LA River Green Infrastructure Project

Funding Program Fiscal Year 2024 – 2025 Upper Los Angeles River Watershed Project Lead: Los Angeles Sanitation and Environment Presenting: Valeria Arteaga, LASAN Previously Awarded TRP – No

Project Overview

The Project will install three dry weather diversions to remove pollutants from runoff, improve water quality, and increase water supply.

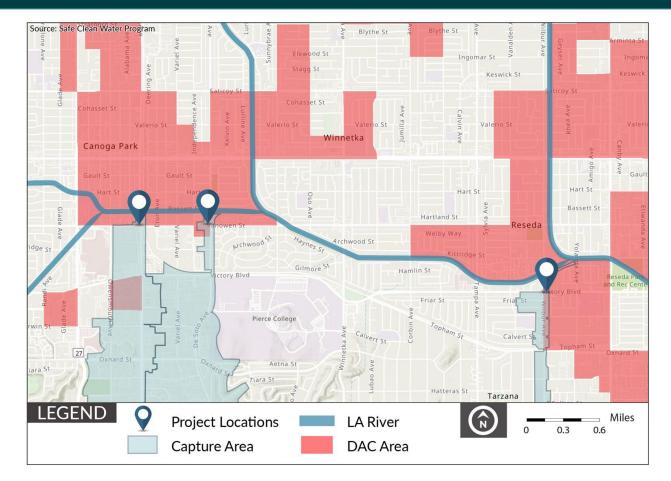
- Primary: 100% bacteria
- Project Status: Feasibility
- SCW funding requested for Planning, Design, Construction, O&M
- Total Funding Requested \$17,053,812







Disadvantaged Community (DAC)





Project location was selected due to:

- Located within a Disadvantaged Community (DAC)
- Greatest need and highest potential for cost-effective implementation of BMPs

Development of the project took place with the following items in mind:

- Originally submitted in Round 3
- Project reduced size and focused on optimizing water quality and cost benefit effectiveness based on feedback from the WASC
- Community input on needs in the project area

Project area is included in the Upper LA River Watershed Management Plan





- Support for the Project
 - Approximately 65 local residents from the City of Los Angeles
 - Friends of the LA River
 - LA River Watchers & Walkers
 - Los Angeles Department of Water and Power
 - Council District 3
 - Winnetka Neighborhood Council
 - Reseda Neighborhood Council (voted to provide a support letter at October 16th meeting - signed letter pending)
- Vector Control District will be contacted during the pre-design phase



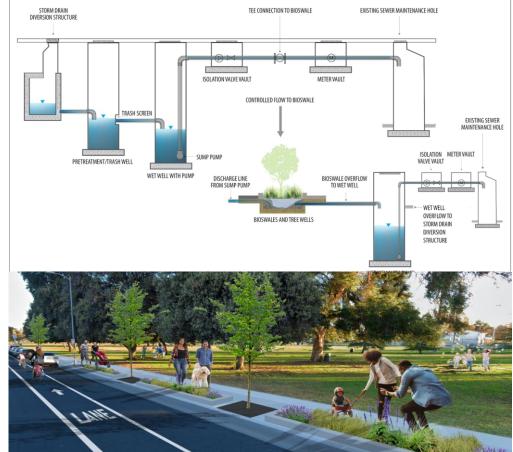






Project Details

- Capture approx. 210.3 ac-ft (AF) of dry weather runoff annually
- 4,247 ac drainage area
- Add approx. 3,528 SF of bioswales
- 50 new street trees
- Runoff diverted from existing LA County storm drain system routed to Donald C. Tillman Water Reclamation Plant to provide additional recycled water
- Alternative 1 proposed underground storage at the Randal D. Simmons Park along Wilbur Ave.
 - Not chosen due to high construction costs



Municipality Benefits

Disadvantaged Community (DAC) & Municipality Benefits

- Trees and greening will create additional shade, improved air quality, and reduce heat island effect.
- Educational displays about SCWP and LA River will foster interest in the environment and the long-term sustainability of the LA River.
- Greening along streets going to the LA River will enhance aesthetics and encourage the community to use the LA River for recreational activities like walking, jogging, and bicycling
- Improvements to water quality in the LA River and downstream recreational areas
- Decreasing municipal water demand with added recycled water
- Pollutant removal





