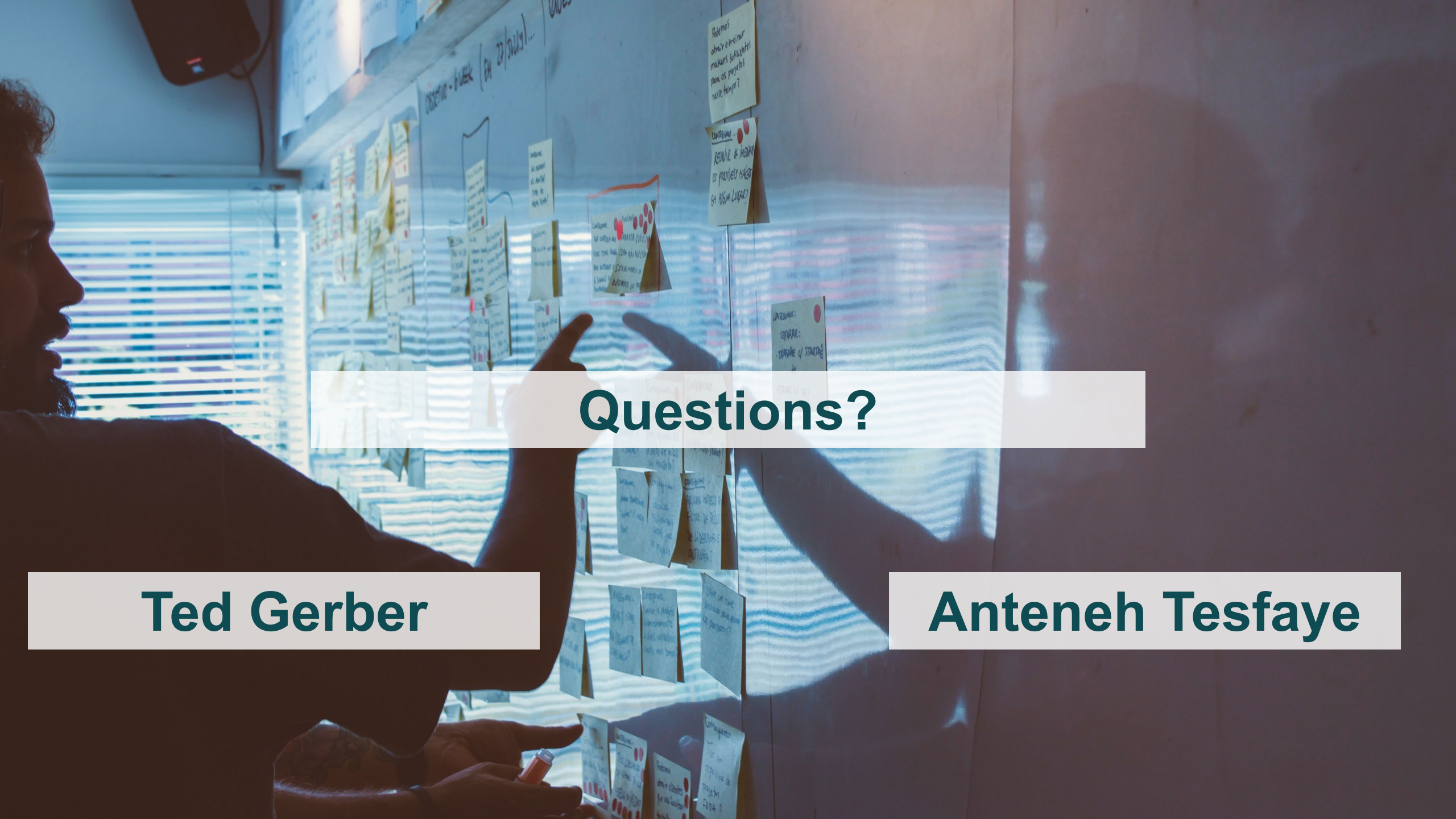
- Nature Based Solutions
  - Installation of a below-ground infiltration system to decrease the impact of pollutants in stormwater
  - Installation of constructed wetlands as a natural detention basin for native vegetation
  - Addition of native vegetation, including trees and shrubs.

Leveraging Funds and Community Support



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

- Leveraging Funds
  - This project is in the preliminary design phase and therefore other funding sources have not yet been explored or secured
  - No funding matched
- Community Support
  - This project is supported by Caltrans and Active SGV.
  - City of South Pasadena and LACFCD met with several key stakeholders during 12/2021 and implemented into the preliminary design report.
  - If funded, this project will continue outreach to the impacted community to seek input on construction scheduling and other potential impacts.


Questions?
Ted Gerber
Anteneh Tesfaye

Bowtie Demonstration Project

Infrastructure Program

Fiscal Year 2023-2024

Upper Los Angeles River Watershed Area

The Nature Conservancy & CA State Parks

Kelsey Jessup, The Nature Conservancy

Previously Awarded TRP: No

Project Overview

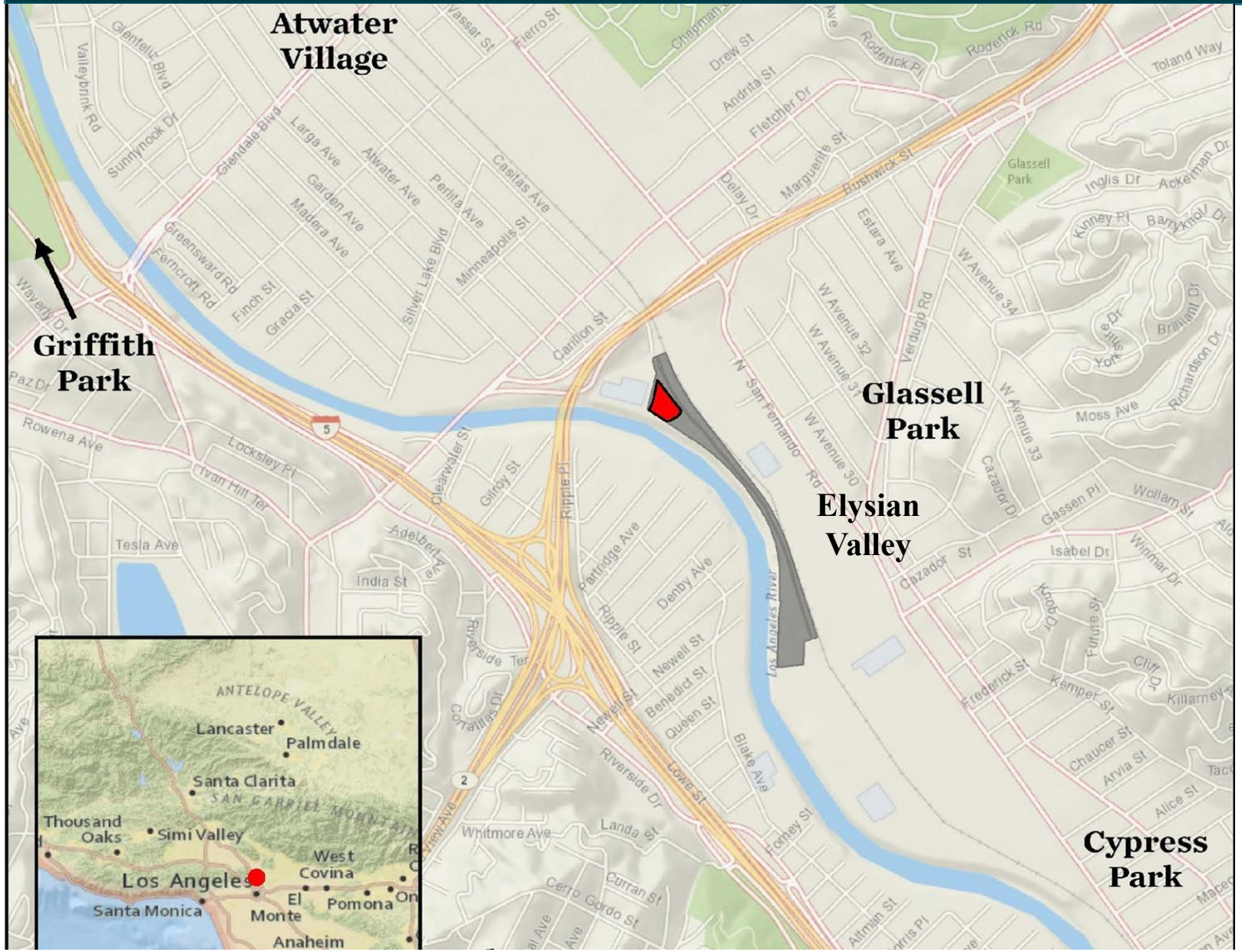
The Project is a multi-benefit stormwater management and habitat enhancement demonstration project along the LA River.

- Primary Objective: Improve water quality
- Secondary Objectives: Enhance LA River habitat
- Project Status: SCW funding is being requested for Construction and O&M.
- Total Funding Requested: $7,164,575.00

Project Location

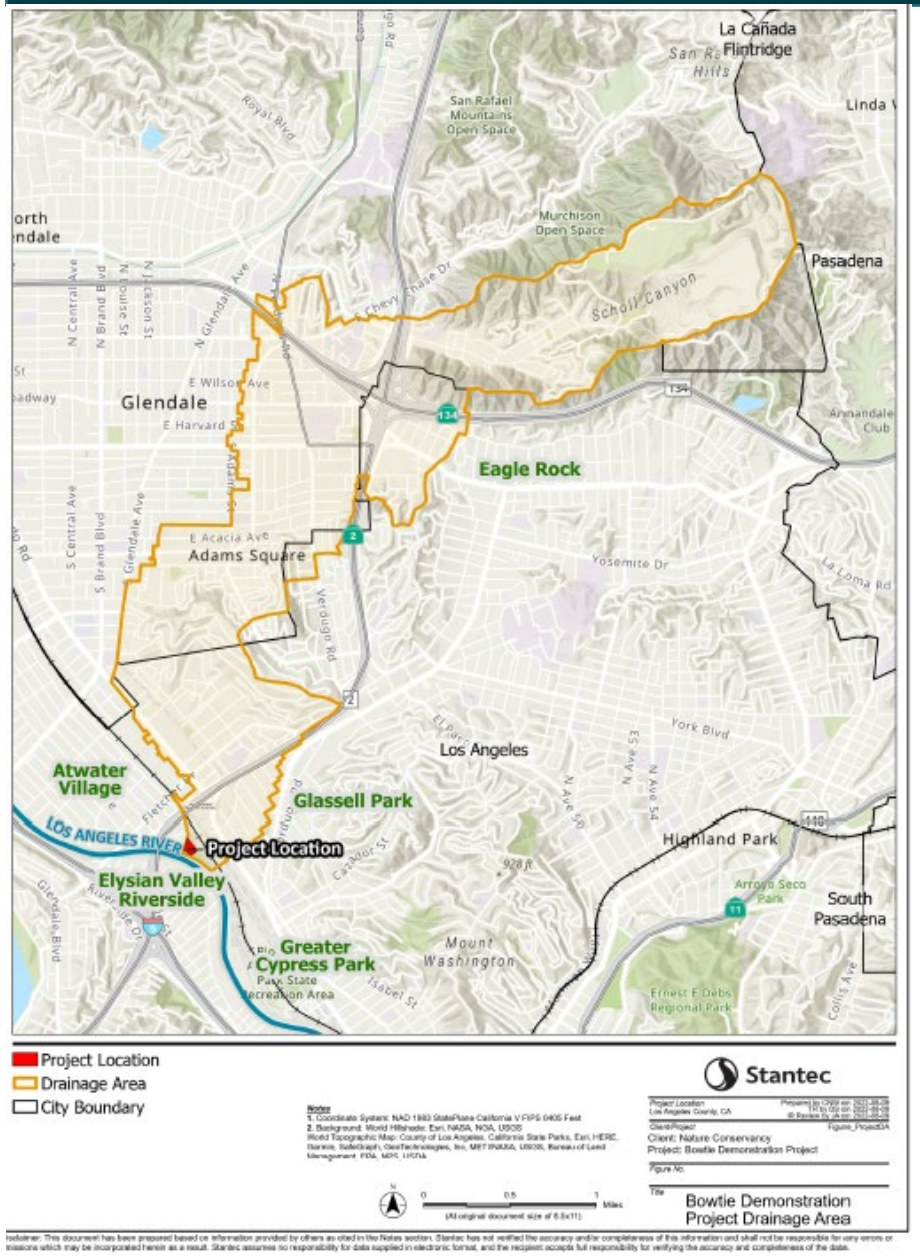
The Project is located within the Upper Los Angeles River Watershed Area

