



Arroyo Park Infiltration Gallery

Infrastructure Program

Fiscal Year 2024-2025

Watershed Area – Upper Los Angeles River

Project Lead – City of South Pasadena

Presenter Names – Ted Gerber & Jon Abelson

Previously Awarded TRP – Yes



Project Overview

This project proposes an underground infiltration gallery (NDS StormChamber) to be located underneath a soccer field at Arroyo Park.

- 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
- Phases for which SCW funding is being requested
 - Planning, Design, Bid and Award and Construction
- Total Funding Requested: \$7,160,127.06





Project Background

- Project (Lower Arroyo Park) was included 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. Arroyo Park is one of them.
- City of South Pasadena will have
 - enhanced water supply through infiltration and treatment
 - enhanced park space e.g. soccer fields
 - increased drought tolerant/native landscaping
 - new native vegetation, extended walking paths and educational signage
 - naturalistic stream channel along south side of project



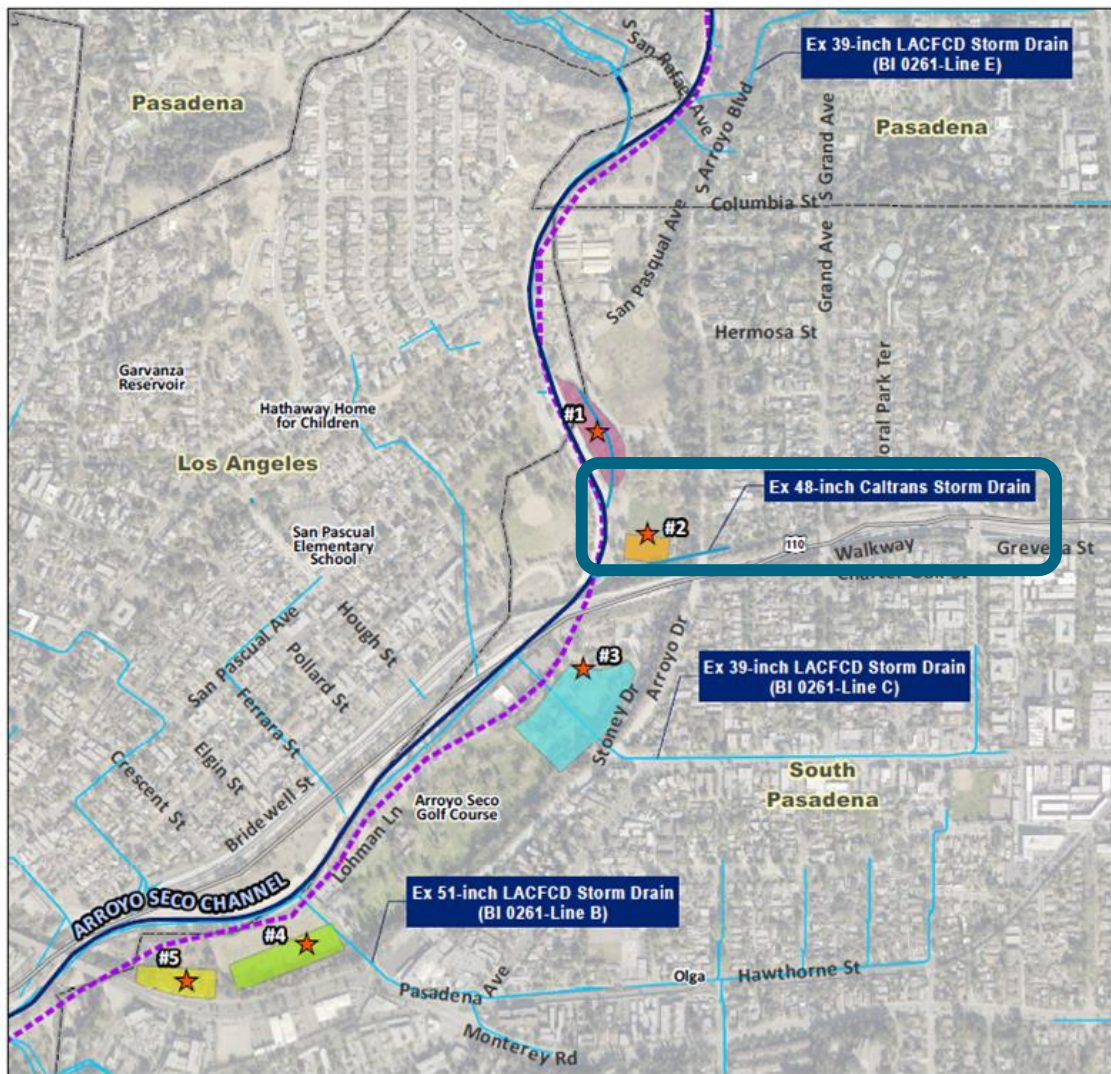
Partners

- City of South Pasadena and LACFCD are implementation partners already identified.
- Caltrans, City of Pasadena, South Pasadena Little League, the American Youth Soccer Organization, and Active SGV have expressed support for the project.
- Received a letter of concurrence from the Flood Control District on 7/28/2022.