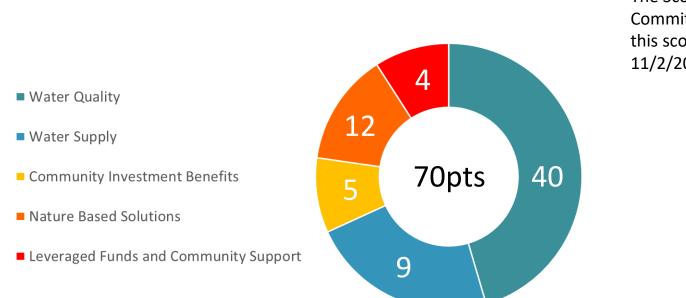
Cost & Schedule

Phase	Description	Cost	Completion Date
Planning	Concept report, feasibility study, public engagement, project planning, permitting, and preliminary design	\$1,156,930	06/2025
Design	Engineering, design, CM	\$4,959,128	12/2028
Bid/Award	Bid/Award	\$1,072,244	04/2027
Construction	Construction Contract	\$12,330,806	12/2028
Construction	Three (3) years post-construction monitoring as required in the project transfer agreement and O&M	\$702,091	06/2029
TOTAL		\$20,221,200	
Leveraged Funds	City Services	\$3,167,388	YR1-YR5

Project Schedule Based 5-Yr Cost						
Task Name	YR1-FY24/25	YR2-FY25/26	YR3-FY26/27	YR4-FY27/28	YR5-FY28/29	Total
	Project Cost					
Planning ¹	\$1,156,930.50					\$1,156,930.50
Design & CM ²		\$1,608,366.00	\$1,206,274.50	\$1,072,244.00	\$1,072,244.00	\$4,959,128.50
Construction			\$4,110,268.67	\$4,110,268.67	\$4,110,268.67	\$12,330,806.00
Bid and Award			\$1,072,244.00			\$1,072,244.00
0&M					\$402,091.00	\$402,091.00
Monitoring					\$300,000.00	\$300,000.00
Total Cost:	\$1,156,930.50	\$1,608,366.00	\$6,388,787.17	\$5,182,512.67	\$5,884,603.67	\$20,221,200.00
Total Match:	\$218,717.00	\$737,167.75	\$737,167.75	\$737,167.75	\$737,167.75	\$3,167,388.00
Funding Request:	\$938,214	\$871,198	\$5,651,619	\$4,445,345	\$5,147,436	\$17,053,812

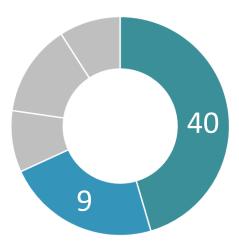
• 15.7% of funding matched (City Services)

Score as confirmed by the Scoring Committee



The Scoring Committee confirmed this score on 11/2/2023

Uater Quality & Water Supply Benefits



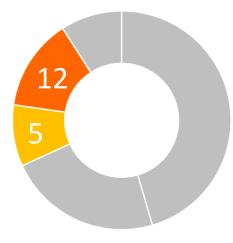
Water Quality

- Bioswales, street trees and LFDs
- Tributary area: 4,247 acres
- 100% Dry Weather Capture
- Pollutant Reduction: 100% bacteria, 100% trash

Water Supply

- Annual Water Supply Volume: 210.3 AF/yr
- Water Supply Use: Recycled water at Donald C. Tillman Water Reclamation Plant
- Water Supply Cost-Effectiveness: \$5,840/AF

Community Investment Benefits and Nature-Based Solutions



Community Investment Benefits

- Creation/enhancement of habitat
- Improved access to LA River
- Enhanced recreational and learning opportunities
- Increased shade and reduction of Heat Island Effects
- Increased trees and vegetation

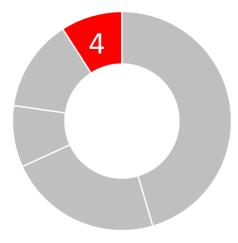
Nature-Based Solutions

- Mimics natural processes in trees and bioswales
- Utilizes natural materials in bioswales
- Replaces impermeable surface with green space

Leveraging Funds and Community Support

Leveraging Funds

• This project has 16% leveraged funds



Community Support

- This Project has received strong community support from:
 - LA Department of Water and Power,
 - Council District 3,
 - Friends of the LA River,
 - LA River Watchers & Walkers,
 - Winnetka Neighborhood Council, and
 - approximately 60 local residents from the City of Los Angeles.