Project Location



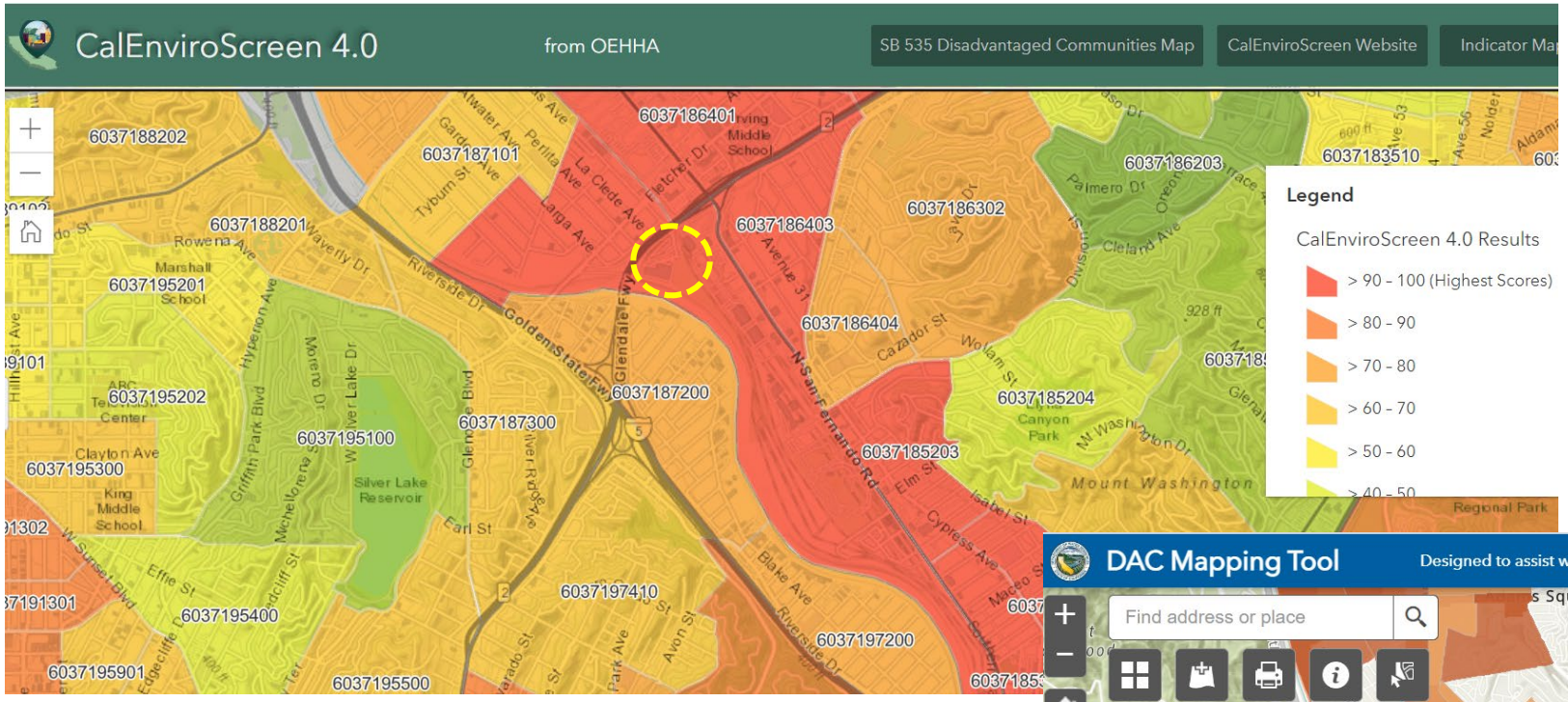
- The Project is located within the City of Los Angeles and will benefit the Cities of Los Angeles and Glendale.
- The Project will improve water quality and increase habitat and access to open space.

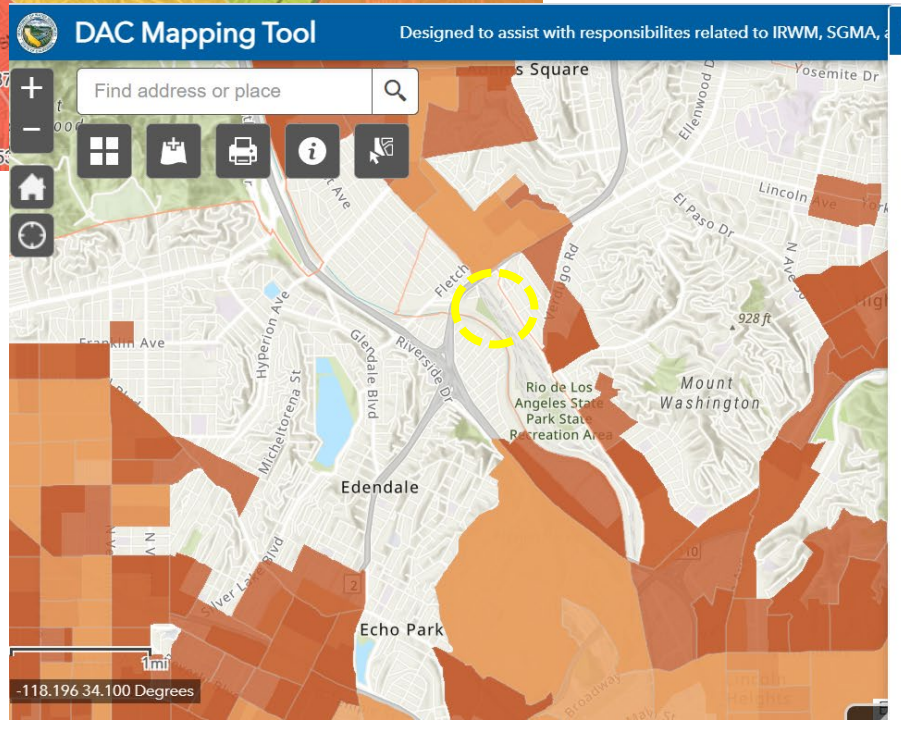
Project Location

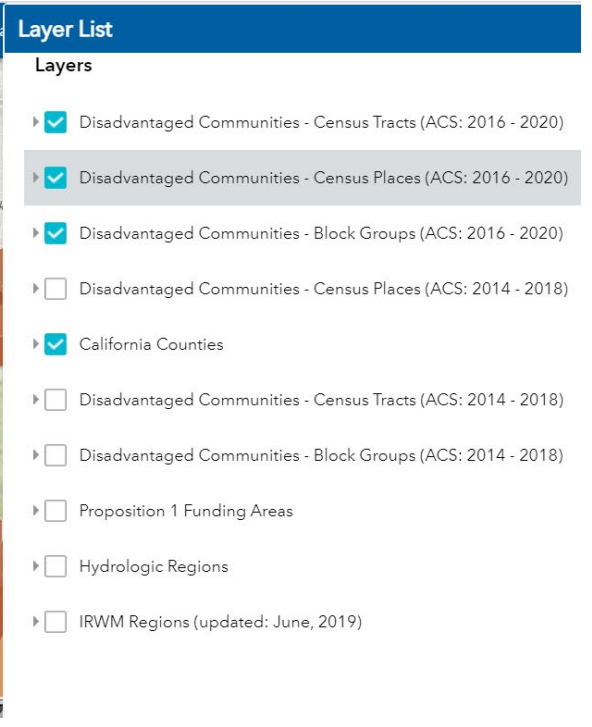


The Project will capture water from an approximately 2,800-acre catchment area.

Project Location



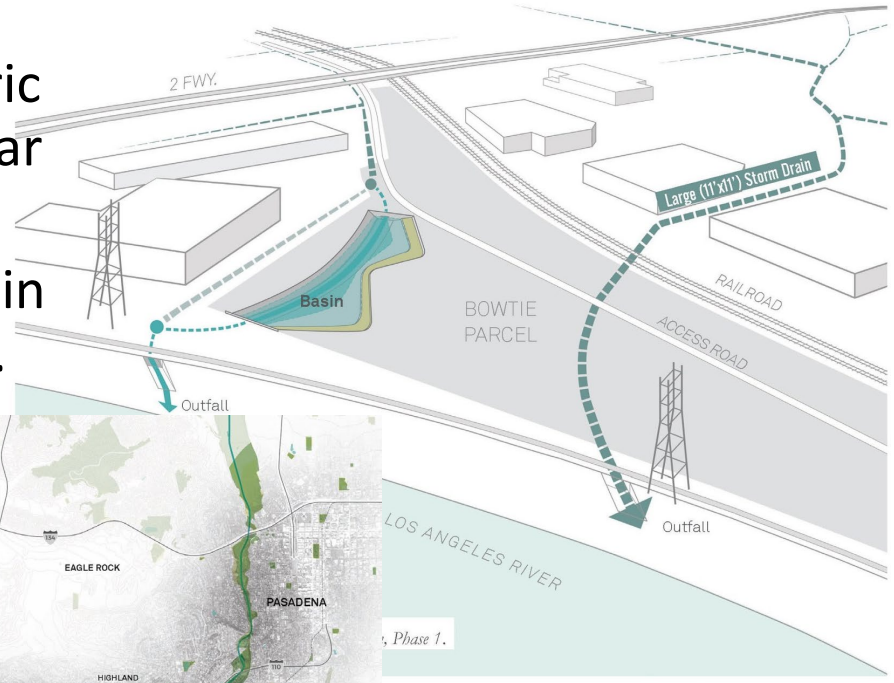




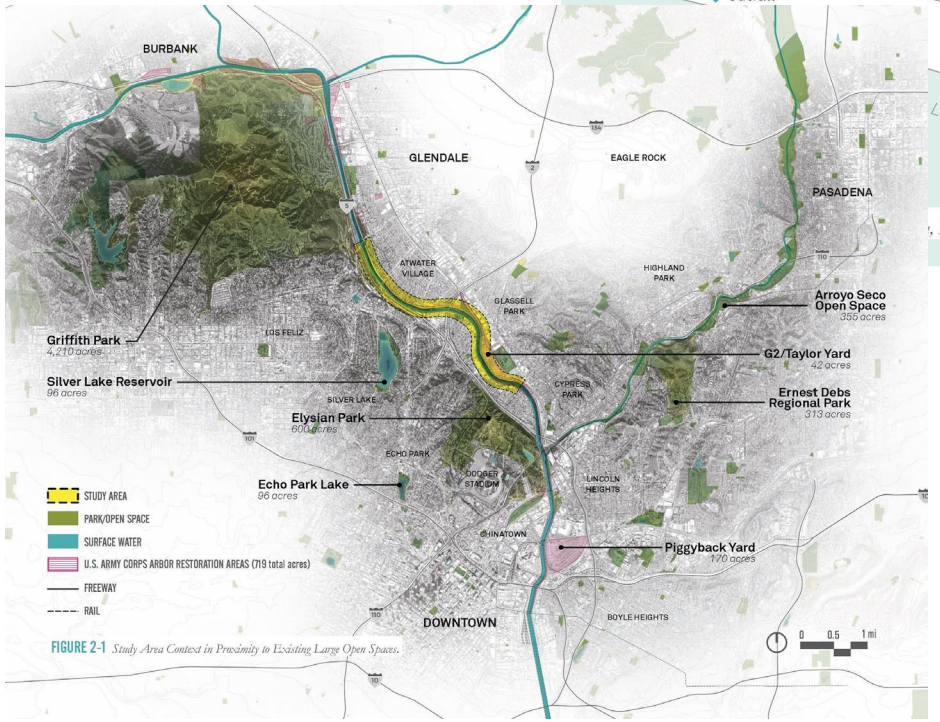
Project Background

Why was the Project Location selected & how was the Project developed?

- In 2016, TNC completed a study of historic ecology, historic and existing hydrological and hydraulic conditions, & a year of biological surveys of a 2.5 mile stretch of the LA River.
- TNC then used a matrix of criteria to select two sites within the Study Area to examine & develop conceptual designs.



- The Bowtie Parcel was selected as the optimal location for siting a project with multiple benefits including water quality improvements and increased wildlife habitat.
- Stantec was brought on in 2022 to complete design & permitting for the Project.



Project Background

Which regional water management plan includes the proposed project?

- Upper Los Angeles River subregion of Integrated Regional Water Management Plan

Project Background

- **Description of benefits to municipality/municipalities**
- The project will capture and treat dry-weather stormwater flows from a highly industrial and commercial area.
- The project will address the primary and secondary pollutants of concern: bacteria (fecal coliform), copper (dissolved and total) and zinc (dissolved and total).
- **Description of benefits to Disadvantaged Communities**
- The project is in and surrounded by disadvantaged and severely disadvantaged communities. The project will improve urban runoff water quality entering the Los Angeles River & will provide the following benefits to the community.
  - Creates, enhances, and restores park space, habitat, and wetland space
  - Improves public access to waterways
  - Creates and enhances new recreational opportunities
  - Reduces heat local island effect and increase shade
  - Increases shade and the number of trees and vegetation at the site location
  - Improve flood management, flood conveyance, or flood risk mitigation

Partners

- Who are the implementation partners already identified?
  - CA State Parks
  - City of Los Angeles
  - Mountains Recreation & Conservation Authority
  - Army Corps of Engineers
- What communities or groups have expressed support for the project?
  - Neighborhood Councils: Elysian Valley Riverside Neighborhood Council, Atwater Village Neighborhood Council, Glassell Park Neighborhood Council
  - Anahuak Youth Sports Association
  - Los Angeles River State Park Partners
  - Representative Adam B. Schiff
  - Senator Maria Elena Durazo
  - Supervisor Sheila Kuehl
  - Supervisor Hilda L. Solis
  - Clockshop
  - Friends of the LA River