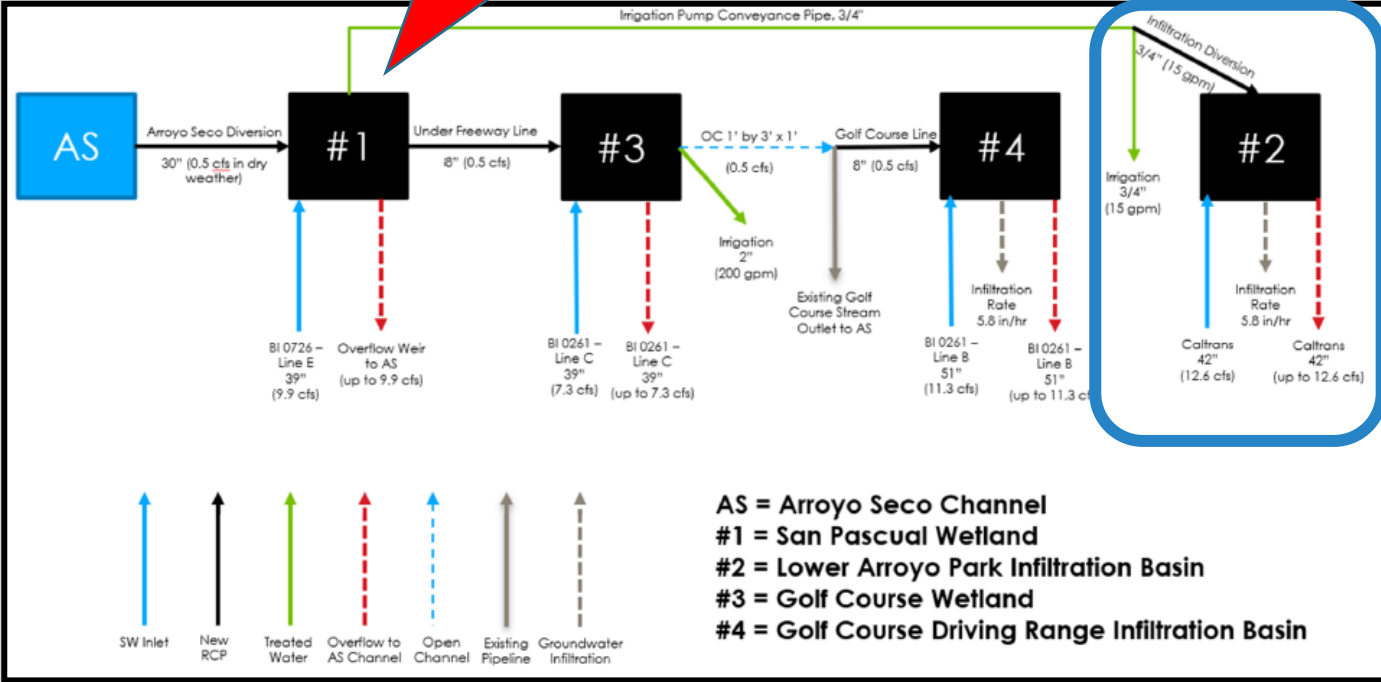
Project Details - Overview



- ★ Facility
- #1 San Pascual Wetland
- #2 Lower Arroyo Park Infiltration Basin
- #3 Golf Course Wetland
- #4 Golf Course Driving Range Infiltration Basin