Questions?

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Valeria Arteaga, LASAN

Sun Valley Green Neighborhood Infrastructure Project

Funding Program (Infrastructure Program) Fiscal Year 2024-2025 ULAR Watershed LA Sanitation & Environment Kevin Ho Previously Awarded TRP –No

Project Overview

This Project proposes the implementation of green street elements such as dry wells, to increase water supply, improve water quality, and mitigate flood risk

- Primary Objective: Increase water supply, improve water quality, and mitigate localized flooding by constructing nature-based stormwater capture and infiltration features.
- Secondary Objectives: Enhance safety and recreational opportunities for the neighborhood
- Project Status Funding Request for: Planning, Design, O&M, Monitoring, & Construction
- Total Funding Requested: \$13,771,475



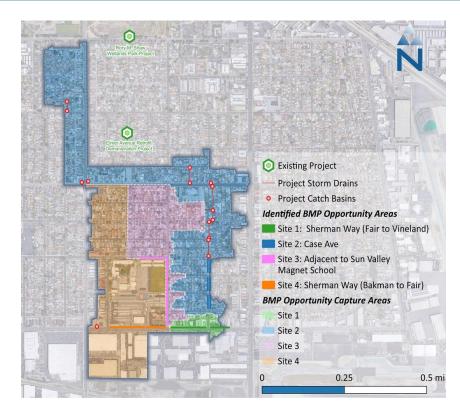


Project Location



DAC Location Map (shown in orange)





Drainage Area and Project BMP Opportunity Areas



- Project location selected because the Sun Valley Neighborhood has:
 - Historically experienced flooding
 - Minimal existing stormwater and green infrastructure
 - Located within a Disadvantaged Community (DAC)
- The project was developed taking into account the water quality and supply needs of area, in addition to community needs
- The project area is included in the Upper Los Angeles River (ULAR) Enhanced Watershed Management Program (EWMP), identified as Subwatershed No. 664249



Localized flooding at Case Avenue and Sherman Way



Localized flooding Case Avenue and Valerio St

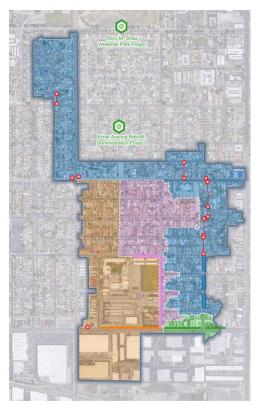


- Communities/groups that have expressed support for the project:
 - Council District 2
 - Sun Valley Area Neighborhood Council
- 19 total Letters of Support received from community members
- Letter of Support received from the ULARA Watermaster
- Vector Control District will be contacted during design phase









Preliminary geotechnical investigation was completed to determine:

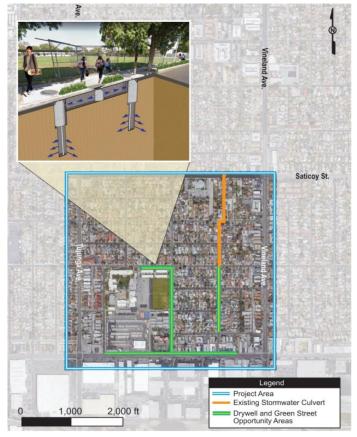
- Soil Type: Interbedded sand and silty sand
- Groundwater Depth: Not Encountered
- Design Infiltration Rate: 4.5 in/hr

The following alternative concepts were considered:

- Alternative 1 Including County storm drain diversions along Vineland Avenue
 - Not chosen due to high cost
- Alternative 2 Excluding a portion of the capture area and County storm drain diversions along Vineland Avenue
 - Not chosen due to exclusion of improvements near school

Project Layout





Project to include:

- 40 drywells
- 2,000 square ft of bioswales
- Approximately 35 trees
- Native, drought-resistant vegetation
- Stormwater educational signages



- Benefits to municipality/municipalities:
 - Capable of capturing 189.9 AF of runoff annually (76.1 AF/yr of wet weather runoff and an additional 113.8 AF/yr of dry weather runoff)
 - Captures 8.9 AF (91% of the 85th Percentile storm volume)
 - Removal of 81% of zinc and 85% of trash from captured runoff.
- Disadvantaged Community (DAC) Benefits:
 - Improved flood management and flood risk mitigation.
 - Additional trees (35) and greening to provide improved air quality, reduction of heat island effect, and increased carbon sequestration.
 - Reduction in pollutants from local runoff.
 - Increased educational opportunities about stormwater and water resources.