Partners

- 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? **yes**

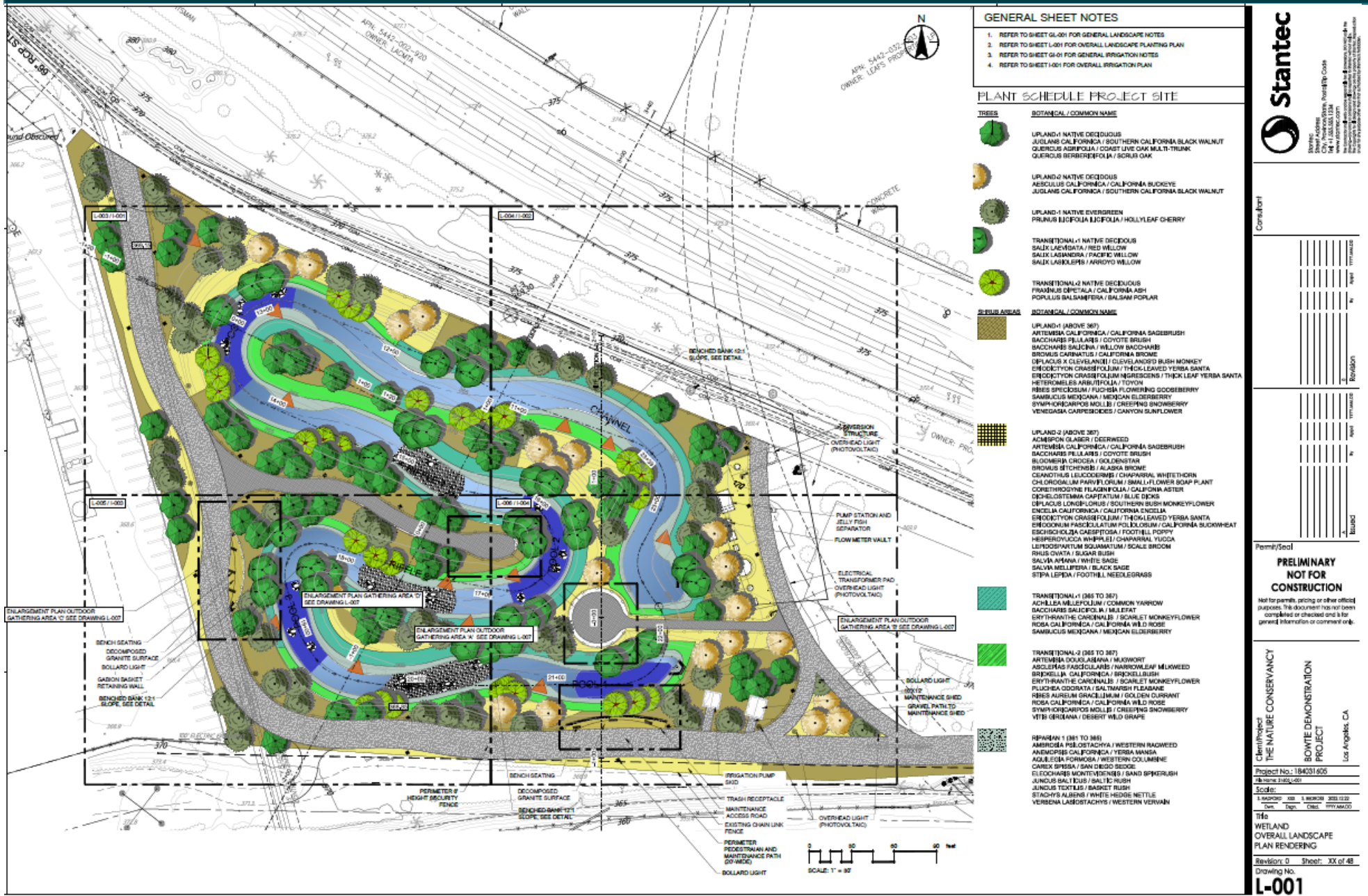
Outreach & Engagement

- Activities have included:
  - Developing best practices for engagement through partnerships with Mujeres de la Tierra, FoLAR, and Prevention Institute
  - Attendance & participation at Neighborhood Council meetings
  - Indigenous community member outreach
  - Unhoused community member outreach
  - Collaboration with local on-the-ground partners, e.g. Anahuak Soccer Club, Audubon at Debs Park, and Educate Our Community
  - Open & regular communication about soil contamination on the site & cleanup plans

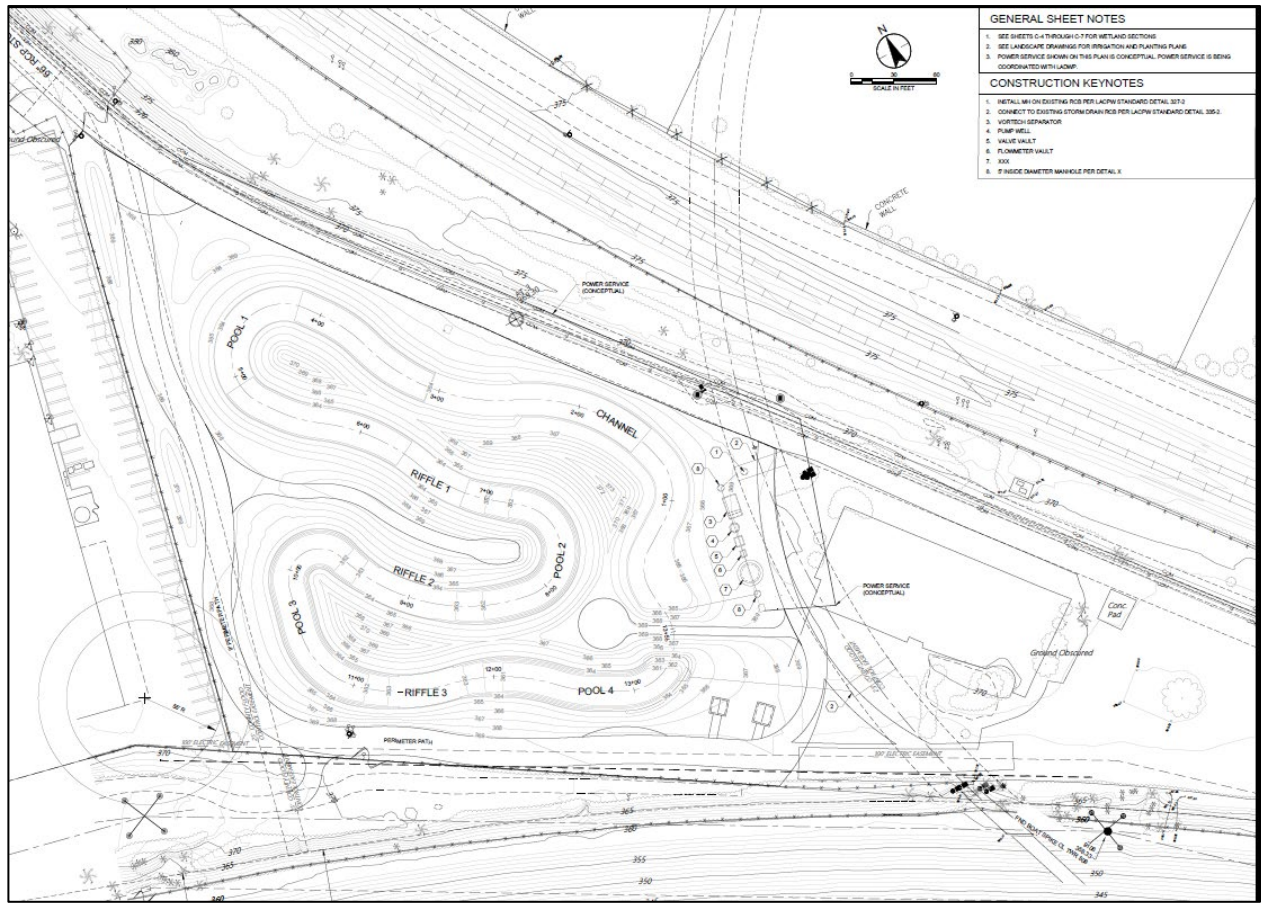
Table 5. Summary of Community Priorities and State Parks' Commitments to the Community

Community Values	Community Priorities	State Parks' Commitments
Nature and Habitat Restoration	• Design with native landscaping features • Restore wetland habitat and support wildlife	• Develop the project with site-appropriate native habitats and restoration as key components
Open Spaces	• Provide opportunities for the community to interact with the landscape, such as: • Accessible trails • Tree canopied seating areas • Green open spaces for picnicking	• Balance the desire of supporting wildlife and habitat while also providing opportunities for people to enjoy nature and open space
Safety and Accessibility	• Identify adequate access points to the park to ensure safety and accessibility • Confirm safety protocols of the site (treat contaminated soil, assess flood and storm risks, erect safety barriers near the river) • Provide support to the unhoused community in the area	• Design a park that will be both safe and comfortable for the wide variety of park users
Land Sovereignty and History	• Honor and value the history of the project's land through: • Land acknowledgements • Educational programs on history of local indigenous people, • Dedicated native and sacred plant gardens onsite • Future collaborations with local tribes on restoration efforts	• Continue to build lasting partnerships with local indigenous groups both in and beyond the park planning stage
Community Installations and Programming	• Create historical, cultural, and environmental installations or programs to provide interactive educational opportunities	• Continue to seek out and support opportunities that will create meaningful and relevant programming and events

Project Details

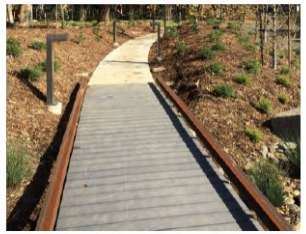


Project Details



DESIGN CONCEPTS





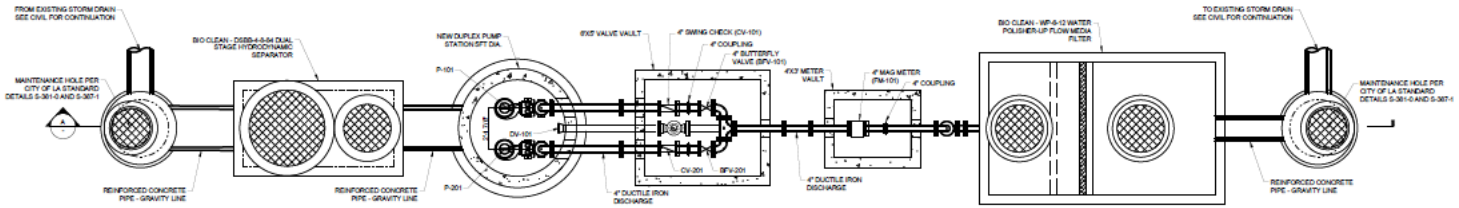

HABITAT STRUCTURES


GROUND NESTING BEES


HABITAT STRUCTURE - ROCK PILE

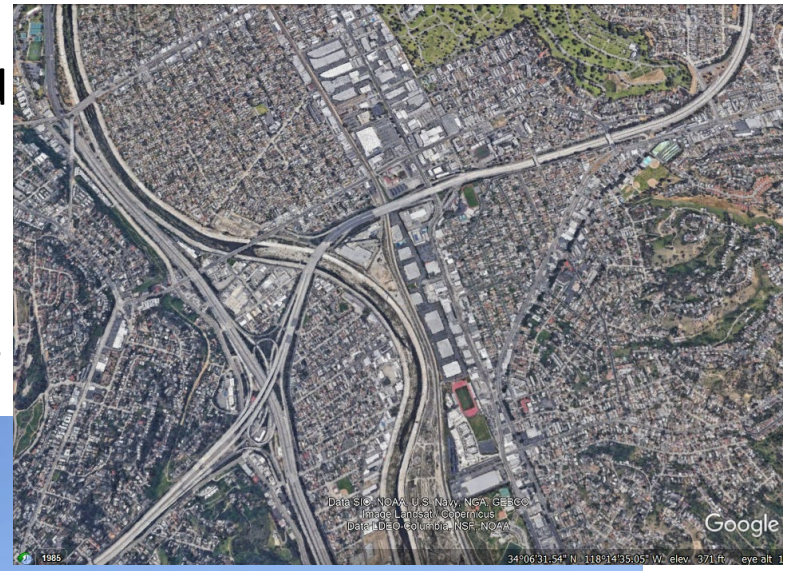

HABITAT STRUCTURE -BRUSH PILE

HABITAT STRUCTURE-SNAG



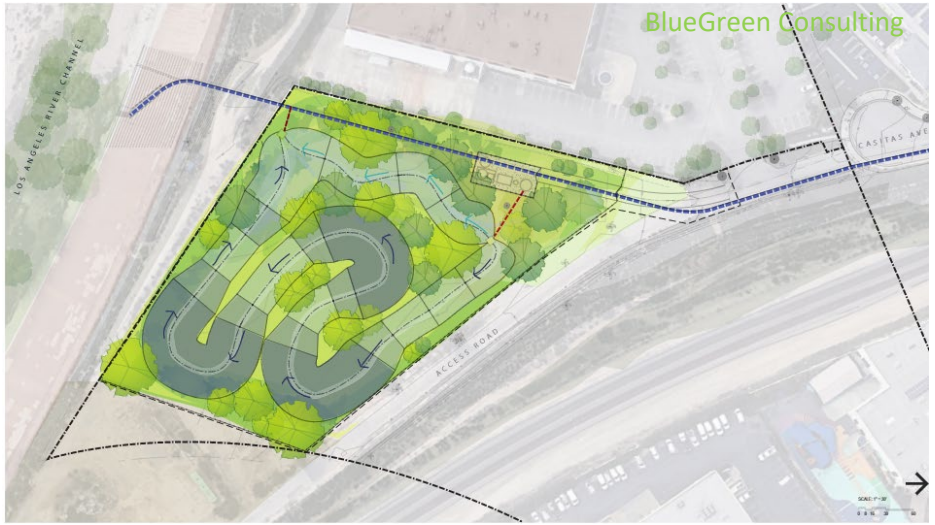
Project Details

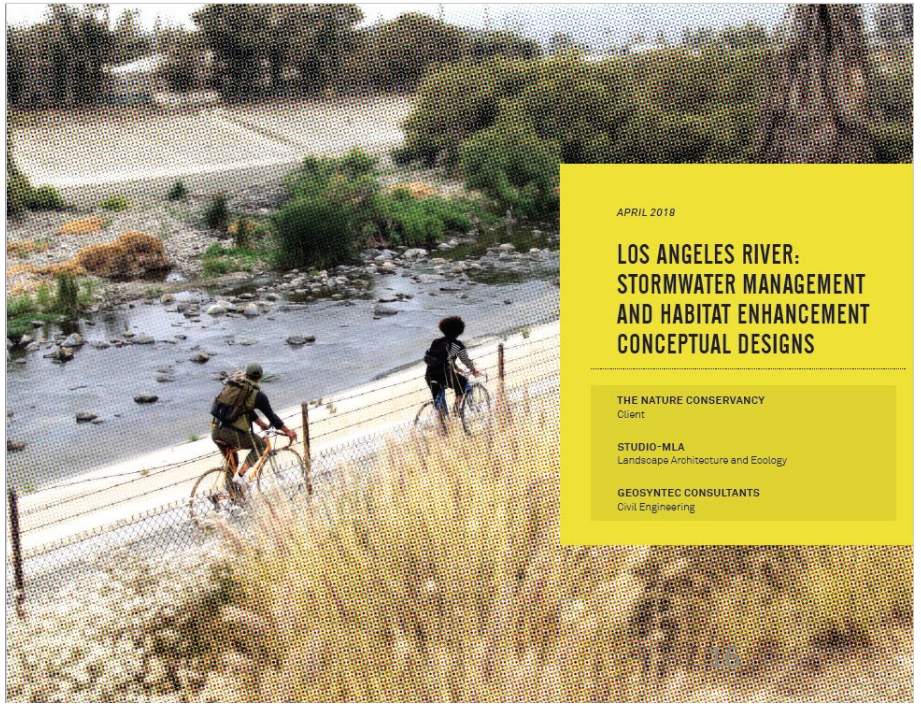
- Description of current site conditions and completed studies/analysis
  - Former railyard
  - Existing fill soils placed during previous site grading activities and natural alluvial soils
  - Existing easements include LADWP and LACFCD
  - Adjacent to a soft bottom section of the LA River
  - Surrounded by industrial, commercial, and residential properties