- #5 Nature Park Wetland
- Existing Stormdrain
- 303d Impaired Streams

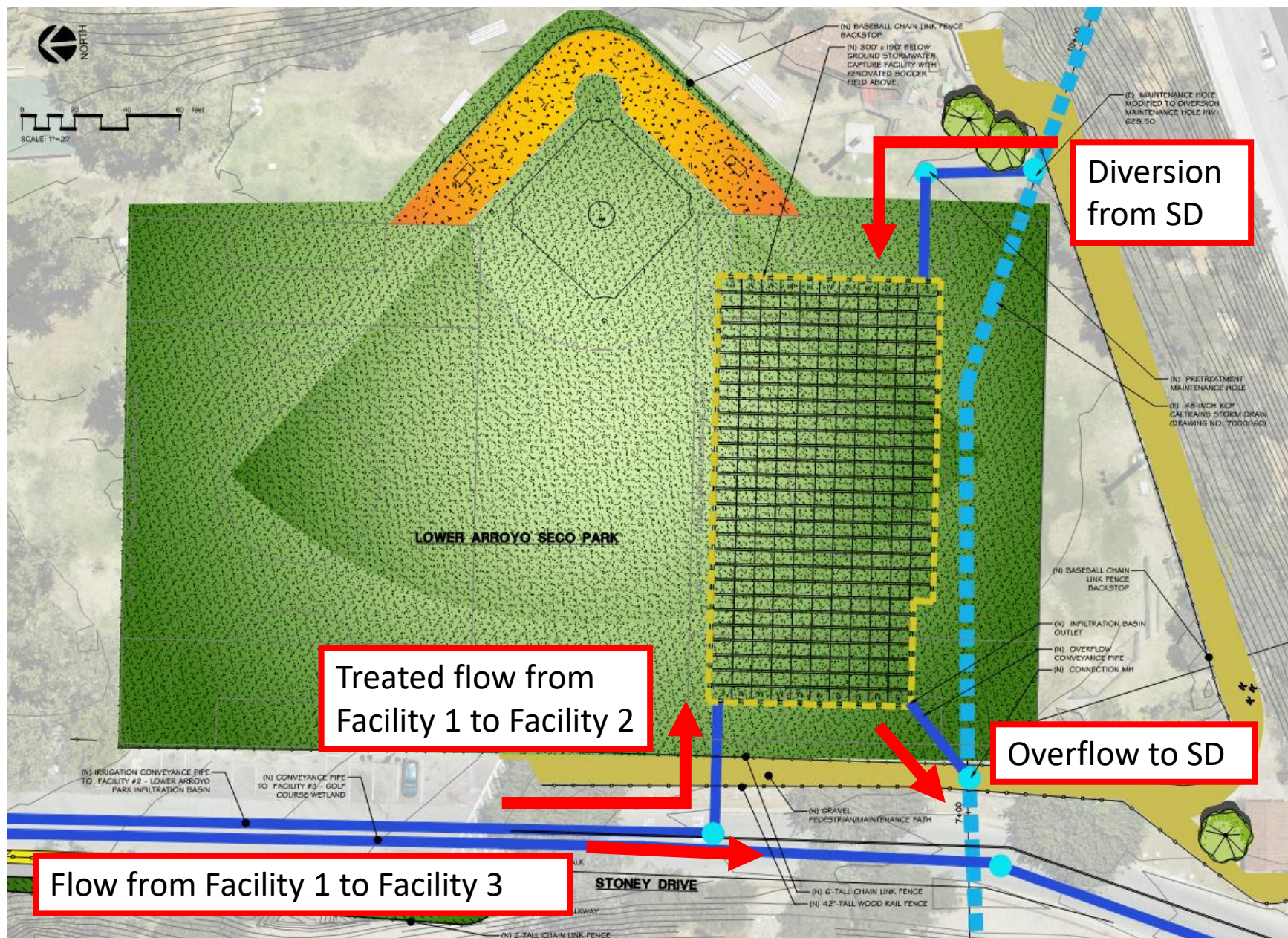
Facility 2 (Arroyo Park Infiltration Basin) is part of a larger project