Cost & Schedule

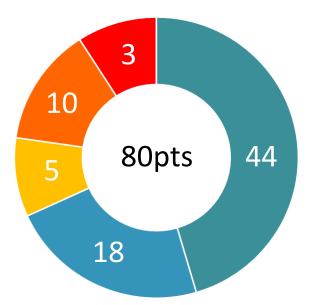
Phase	Description	Cost	Completion Date	
Planning	Project Planning, Permitting, Preliminary Design	\$963,363	YR1-FY24/25	
Design & CM	Design and CM	\$4,034,917	YR5-FY28/29	
Bid & Award	Bid & Award	\$87,241	YR4-FY27/28	
Construction	Construction	\$10,817,940	YR5-FY28/29	
Monitoring and O&M	Three (3) years post-construction monitoring	\$467,154	Continued After Project Construction	
TOTAL		\$16,370,615		
Leveraged Funds	City Services	\$2,599,140	YR1-YR5	

		[-	5-Yr Cash Flow			
0	YR1-FY24/25	YR2-FY25/26	YR3-FY26/27	YR4-FY27/28	YR5-FY28/29	Total
			Project Cost			
Planning	\$963,363	\$0	\$0	\$0	\$ 0	\$963,363
Design	\$0	\$1,308,622	\$981,466	\$872,415	\$872,415	\$4,034,917
Construction	\$0	\$0	\$0	\$5,452,591	\$5,452,590	\$10,905,181
0&M	\$0	\$0	\$0	\$0	\$327,154	\$327,154
Monitoring	\$0	\$0	\$0	\$0	\$140,000	\$140,000
Total Cost	\$963,363	\$1,308,622	\$981,466	\$6,325,006	\$6,792,159	\$16,370,615
Total Leverage	\$200,000	\$599,785	\$599,785	\$599,785	\$599,785	\$2,599,140
Funding Request	\$763,363	\$708,837	\$381,681	\$5,725,221	\$6,192,374	\$13,771,475

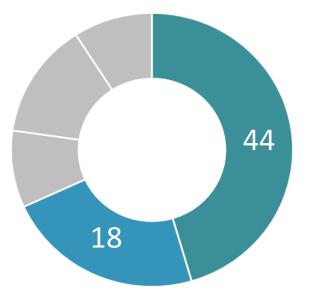
• 15.9% of funding matched (City Services)



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

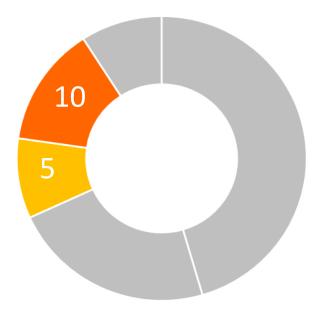


Uater Quality & Water Supply Benefits



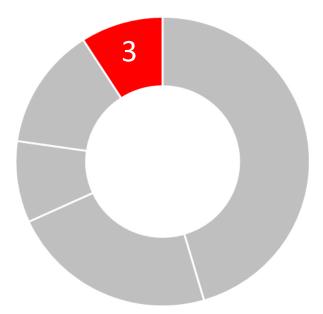
- Water Quality
 - Water quality effectiveness 0.82 AF/\$-Million
 - 81% Primary Load (zinc) reduction
 - 85% Secondary Load (trash) reduction
- Water Supply
 - Water supply cost effectiveness of \$5,244/AF
 - 189.9 AF/yr of stormwater capture

Community Investment Benefits and Nature Based Solutions



- (6) Community Investment Benefits
 - Improved flood mitigation
 - Enhancement and Restoration of Habitat
 - Enhanced recreational opportunities
 - Increased shade and reduced heat island effect
 - Increased carbon sequestration and air quality improvements
- Nature Based Solutions
 - Implements natural processes in stormwater runoff infiltration
 - Use of natural materials and Californianative vegetation