Project Details

- Description of alternatives considered:
  - Conceptual design report by Studio-MLA and Geosyntec in April 2019 identified three phases:
    1. daylighting the City of LA storm drain,
    2. daylighting the LA County storm drain,
    3. expansion of stormwater management and habitat including creation of a basin
  - Conceptual designs developed by BlueGreen Consulting built on the original report and included the creation of a bioswale and constructed wetland and the diversion from the City of LA storm drain.
- The final designs:
  - Remove the bioswale to expand the capacity of the constructed wetland
  - Modify the diversion to the County storm drain to increase year-round dry-weather flows to the site





Cost & Schedule

Phase	Description	Cost	Start Date	Completion Date
Planning	Includes Feasibility Studies and Concept Designs and Planning Phase Community Outreach & Engagement	$305,631.00	01/2019	04/2022
Design	Includes Engineering Design Drawings, Permitting and Design Phase Community Outreach & Engagement	$1,494,369.00	04/2022	01/2023
Bid/Award	Includes Bid and Award Process (5% of construction costs)	$450,000.00	02/2023	06/2023
Construction	Includes Mobilization/Demobilization, Construction of Project Components, Construction Management, Escalation Costs and Unallocated Contingencies.	$9,000,000.00	07/2023	12/2024
Total		$11,250,000.00		

Total Life-Cycle Cost:
$ 14,567,818.16

Annualized Life-Cycle Cost:
$ 871,939.17

Description of Annual Costs (O&M):

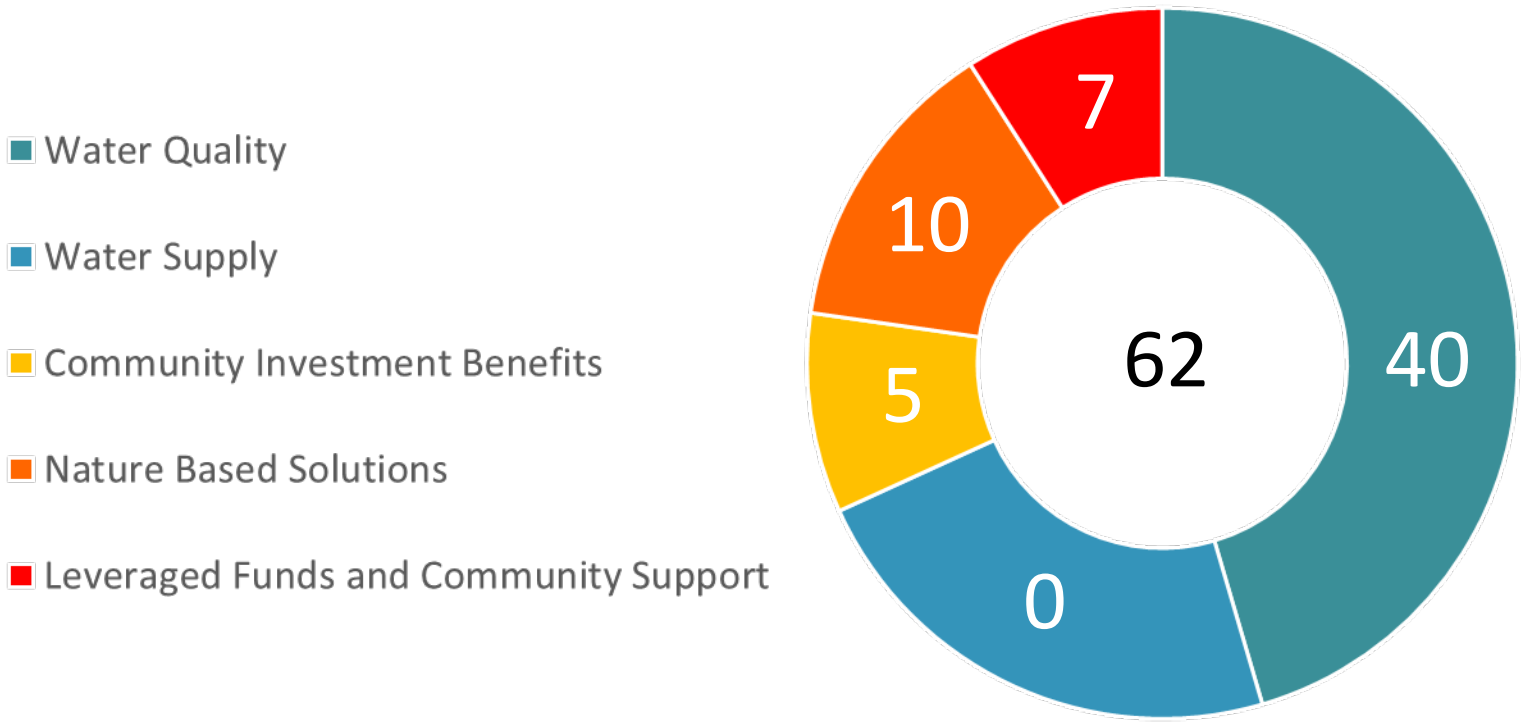
- Landscape maintenance (e.g. weeding)
- General site maintenance (e.g. trash, railings, paths, lighting, graffiti removal)
- Stormwater facility structures (e.g. debris, trash, & sediment removal; replacement & inspection)
- Wetland pond (e.g. trash & sediment removal, inlet & outlet inspection)

Funding Request

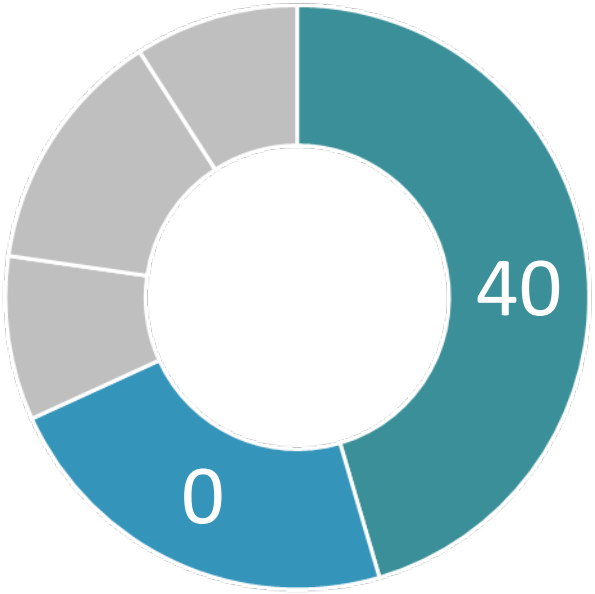
Year	SCW Funding Requested	Eligible expenditure?	Phase	Efforts during Phase and Year
Year 1	$500,000.00	Yes	Construction	Construction of Project, 2023 - 2024
Total Year 1	$500,000.00			
Year 2	$1,200,000.00	Yes	Construction	Construction of Project, 2024 - 2025
Year 2	$198,583.00	Yes	O & M	Operation and Maintenance of Project, 2024 - 2025
Total Year 2	$1,398,583.00			
Year 3	$500,000.00	Yes	Construction	Construction of Project, 2025 - 2026
Year 3	$198,583.00	Yes	O & M	Operation and Maintenance of Project, 2025 - 2026
Total Year 3	$698,583.00			
Year 4	$198,583.00	Yes	O & M	Operation and Maintenance of Project, 2026 - 2027
Total Year 4	$198,583.00			
Year 5	$198,583.00	Yes	O & M	Operation and Maintenance of Project, 2027 - 2028
Total Year 5	$198,583.00			
Funding requested beyond 5 years	$4,170,243.00	Yes	O & M	O&M for Total Life Span of Project (25 years), 2028 - 2050
Total Funding requested beyond 5 years	$4,170,243.00			
Total	$7,164,575.00			

Score as confirmed by the Scoring Committee

The Scoring Committee confirmed this score on October 17, 2022



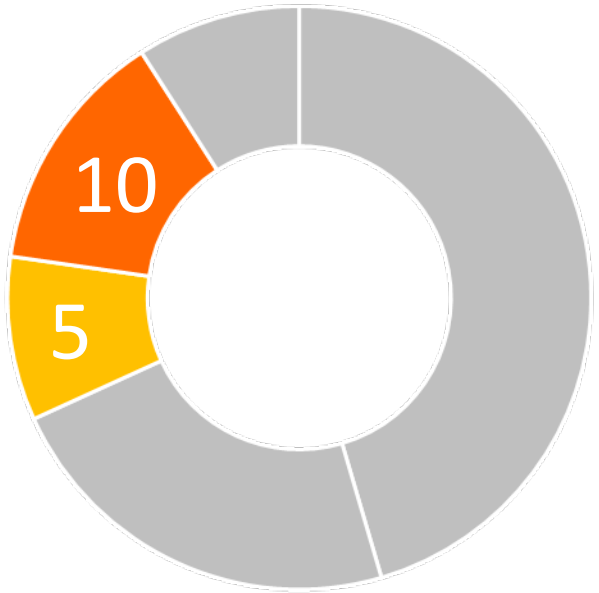
Water Quality & Water Supply Benefits



The Scoring Committee confirmed this score on October 17, 2022

- Primary mechanisms that achieve Water Quality and Water Supply Benefits claimed
  - The Project will treat 100% dry weather flows and partial wet weather flows via hydrodynamic separators, membrane filtration and a constructed wetland.
  - Tributary Area is approximately 2,800 acres.
  - Storage volume is 18,000 acre-feet.
  - Pollutant Reduction will include metals, bacteria, and organics.
  - The Project will reuse stormwater and runoff to irrigate the site.

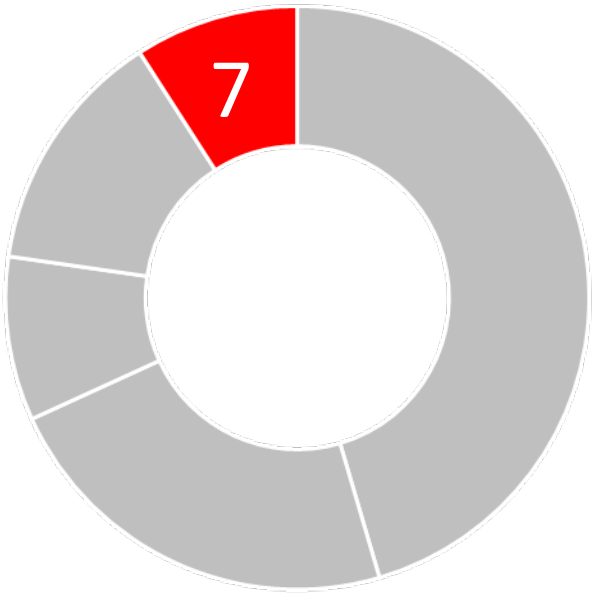
Community Investment Benefits and Nature Based Solutions



The Scoring Committee confirmed this score on October 17, 2022

- Community Investment Benefits
  - Enhancement of park space, habitat, and wetland space
  - Improve public access to waterways
  - Create new recreational opportunities
  - Reduce local heat island effect & increase shade
  - Increase shad & number of trees and vegetation
- Nature Based Solutions
  - Implement/mimic natural processes
  - Utilize natural materials

Leveraging Funds and Community Support



The Scoring Committee confirmed this score on October 17, 2022

- Leveraging Funds
  - Public funding from DTSC & CNRA (Prop 68)
  - Amount: $2,511,289
  - Percent funded cost share: 25.95%
- Community Support
  - The Project is supported by local Neighborhood Councils, elected officials, nonprofit organizations, and community-based organizations (we received 11 letters of support).
  - Community outreach has included surveys, one-on-one connections, attendance & participation at NC meetings, and other activities. This will continue throughout construction and beyond.

Questions?