Facility 1 already funded by SCW



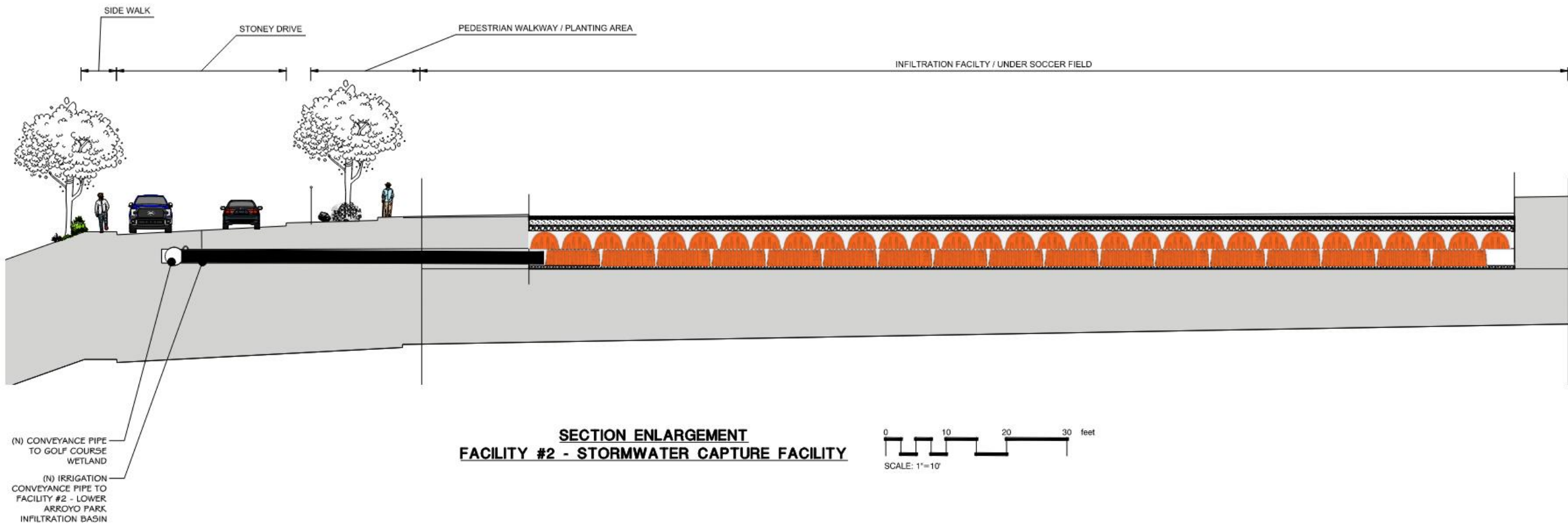


Project Details – Infiltration Gallery



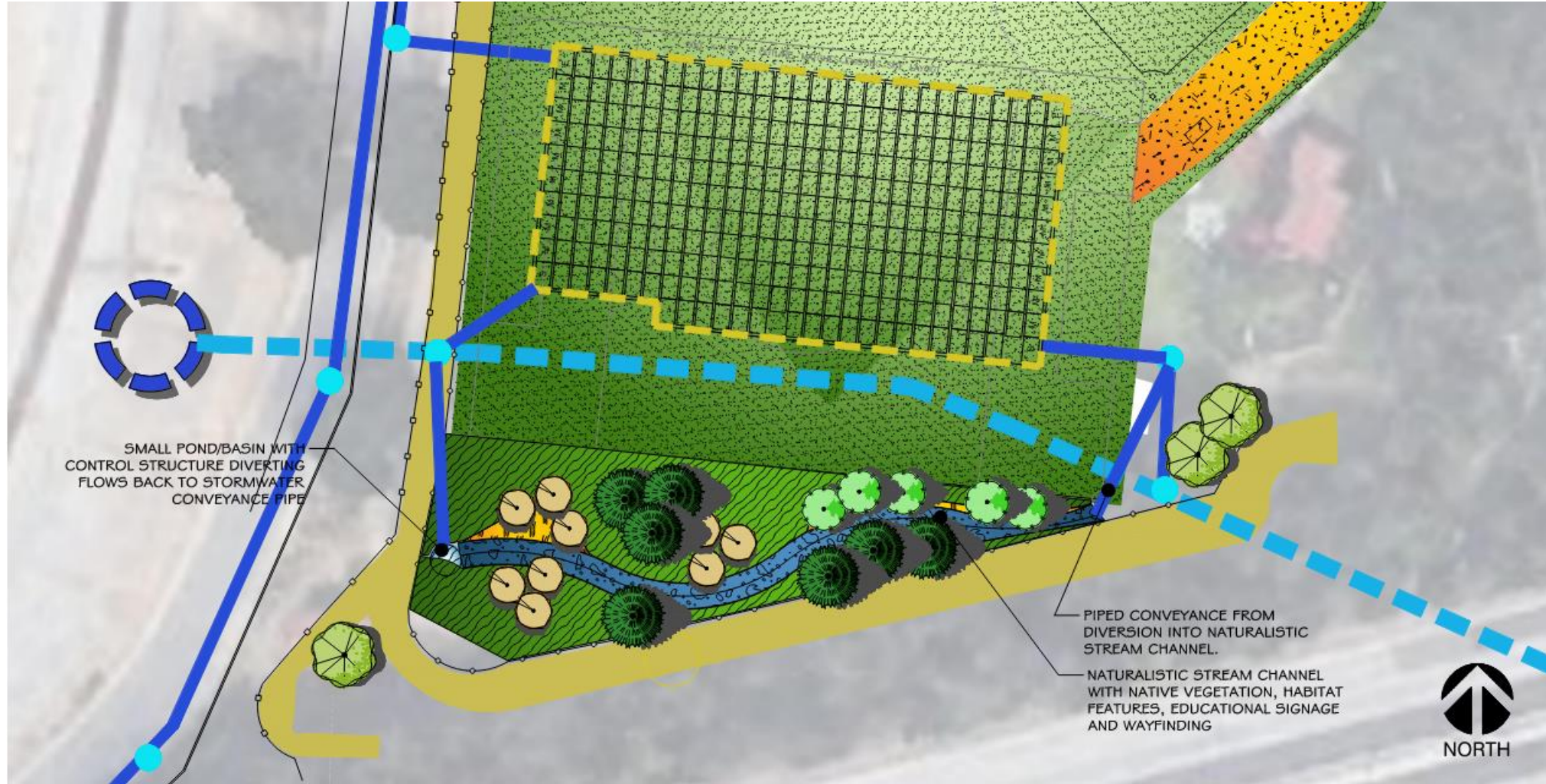


Project Details – Infiltration Gallery Section View





Project Details – Naturalistic Stream





Project Details – Current Site Conditions

- A geotechnical investigation was conducted on 7/15/21
 - Infiltration Rate: 5.84 in/hr (with FS of 3)
 - 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.