Leveraging Funds and Community Support



- Leveraging Funds
 - The City is exploring potential leveraged funding opportunities
 - 15.9% of funding will be matched
- Community Support
 - The project has been embraced by the local community
 - 19 Letters of Support received from community members and local community organizations



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Kevin Ho



Osborne Street Stormwater Capture Green Street Project

Infrastructure Program – Fiscal Year 2024-2025 Upper Los Angeles River Watershed City of Los Angeles, Bureau of Street Services (StreetsLA) Previously Awarded TRP – No

> Presenters: Mark Prieto-Ines, StreetsLA Curtis Fang, Geosyntec Consultants





Regional stormwater capture and infiltration located along 1.7-mile stretch of Osborne Street to enhance active transportation improvements

- Project Lead: StreetsLA
- Primary Objective: Use nature-based solutions to provide 5.1 ac-ft water quality management capacity.
- Secondary Objectives: Recharge groundwater, promote active transportation, reduce local urban heat island effect
- Phases for which SCW funding is being requested: Planning, Design, and Construction
- Total Funding Request: \$9,500,000









The Project will capture 122-acres of drainage area in the City of Los Angeles portion of the Upper Los Angeles River Watershed Management Program Area.





Disadvantaged Communities

2,000 Feet **Disparity Score** + LAKE VIEV -1 to 0 0 to 1 1 to 2 San Fernanc pothill Fu 2 to 3 3 to 4 4 to 5 Q Not Stat. Sig ake View Terrace Gabrielino Equestrian Park Flood Contro Basin STONEHURST Hansen Dan Golf Course Sunland Blvd Legend Project Boundary DAC Census Block Group (2020)

City of LA Equity Tool showing Cooling Center Need

The Project encompasses five DAC census block groups that are in great need for shade improvement within the City of Los Angeles, Council District 7.

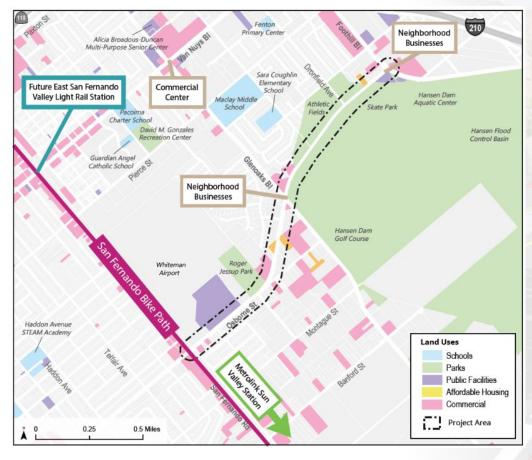


Project Background

The Osborne Street Path to Park Access Project was selected and developed to:

STREETS LA

- prioritize livability and safety within a disadvantaged community, and
- creates a complete street between transportation options, neighborhood destinations, open spaces, waterways, and trails.





STREETSILA

The stormwater capture component is integrated to provide additional water quality, water supply and community investment benefits to the municipality and disadvantaged community:

- ULAR WMP Implementation: Contribute 5.1 ac-ft of 24-hr stormwater management capacity to ULAR EWMP subwatershed 668649
- Groundwater recharge: Infiltrate 95.5 ac-ft/year of water into the underlying San Fernando Valley Groundwater Basin.
- Improved flood management
- Creation, enhancement, and restoration of open space
- Recreational enhancements (protected bike lanes and walkways)
- Heat island effect reduction
- Increased shade with 250 new trees
- Accessible, safe route to Hansen Dam Recreation Area and other community destinations



Project Background





Based on feedback provided at <u>over 20 outreach events conducted</u> for the Project, the community identified major concerns along Osborne Street regarding traffic safety and lack of shade along the corridor.