Kelsey Jessup, The Nature Conservancy

Jonathan Abelson, Stantec

Emerald Necklace John Muir High School Campus Natural Infrastructure Improvement Project

Infrastructure Program

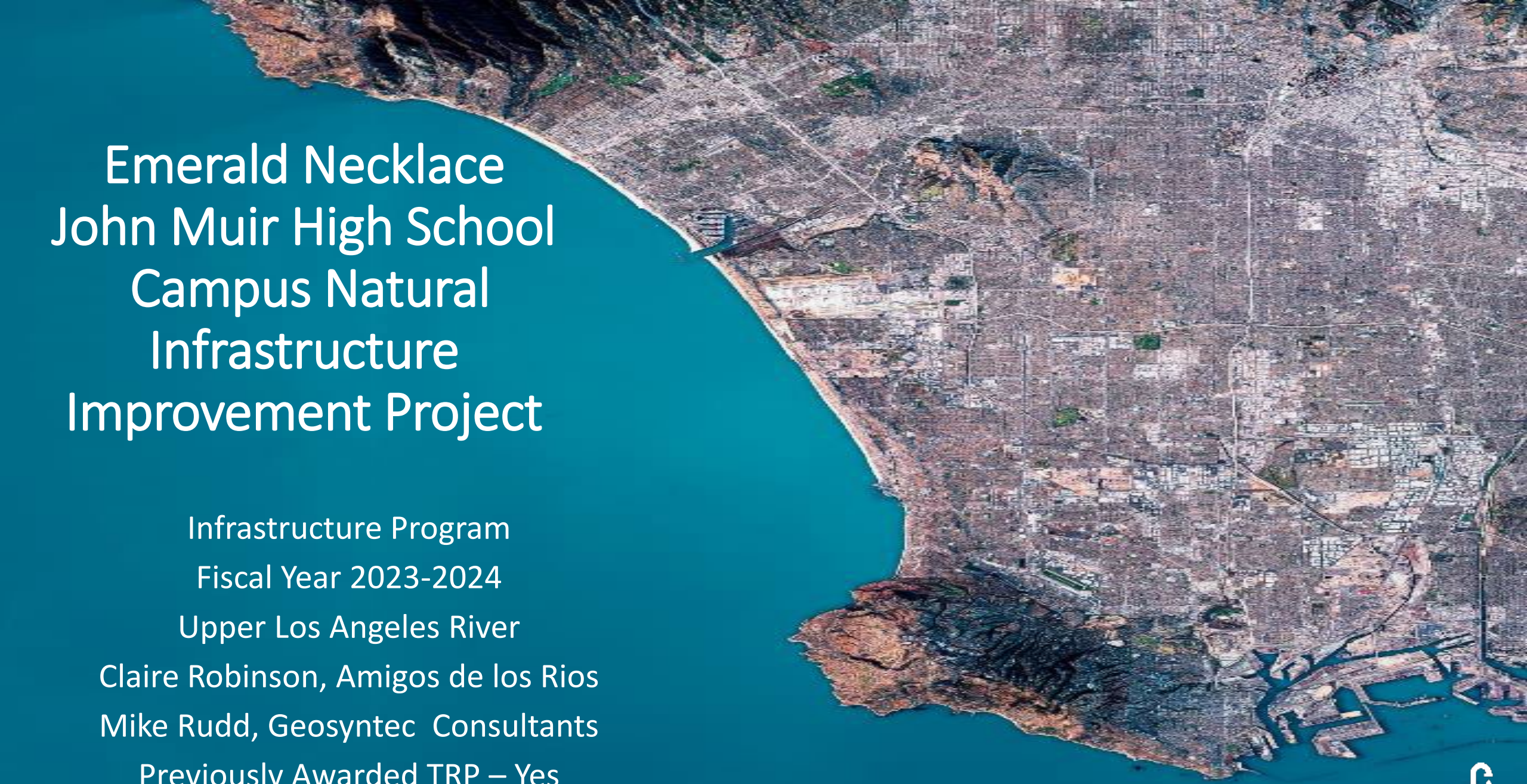
Fiscal Year 2023-2024

Upper Los Angeles River

Claire Robinson, Amigos de los Rios

Mike Rudd, Geosyntec Consultants

Previously Awarded TRP – Yes



Project Overview

Multi-benefit project improves campus /neighborhood stormwater management, drainage, maximizes public health benefits of integrating natural infrastructure onto campus

- **Primary Objectives**: Improve drainage, optimize stormwater capture and infiltration, protect water as a precious resource - increase vector control and integrate natural infrastructure into campus
- **Secondary Objectives**: Maximize Multiple Benefits of Urban Forestry for heat island reduction, carbon sequestration, biodiversity protection and to confer the correlated mental health, academic performance, and physical fitness benefits to school and surrounding community of bring nature to campus/community
- **Project Status**: Total Project Cost: Planning, Design ($509,400), Construction ($1,750,000), O & M, and Monitoring ($369,600)

Total Funding Requested: $ 1,891,500.00 *(*Total Project is $2,629,000 w/$737,500 of leveraged funding)*

Project Location Greater LA County Watershed - ULAR

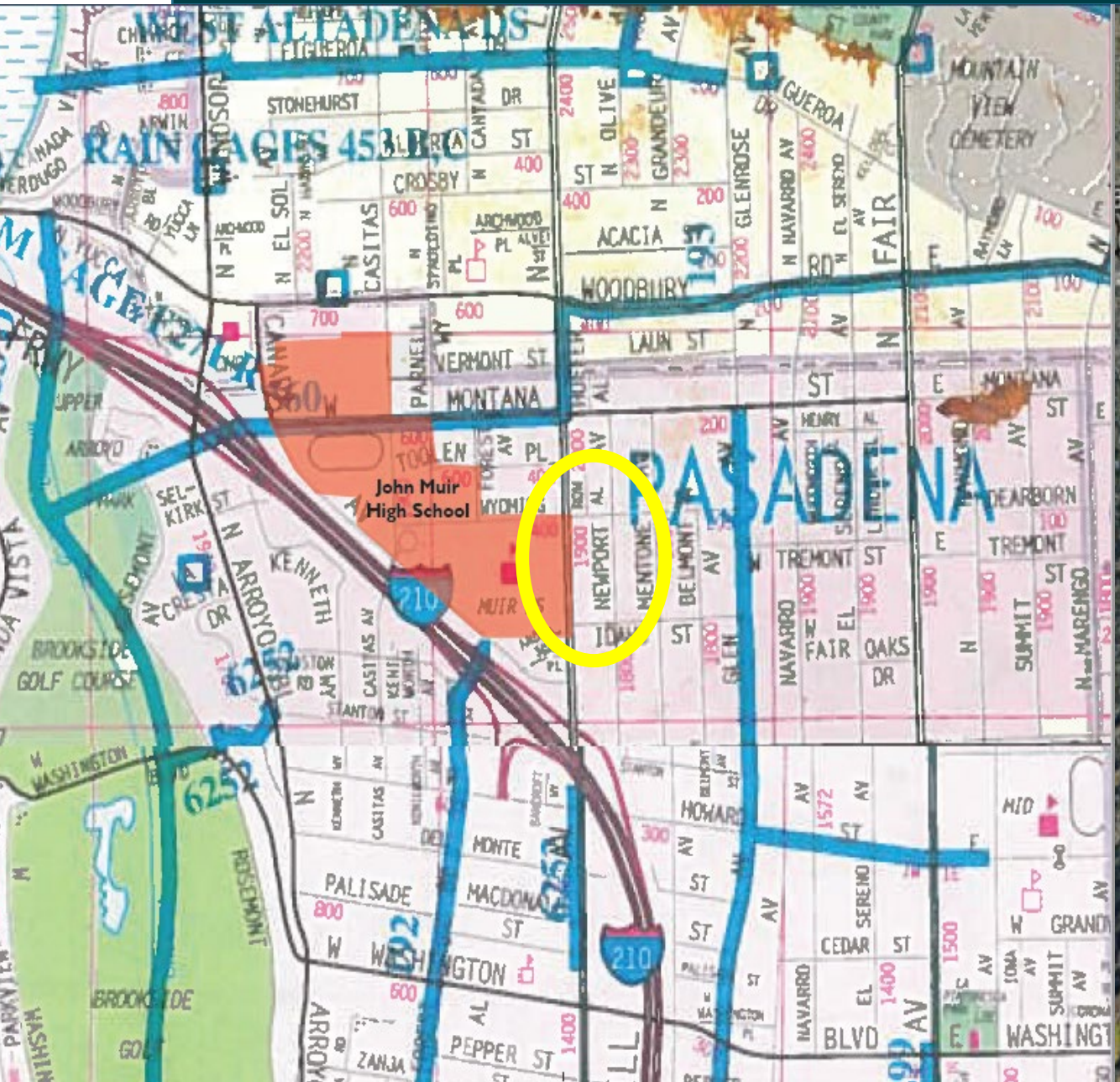
Project Location Emerald Necklace John Muir Campus

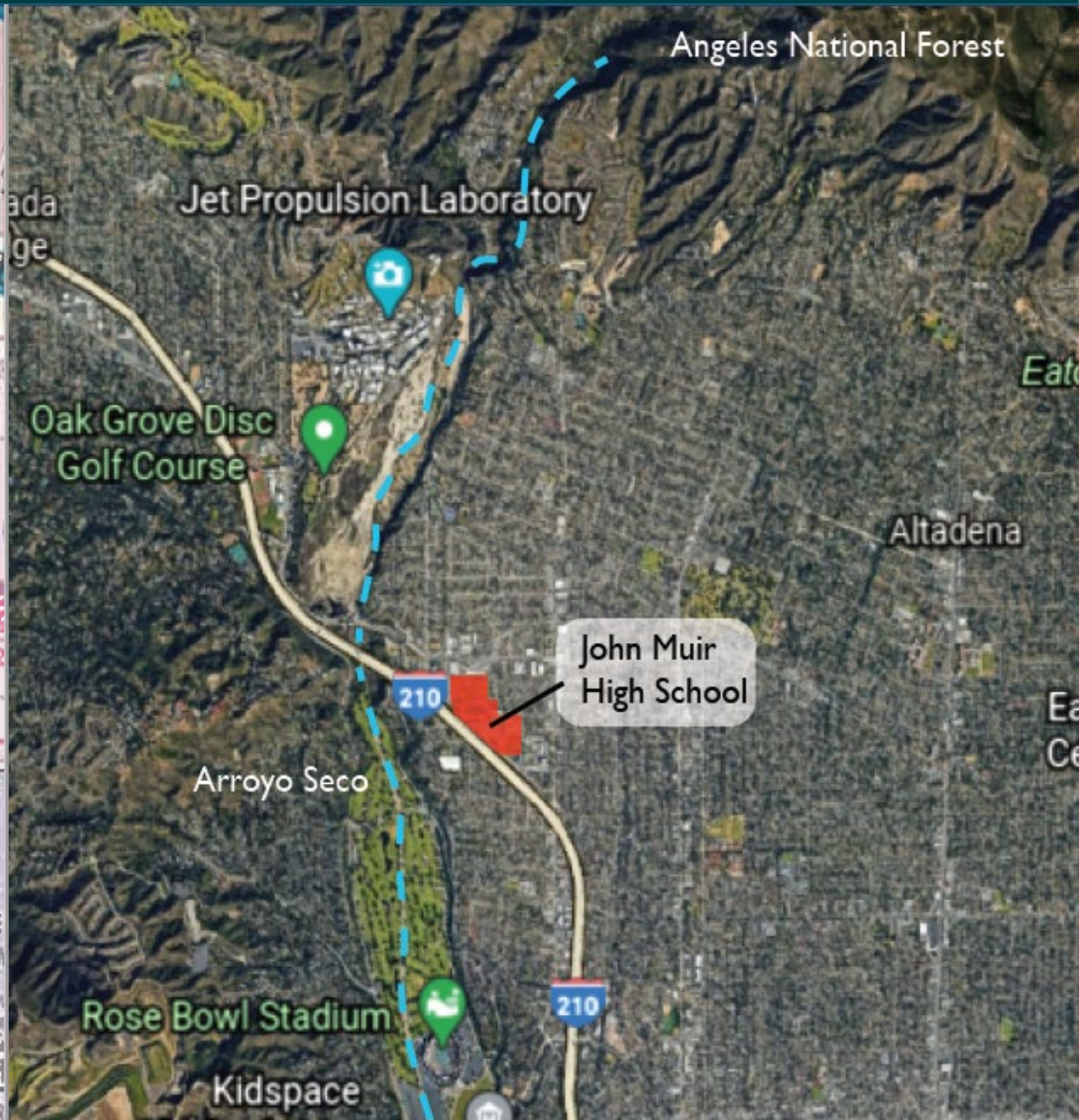
John Muir High School serves DAC/LIC community population and is within 0.46 miles of a DAC / 0.0 miles of a LIC.

Campus Watershed flows directly to Arroyo Seco, which is upstream of and flows through, Disadvantaged and Severely Disadvantaged Communities downstream.

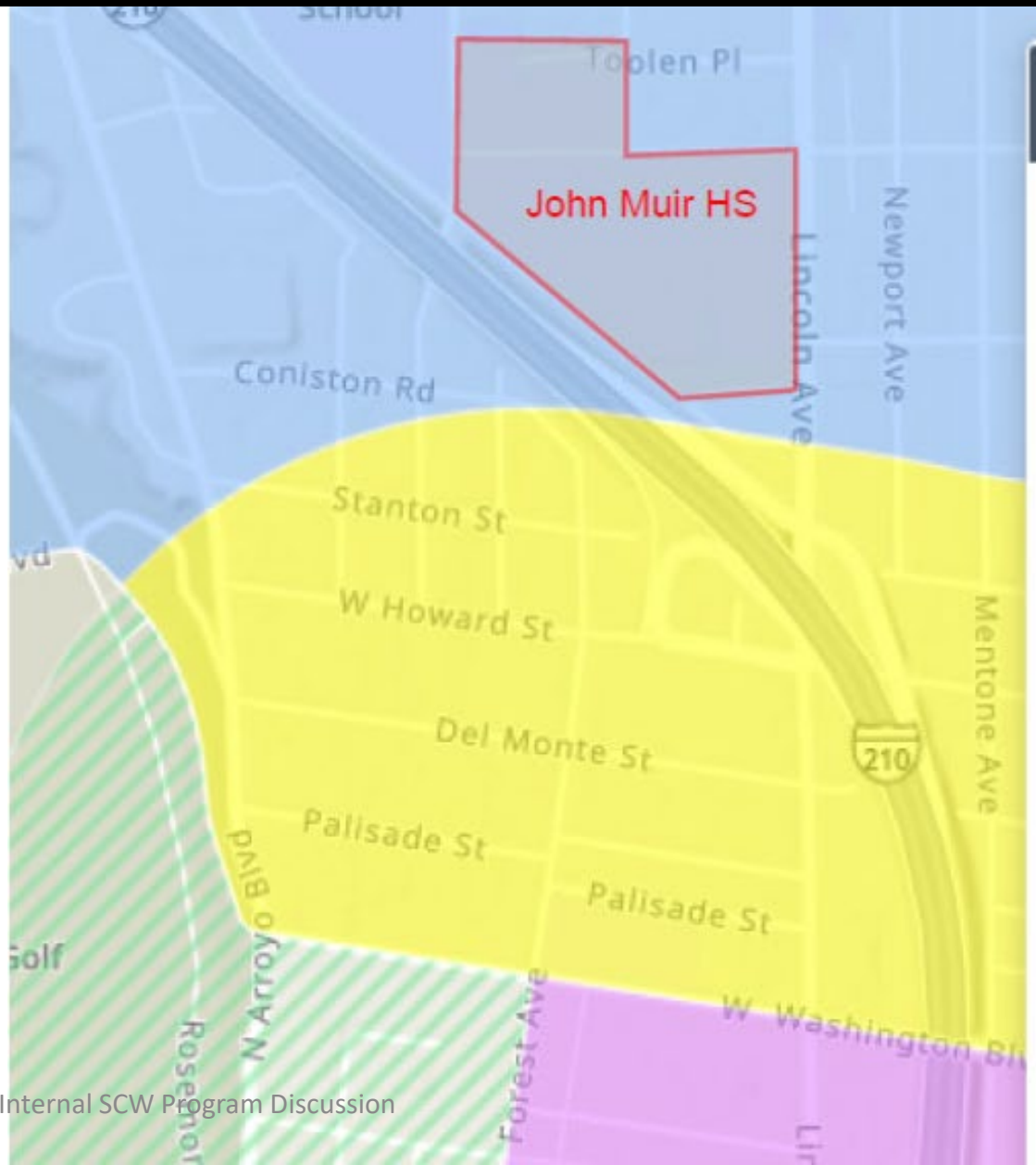
Improving stormwater quality before it gets to the Arroyo improves water quality in these downstream communities.
This project captures 100% of 85th percentile, 24-hr storm from 22 acres of neighborhood surrounding campus, capturing and infiltrating 1.4 ac-ft from each of those events.
On average, project removes 82% of pollutants in that water from reaching the Arroyo and Communities downstream.