Cost & Schedule

Phase	Description	Cost	Completion Date
Planning	Associated costs with permits and environmental compliance (including CEQA), pre-design report development, site investigations, and other general reconnaissance during design phase	\$333,407.38	12/2025
Design	Assuming approval occurs in August 2024, the development of 30% design drawings will begin in September 2024. It is assumed that 100% design drawings will be finished by December 2025.	\$580,666.44	12/2025
Bid/Award	Send project out for bid and award to contractors after design phase	\$20,000.00	05/2026
Construction	Assuming approval occurs in August 2024 and design finishes in December 2025, construction would begin in July 2026.	\$9,340,738.24	07/2028
Total		\$10,274,812.06	

- Total Life-Cycle Cost: \$12,208,797.30 over 30 years
- Annualized Life-Cycle Cost: \$653,453.40
- Annual Cost for Maintenance, Operation, & Monitoring: \$103,513.00



Funding Request

Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	\$333,407.38	Planning	Obtaining permits and engaging in environmental compliance (including CEQA) and other reconnaissance during design phase
1	\$580,666.44	Design	Formal design drawings will be developed for the project (30% - 100%).
2	\$20,000	Bid/Award	Send project out for bid and award to contractors after design phase
2	\$6,226,053.24	Construction	Construction of the project will begin during 2026.
TOTAL	\$7,160,127.06		

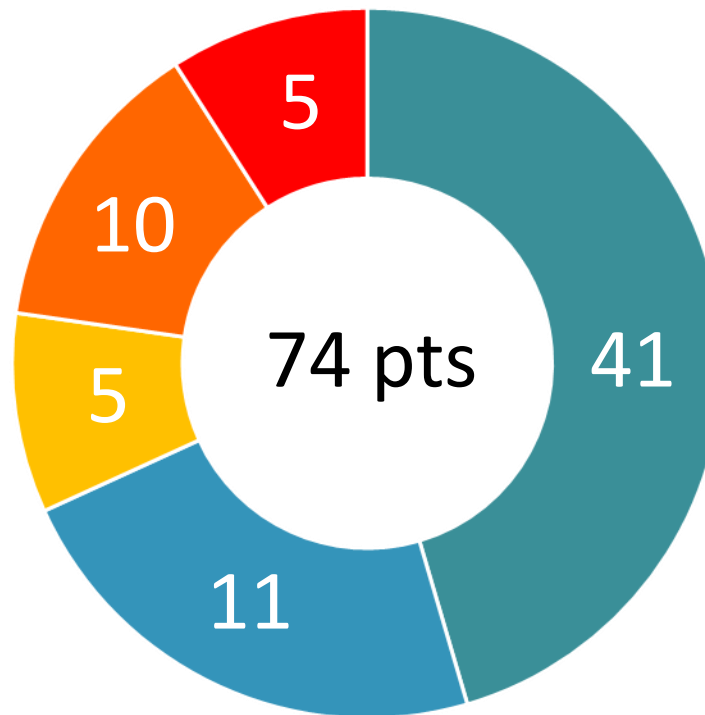
- Leveraged Funding from Caltrans Cooperative Implementation Agreement (CIA) dated 6/7/23: \$3,114,685.00 (30.3% of total project cost)
- Future potential SCW funding requests may arise for the remaining two facilities for the Arroyo Seco Projects



Score as confirmed by the Scoring Committee

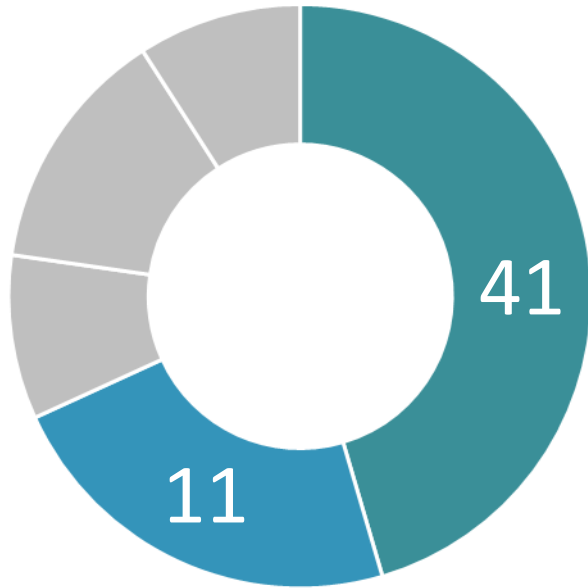
The Scoring Committee confirmed this score on **12/7/2023**