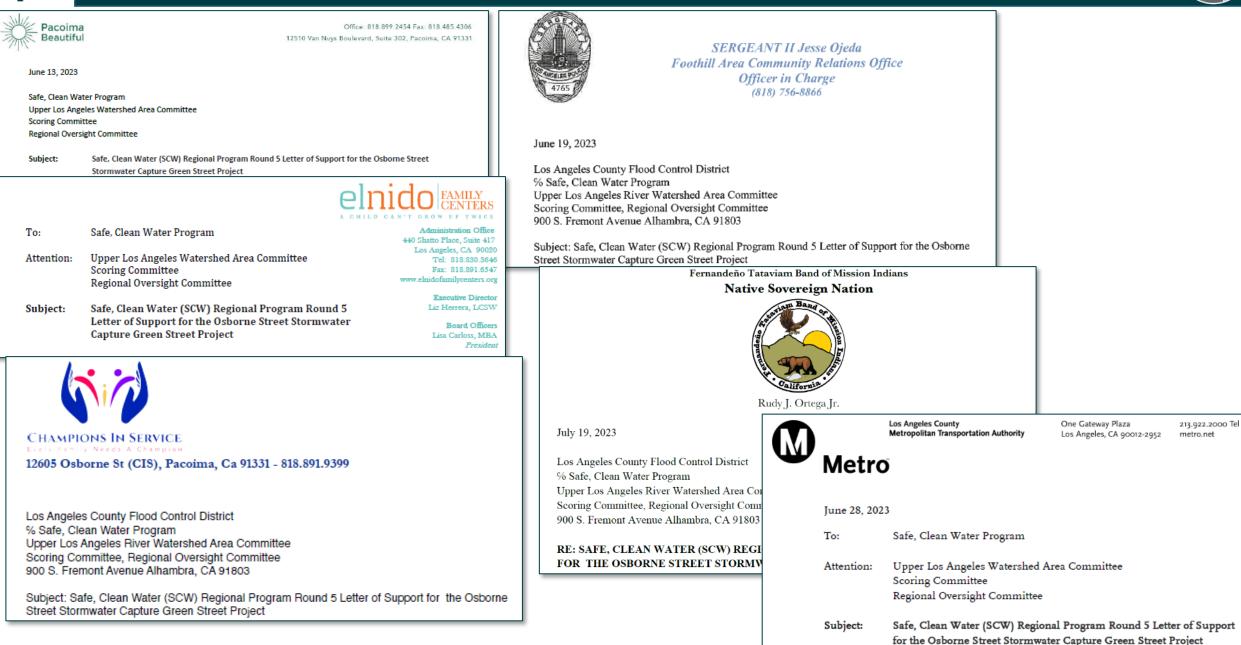
- <u>New protected bike lanes and sidewalks</u> will increase cyclist and pedestrian safety and encourage more active transportation.
- <u>Green stormwater features will</u> provide shade and cooling, while also helping to manage stormwater runoff, prevent flooding, and provide water quality benefits.
- <u>Addition of green space and trees</u> throughout the corridor will reduce local urban heat island effect and provide physical and mental health benefits.





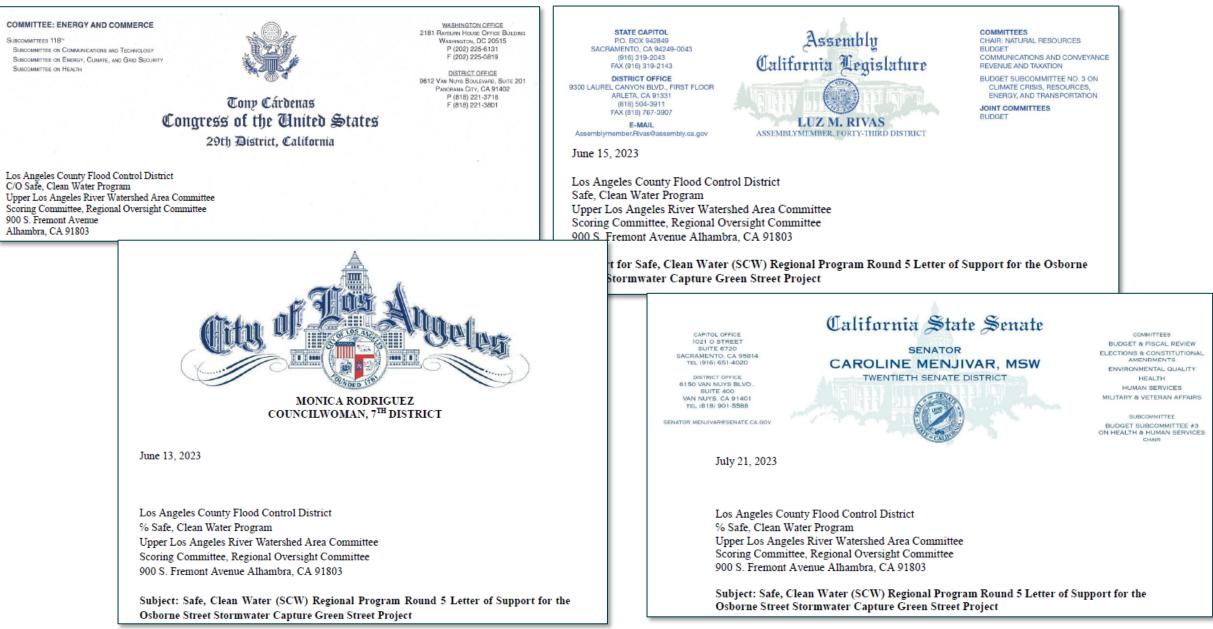
Partners – Strong Community and Elected Official Support