John Muir Campus Natural Infrastructure In Context





Project TITLE 1 SCHOOL (87% FRPM) - DAC /LIC Context



Map Legend

Priority Populations CES4 2022

PriorityPopulationsCES4

- Disadvantaged Communities
- Disadvantaged and Low-income Communities
- Low-income Communities
- Low-income Communities within 1/2 mile of Disadvantaged Communities
- Low-income Households within 1/2 mile of Disadvantaged Communities

* Low-income households statewide are also considered a priority population for the purposes of California Climate Investments

***85.6% of John Muir students are eligible for Free and Reduced Price Meals based on income**

Project Background

- Why was the Project Location selected?

John Muir Campus supports BIPOC student body - 24% Black, 70% Hispanic, 6% White.

Environmental Justice - Campus is adjacent to I-210 freeway w/ health hazards correlated to high carbon load/air pollution levels /site characterized by heat islands due to prevalent asphalt surfaces.

Social Justice -John Muir has suffered from historic disinvestment in public school infrastructure.

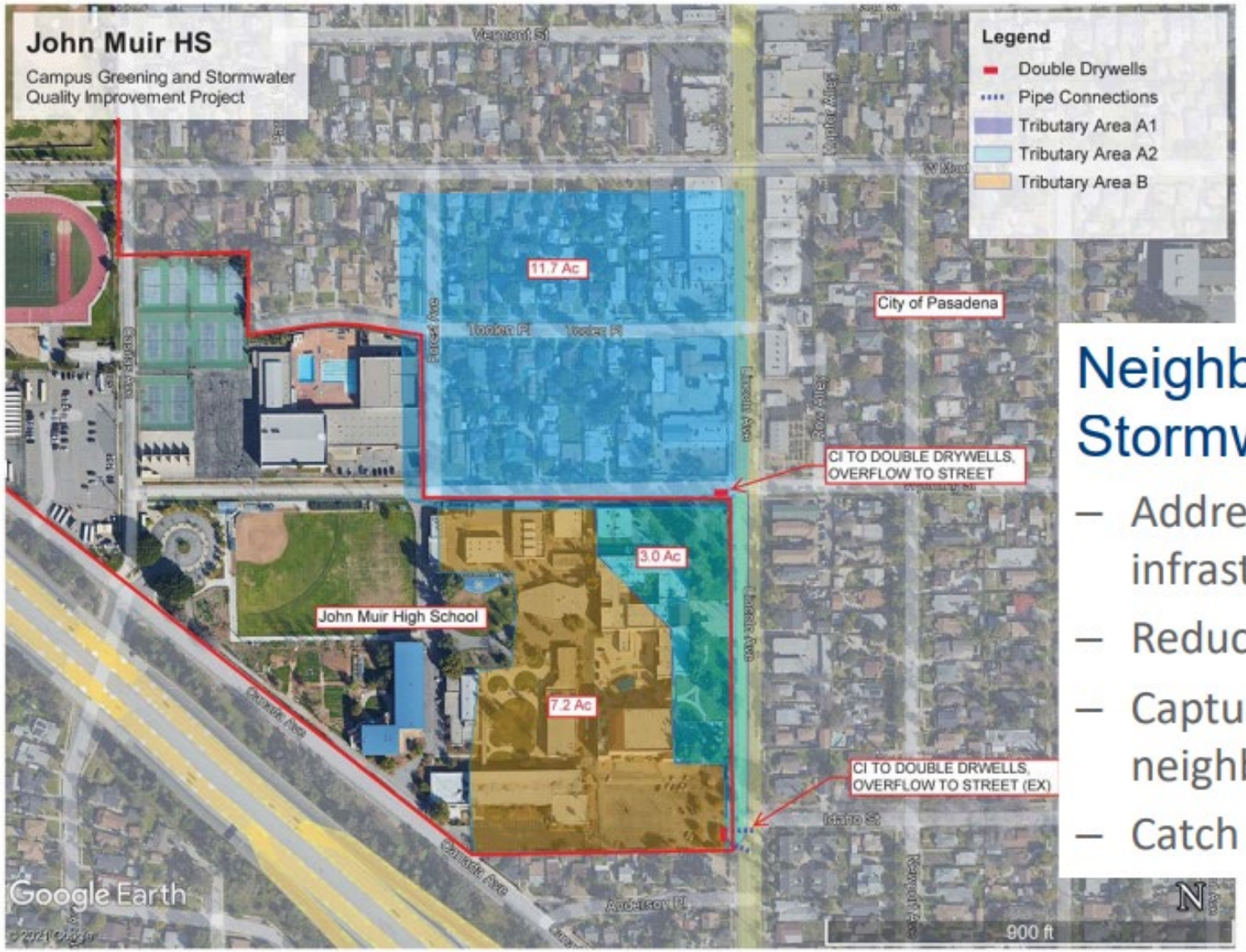
- Post Brown Vs. Board of Education (1954), 22% of white students immediately left PUSD; (by 2000, Caucasian population declined from 54% to 16%), leaving public schools depopulated, **infrastructure neglected & in effect segregated**.

- Proposed project **re-invests in public school infrastructure** & will **significantly enhance outdoor commons spaces on campus** w/tree canopy & 'near by m nature' so school serves as cool green hub for surrounding community

- **Natural Infrastructure** has proven benefits enhancing academic performance, physical fitness, mental health for school community members .This critical school site needs air quality protection, improved drainage and vector control, heat island reduction and cutting edge outdoor learning spaces.

Site Context

PROJECT DESCRIPTION SITE SCHEMATIC



Neighborhood Stormwater Capture

- Address lack of stormwater infrastructure
- Reduce nuisance flooding
- Capture and treat neighborhood runoff
- Catch basins and drywells

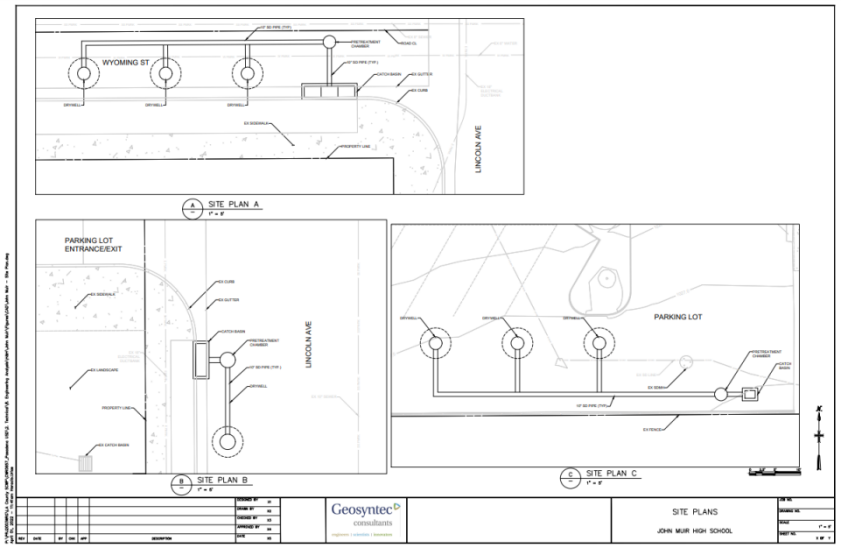
Urban Forest /Natural infrastructure on Campus

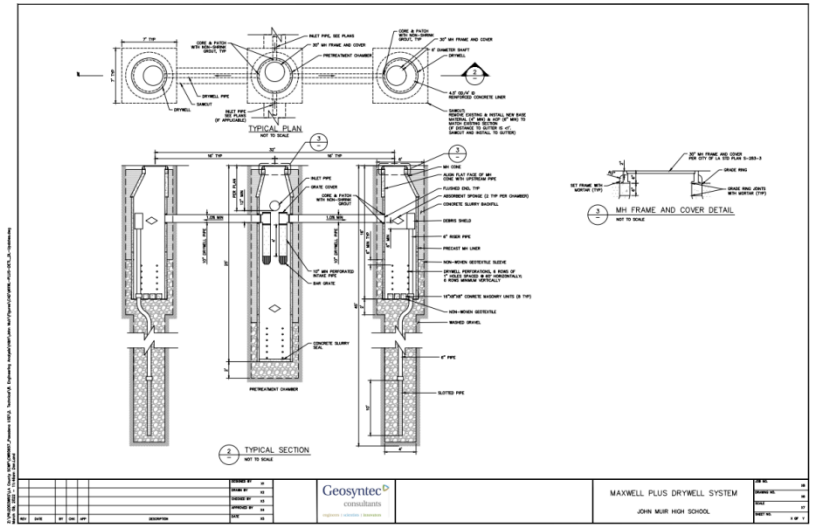
How was the Project developed?

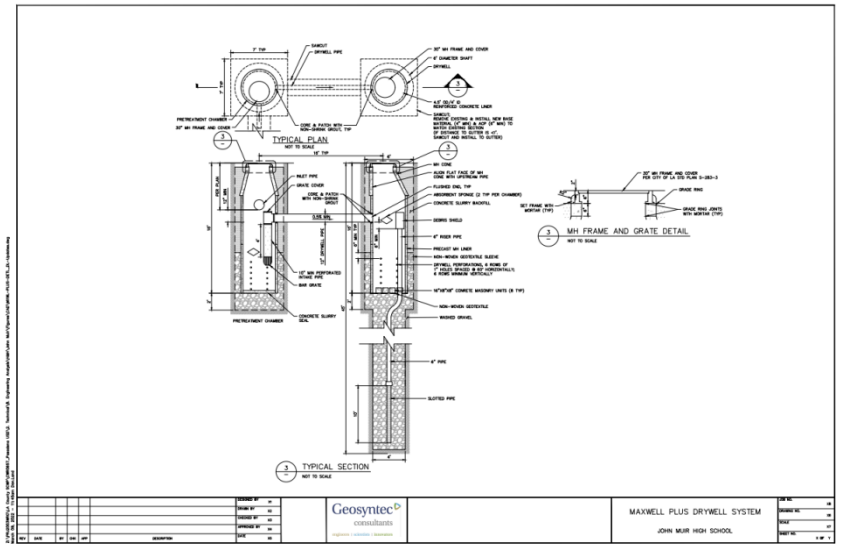
- ADLR working w/ PUSD for over six years, focused on benefiting DAC / LIC students.
- We have connected w parents, students, teachers, administrators, campus-based organizations, and local residents to outline and prioritize meaningful, multi-benefit enhancements high community impact.
- Principal Lawton Grey III attended John Muir .now serves as principal –he is committed to reinvestment in John Muir.
- Since 2020despite COVID challenges & restrictions, Amigos has hosted Emerald Necklace Watershed Stewardship Events on Campus to celebrate Earth Day, Martin Luther King Day, CNN's Call to Earth Week, and to support the Engineering Academy and Environment Clubs.
- We have engaged w/ students and hired interns from John Muir and participated in organizing Career Day Events &
- Collaborated w/ local community-based organizations OBA house on campus to explore how natural infrastructure elements, including improved stormwater drainage, would serve the greater school and community.
- Hosted series tree planting events / workshops on campus to develop priorities for Campus Improvements .
- Our Design process prioritized replacing existing asphalt within campus w/ combination of permeable concrete, planters, rain gardens, bioswales and permeable path surfaces to improve common spaces at school
- Safe Clean Water December 2019 submitted application to Technical Resources Program (TRP).
- ULAR Watershed Area Steering Committee (WASC) Board of Supervisors TRP funds allocated
- Feasibility Study Completed 2022 John Muir High School Campus Greening and Stormwater Improvement Project (Project)