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





Water Quality & Water Supply Benefits

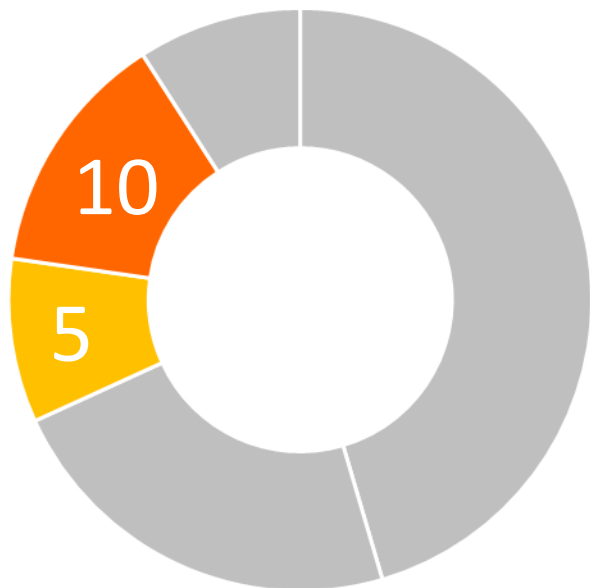


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- Primary mechanisms that achieve Water Quality and Water Supply Benefits claimed
- The project will be sized to capture, bioretain, and infiltrate runoff associated with the 24-hour, 85th percentile storm.
- **Wet Weather Project**
- **Tributary Area:** 165 acres
- **24-hour BMP Capacity:** 5.61 ac-ft
- **10-yr Primary Pollutant Reduction (Total Zinc):** 97.6%
- **10-yr Secondary Pollutant Reduction (Total Copper):** 97%
- **Annual Water Supply Volume:** 57.55 ac-ft
- **Water Supply Aquifer:** Main San Gabriel Groundwater Basin
- **Water Supply Cost Effectiveness:** 5.61 ac-ft/\$9.34M (0.60)
- **Water Quality Cost Effectiveness:** \$11,355/ac-ft



Community Investment Benefits and Nature Based Solutions

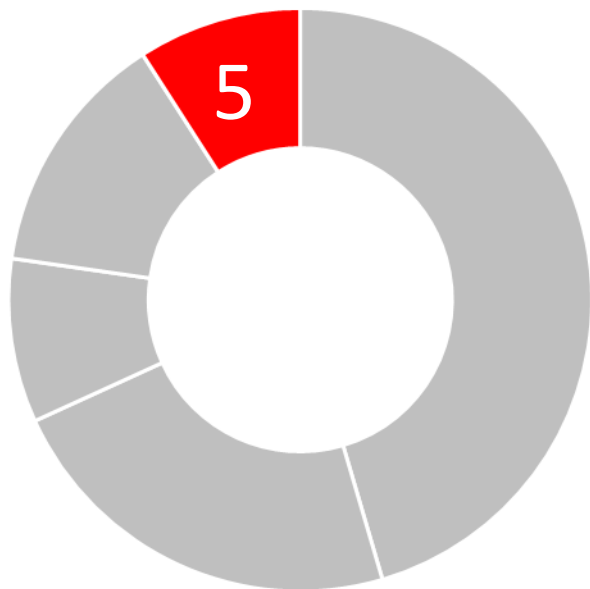


The Scoring Committee confirmed this score on **12/7/2023**

- Community Investment Benefits
 - Enhance park space through addition of native plants
 - Enhance existing soccer fields
 - 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
 - Addition of native vegetation, including trees and shrubs.



Leveraging Funds and Community Support



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

- Leveraging Funds
 - Caltrans CIA Commitment of \$3,114,685
 - 30.3% funding matched
- Community Support
 - This project is supported by Caltrans, City of Pasadena, South Pasadena Little League, the American Youth Soccer Organization, 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

Jon Abelson