Partners – Strong Community and Elected Official Support









Ongoing Correspondence with Vector Control District

From:	Mark Hall <mhall@glacvcd.org></mhall@glacvcd.org>		
Sent:	Thursday, July 20, 2023 1:02 PM		
To:	Kimberly Goins		
Cc:	Alyssa Yu; Phil Reidy; Curtis Fang; mark.prieto-ines@lacity.org; gina.liang@lacity.org		
Subject:	RE: Vector Control District Contact - Osborne Street Stormwater Capture Green Street		
	Project		

Some people who received this message don't often get email from mhall@glacvcd.org. Learn why this is important

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. If you have any suspicion, please confirm with the sender verbally that this email is authentic. If you suspect fraud, click "Phish Alert Report."

Hi Kimberly,

Thank you for the additional documents. After reviewing the proposed project, I only have a few items of concern that will need to be verified. Also, I understand the drawing supplied are not construction specific and any comments related should be considered for inclusion into the final construction plans.

- Diversion structure The secondary side of the structure to slope to the invert of the discharge so there is no standing water in the absence of flow. Maintenance hole covers must be sealed (void of any through or pick holes), or have a mosquito exclusion insert installed beneath each cover to eliminate mosquito access into or out of the system.
- Pretreatment (CDS) units Devices must be from the State Water Board list of certified full trash capture devices. Access covers must be sealed (void of any through or pick holes), or have mosquito exclusion inserts installed beneath each cover.
- Drywells Many drywells are designed with a solid bottom and the wall perforations do not allow for complete
 draining of the unit. The floor of each drywell must be pervious to allow for complete draining of the
 unit. Additionally, maintenance or access covers must be sealed (void of any through or pick holes), or have
 mosquito exclusion inserts installed beneath each cover.
- Catch basins Basin must slope to discharge pipe invert. No standing water.

Please let me know if you have any questions or concerns with the above comments or other aspects of the project.

Thanks again, Mark

Mark Hall

Environmental Program Manager Greater Los Angeles County Vector Control District 12545 Florence Avenue Santa Fe Springs, CA 90670 Office: 562.944.9656 x554 Cell: 562.244.2029

Letter of Support from ULARA Watermaster



ularawatermaster.com 14051 Burbank Blvd, STE 300 Sherman Oaks, CA 91401 818-506-0418 PHOME 818-506-1343 TAX

July 19, 2023

- To: SCWP Regional Oversight Committee Members SCWP Scoring Committee Members SCWP ULAR Watershed Area Steering Committee Members City of Los Angeles Bureau of Street Services (Streets LA)
- Re: Letter of Support for Streets LA For Osborne Street Stormwater Capture Green Street Project, San Fernando Basin

Dear Committee Members:

The undersigned, as the Court-appointed Watermaster for the adjudicated region known as the Upper Los Angeles River Area (ULARA), wishes to express my direct support for the Streets LA grant funding application for its Osborne Street Stormwater Capture Green Street Project (the Project). The Project is located along Osborne Street, between San Fernando Road on the southwest and Foothill Blvd on the northeast, and along the northwesterly side of the Hansen Dam Golf Course; as such, the Project overlies a portion of the San Fernando Groundwater Basin (Basin), the largest of the four adjudicated groundwater basins in ULARA.