Engineering Details

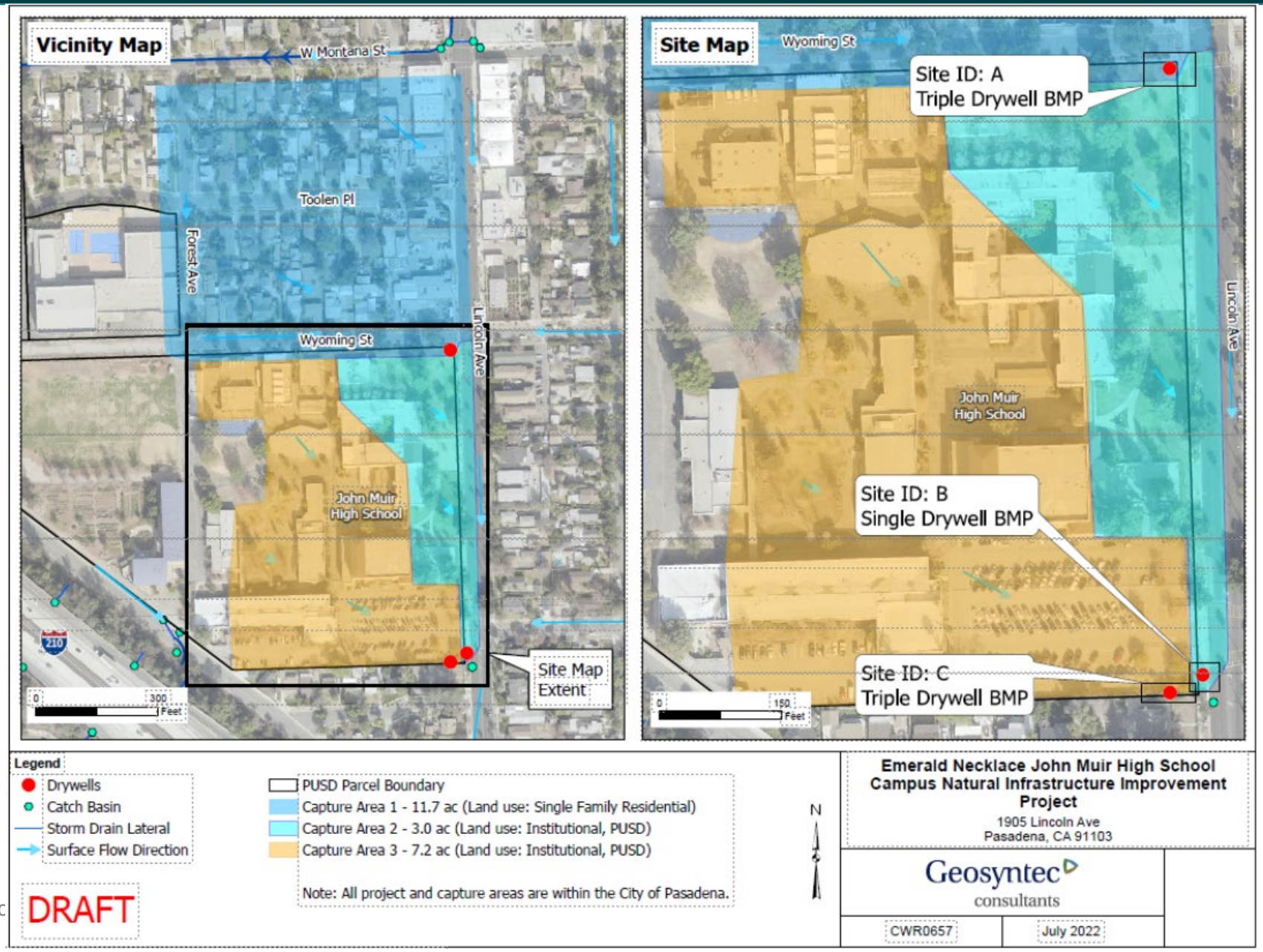
Drainage improvements to the area surrounding the campus include the installation of drywell infiltration systems at 2 locations. Each drywell location is stand-alone system and includes a new catch basin with a grated inlet to capture runoff from the adjacent neighborhood and, depending on the size of the watershed, either a single, double, or triple drywell unit. The single, double, and triple drywell units include a pretreatment chamber designed to remove the trash, sediment, and debris before entering the main drywell chamber(s).



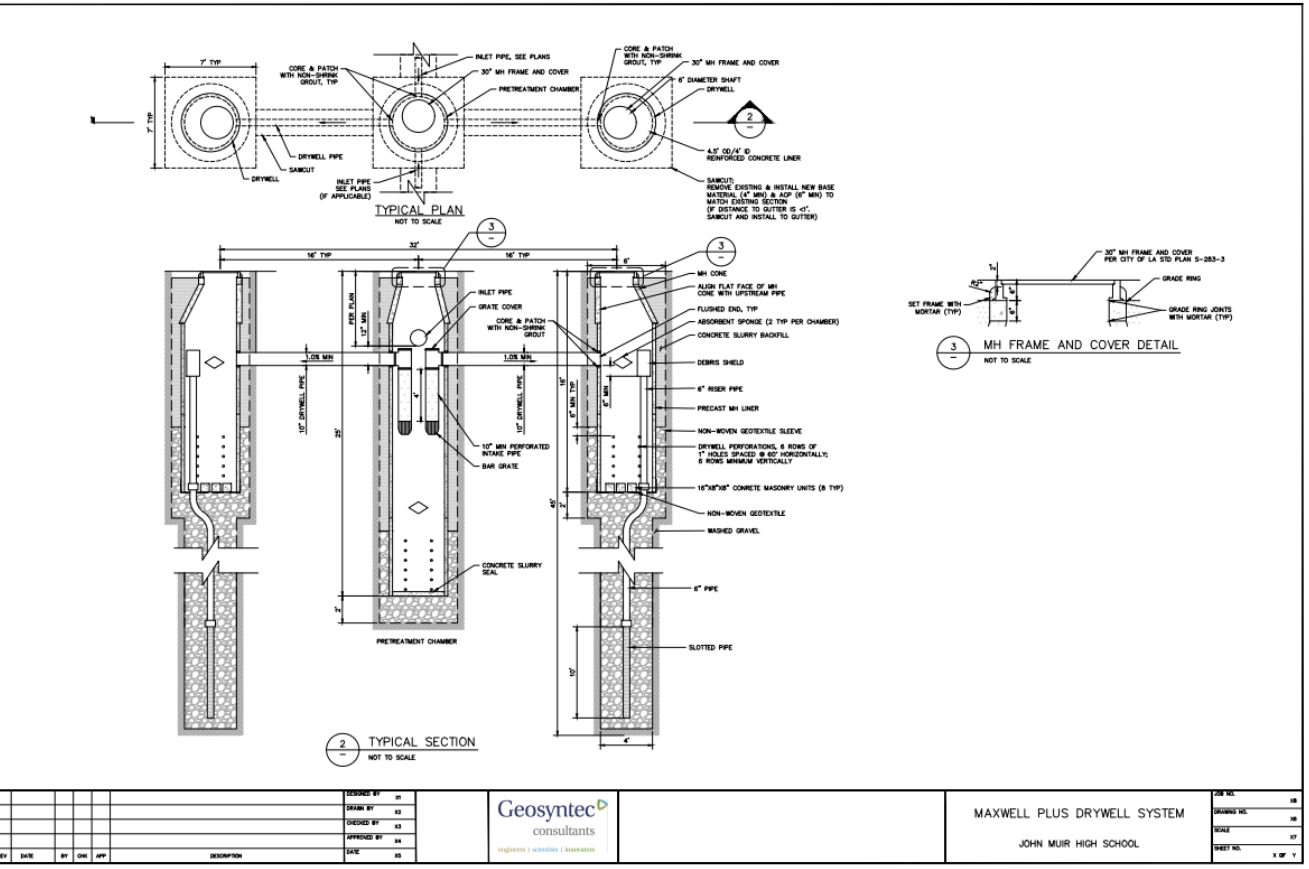


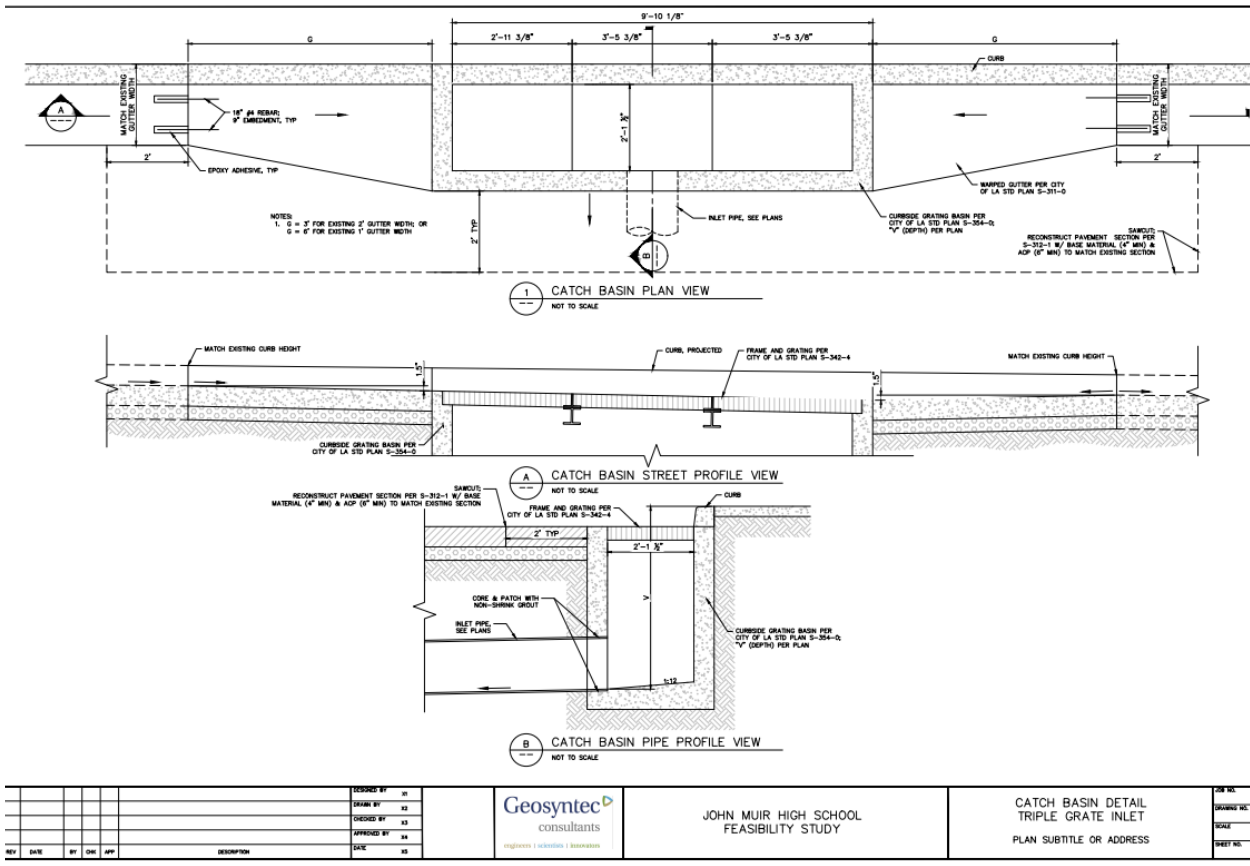


VICINITY MAP



Completed Studies - Engineering Details





Project Background

- Which regional water management plan includes the proposed project?

  Project is located within sub watershed 642883, as part of Upper Los Angeles River

  Enhanced Watershed Management Program (ULAR EWMP)

- Description of benefits to municipality/municipalities

  Project supports EWMP Goals for City of Pasadena where John Muir is located: improved stormwater capture nuisance flooding reduction, vector control and myriad benefits of greening

Benefits to DAC Communities

Description of benefits to Disadvantaged Communities

- **Public Health** Proposed trees &shrubs are effective means of mitigating urban heat island, capturing & sequestering dangerous air pollutants, including carbon and greenhouse gases, and other harmful air pollutants from sources that cause chronic cardiovascular health issues like smog-forming ozone and volatile organic compounds
- For students who live in DAC communities attending the school – spaces defined by cool shade, inspiring outdoor learning areas, and green vistas on campus – will help lower Asthma Rates, Mental Health Distress, support academic achievement, and increase the variety of recreation opportunities available.
- Title I students deserve benefits of urban forestry
- Natural infrastructure campus will benefit DAC/LIC community members participating in sports, afterschool programs, and weekend joint use by community partners.
- Extensive urban forest elements proposed for climate resilience, will serve as urban cool zone where tree canopy, shade, and nearby nature provide multiple benefits for all.

Pandemic COVID Safe High Quality Outdoor Spaces

- The project will provide 95% of low-income and minority students and their families (TITLE 1 School L) access to a state-of-the-art Natural Infrastructure School campus with academic performance, mental health, and recreation benefits. It will provide enhanced natural habitat areas throughout and around perimeter streets of campus, including a nature trail winding through campus. The proposed inclusive community-based implementation process will encourage empowerment and strong civic engagement for participating youth to help inspire and train next-generation leaders. Urban residents are at increased risk for increasing anxiety-related disorders. The improved tree canopy will help reduce stress and aggression while increasing attention, helping to boost community mental and emotional health. The culturally diverse communities of the area have historically been disproportionately impacted by the multiple environmental and health burdens and by disinvestment in public school infrastructure. The project will reinvest in this TITLE 1 school and include multi-culturally response interpretive elements reflective of meaningful local natural and cultural history and protecting water as a precious resource in an inclusive manner - this will amplify the voices of traditionally disenfranchised communities.

Partners

- Who are the implementation partners already identified?
  - Amigos de los Rios, School District (Pasadena USD), Constellation of School Community stakeholders
- What communities or groups have expressed support for the project?
  - John Muir High School Alumni Association, Outward Bound Adventures, Council for Watershed Health
  - Have you received a letter of concurrence from the municipality - Yes
- Have you yet engaged the appropriate vector control district about the project concept? Yes

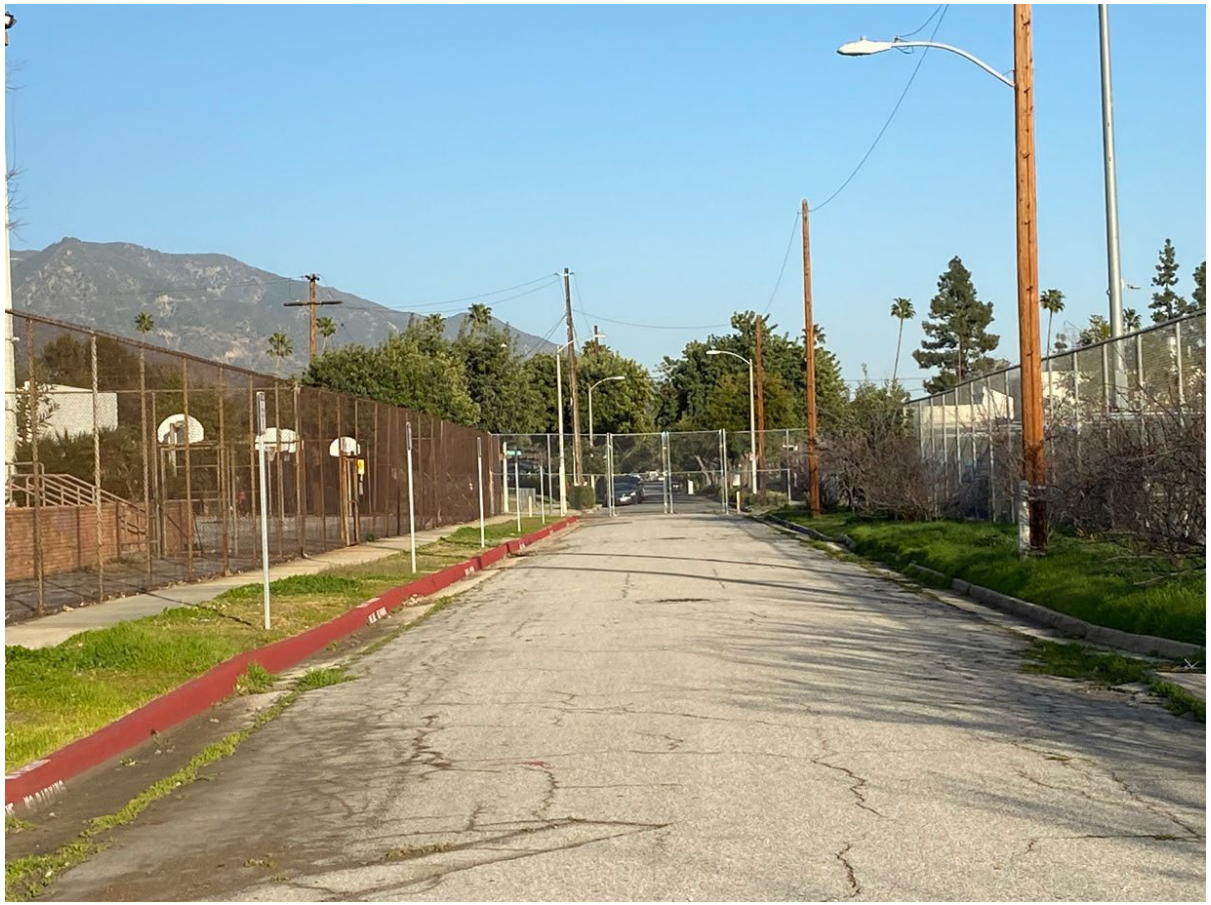
Site Conditions

Site Conditions

SITE CONDITIONS

Site Conditions

Site Conditions



Cost & Schedule

Phase	Description	Cost	Completion Date
Planning	CEQA Cat Ex, obtain permits,	$ 93,400.00	April 2024
Design	Project design and development of PS & Es	$ 416,000.00	June 2024
Construction	Project construction and construction phase support costs	$ 1,750,000.00	October 2025
TOTAL		**$ 2,259,400.00**	

**$737,500 of leveraged funding*

Project Lifespan & Lifecycle Cost

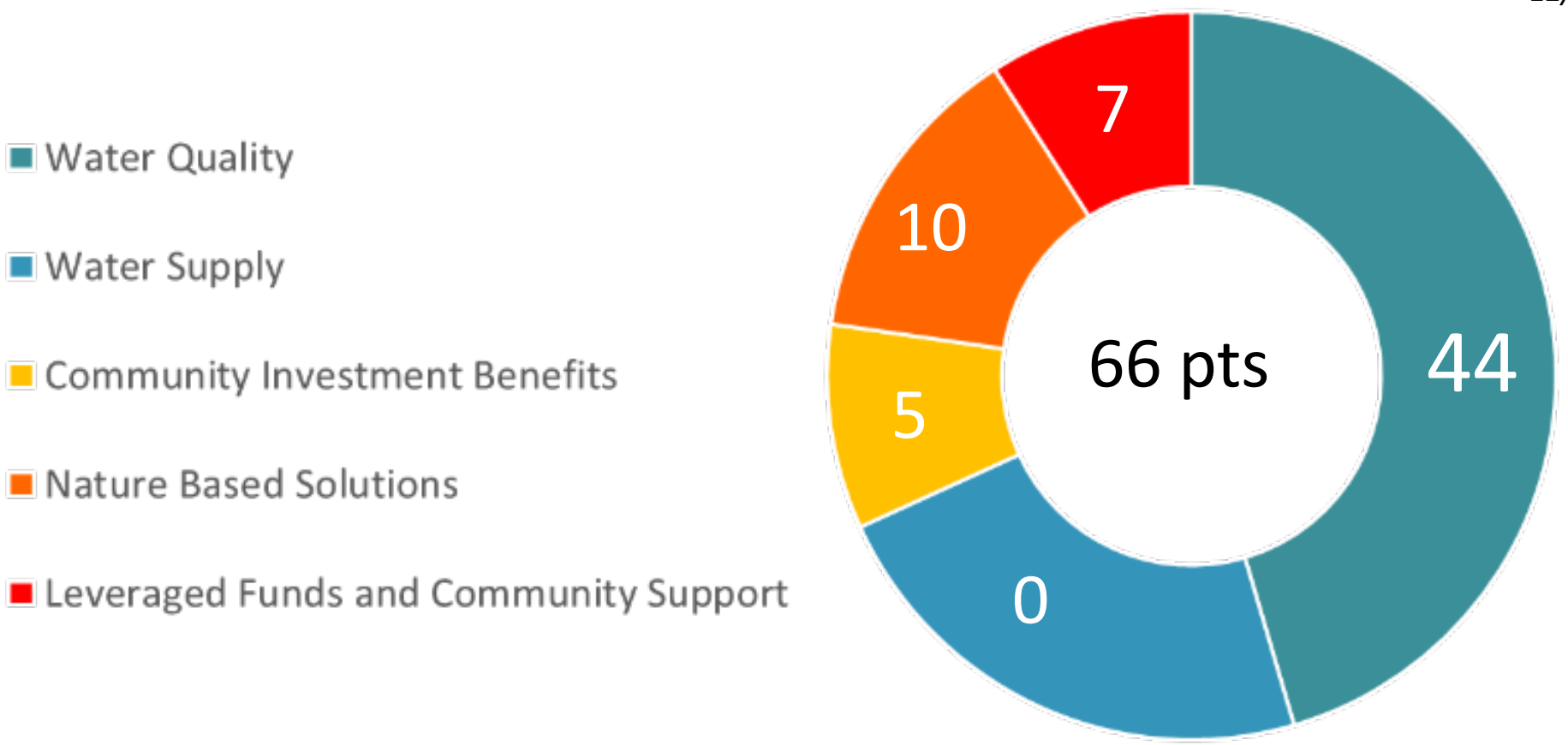
- 40 YEARS

Funding Request

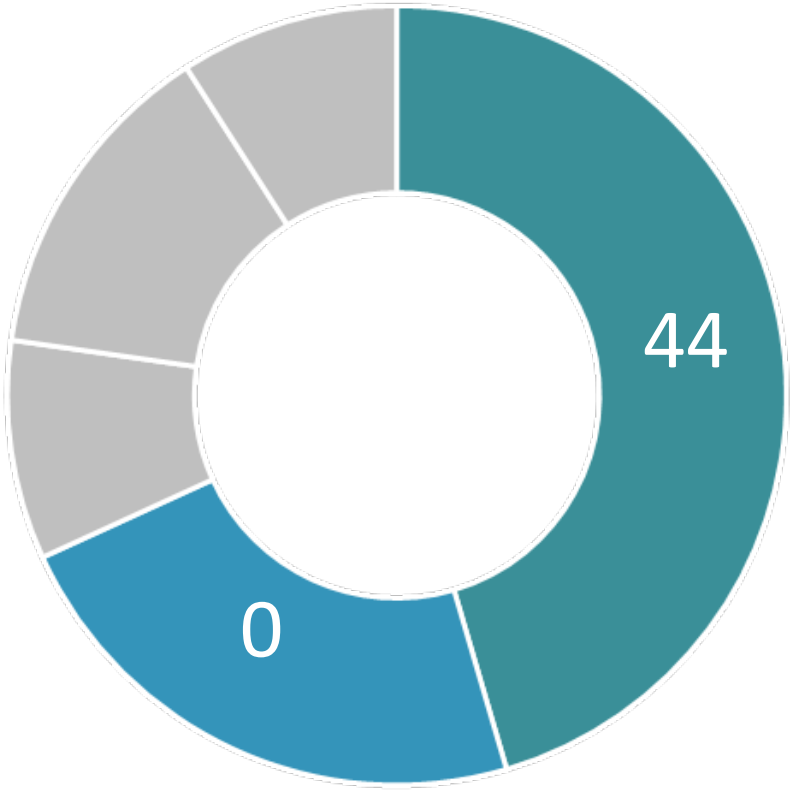
Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	$ 404,400.00	Planning + Design	Project planning, environmental documentation, and right of way costs. Project design and development of PS&Es. This funding item includes $105,000 of leveraged funds ($509,400 - $105,000 =$404,400).
2	$ 1,117,500.00	Construction	Construction/construction phase support. funding item includes $632,500 of leveraged funds ($1,750,000- $632,500 = $1,1175,000).
3	$ 123,200.00	O&M + Monitoring	First year of project O&M. First year of project monitoring.
4	$ 123,200.00	O&M + Monitoring	Second year of project O&M. Second year of project monitoring.
5	$ 123,200.00	O&M + Monitoring	Third year of project O&M. Third year of project monitoring.
TOTAL	**$ 1,891,500.00**		**2,6209.000 PROJECT TOTAL**

Score as confirmed by the Scoring Committee

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



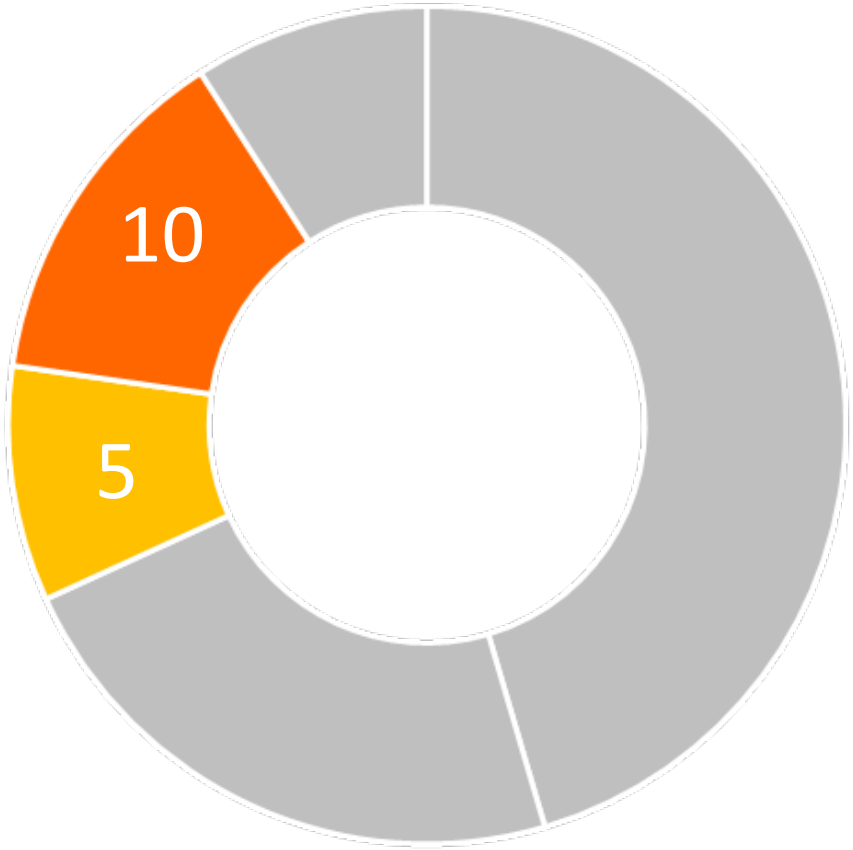
Water Quality & Water Supply Benefits



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

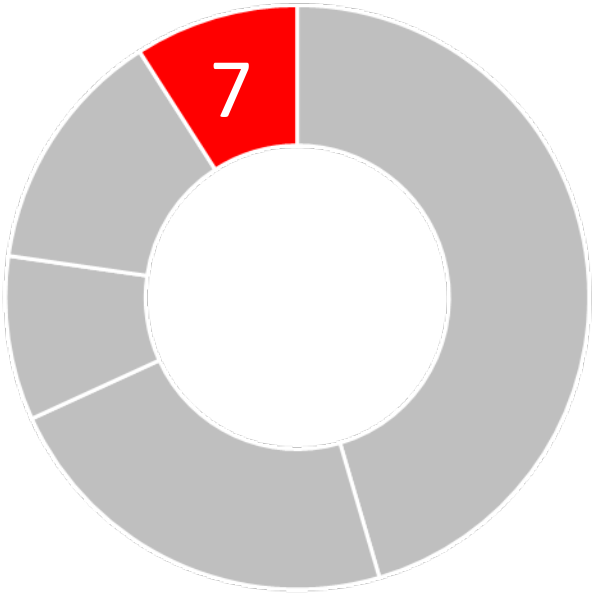
- Drywell infiltration
- Wet + dry weather performance
- 22-ac capture area and
  24-hr capacity: 1.5 ac-ft
- 82% long-term pollutant capture
- Project infiltrates 0.7 ac-ft per year on average
- Project does not claim any water supply benefit

Community Investment Benefits and Nature Based Solutions



- Community Investment Benefits
  - Project addresses nuisance flooding, vector control enhances common spaces at school, reduces of heat island effect, brings myriad benefits of Urban Forestry & 'nearby nature' to school (*Mental Health, Physical Fitness, Academic Performance*)
- Nature Based Solutions
  - The primary mechanisms of this project are infiltration and shade. Infiltration to treat runoff and shade from proposed vegetation to reduce heat island effect, provide cooling and critical ecosystem services – air quality habitat

Leveraging Funds and Community Support



The Scoring Committee confirmed this score on12/1/2022

- Leveraging Funds
  - AdlR has a strong track record of obtaining grants and in-kind pledges with
  - commitments and applications in progress for $716,230 of matching funds 25.3% funding matched
- Community Support
  - Project has wide range of support from Principal, PUSD Superintendent, Alumni Assoc. to non-profits and community-based organizations.
  - AdlR had been conducting outreach and incremental greening work for almost six years.


Questions?
Claire Robinson
Mike Rudd