This Watermaster recognizes that various local agencies are applying for Regional Project Funds under the Los Angeles County Flood Control District's Safe Clean Water Program (SCWP). I also understand that I have been contacted by Streets LA, as the local Watermaster for this adjudicated Basin, to provide my concurrence and support of the proposed goals of the Project.

From information provided to my office by Streets LA, the Project is to consist of a series of dry wells and linear bioretention features designed to capture local stormwater, and dry-weather and wetweather flows, and to help permit the captured flows to deep percolate (infiltrate) into the ground. Water supply benefits could include improving the quality of the runoff flows, reducing local street flooding, and potentially increasing the local water supply by inducing recharge to the local groundwater in this portion of the Basin.





Engineering analysis completed during the Feasibility Study phase:

- ✓ As-built review
- ✓ Utility mapping
- ✓ H&H analysis
- ✓ In-situ geotechnical exploration
- ✓ Conceptual design
- ✓ Cost estimate

Subsurface BMP alternative evaluated: × Infiltration trench × Diversion to sewer × Cistern ✓ Drywell

Surface BMP alternative evaluated:

- ✓ Tree well filter
- ✓ Rain garden
- ✓ Bioswale
- ✓ Bioretention planter
- Engineered wetland
- × Pervious pavement

Selected surface BMPs are compatible with the landscape plan of the Osborne Street: Path to Park Access Project

Drywell is selected due to cost effectiveness, O&M procedure familiarity, and favorable deep infiltration condition at the Project site

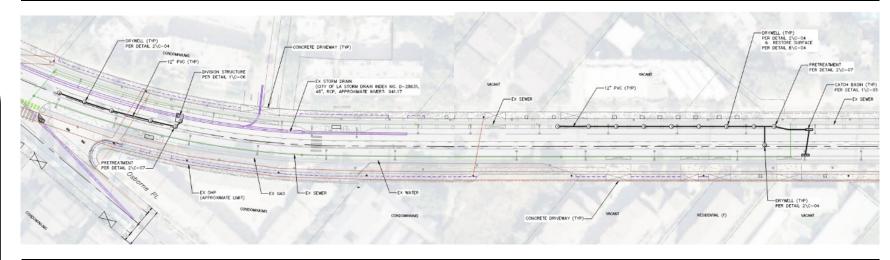


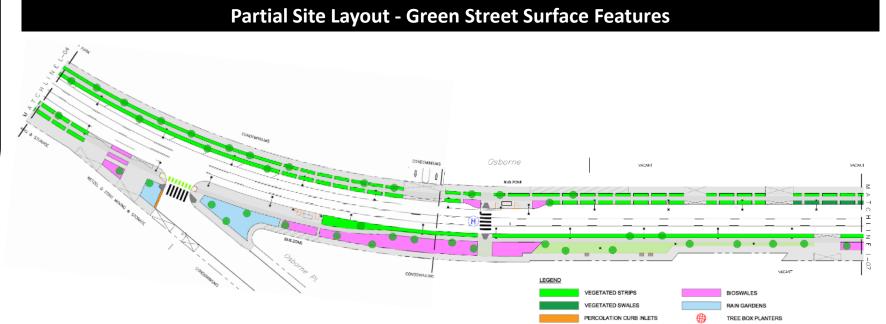


BMP quantities and locations are optimized based on H&H modeling output to fully capture the design storm.

✓ 19 drywells

- ✓ 1 storm drain diversion
- ✓ 131,000 sq-ft of vegetated bioswale, bioretention planters, rain gardens, and tree box infiltration planters
- ✓ 250 new trees





Partial Site Layout - Subsurface Infiltration Features

Project Details (Surface Capture Illustration)

STREETS LA

The Project will manage runoff from approximately 122 acres; approximately 98 acres of this area will be captured from surface flow. The catch basins will be sized to accommodate flow. Runoff will go from the catch basins into a pretreatment device to capture trash and particulates, then to a series of drywells for infiltration.

Catch Basin

Drywell

Pretreatment BMP

Project Details (Storm Drain Diversion Illustration)

The Project also includes a diversion structure that will divert runoff from approximately 24 acres from an existing 48-inch City of LA-owned storm drain, which will also flow into the drywells.

STREETS LA

Storm Drain Diversion Structure

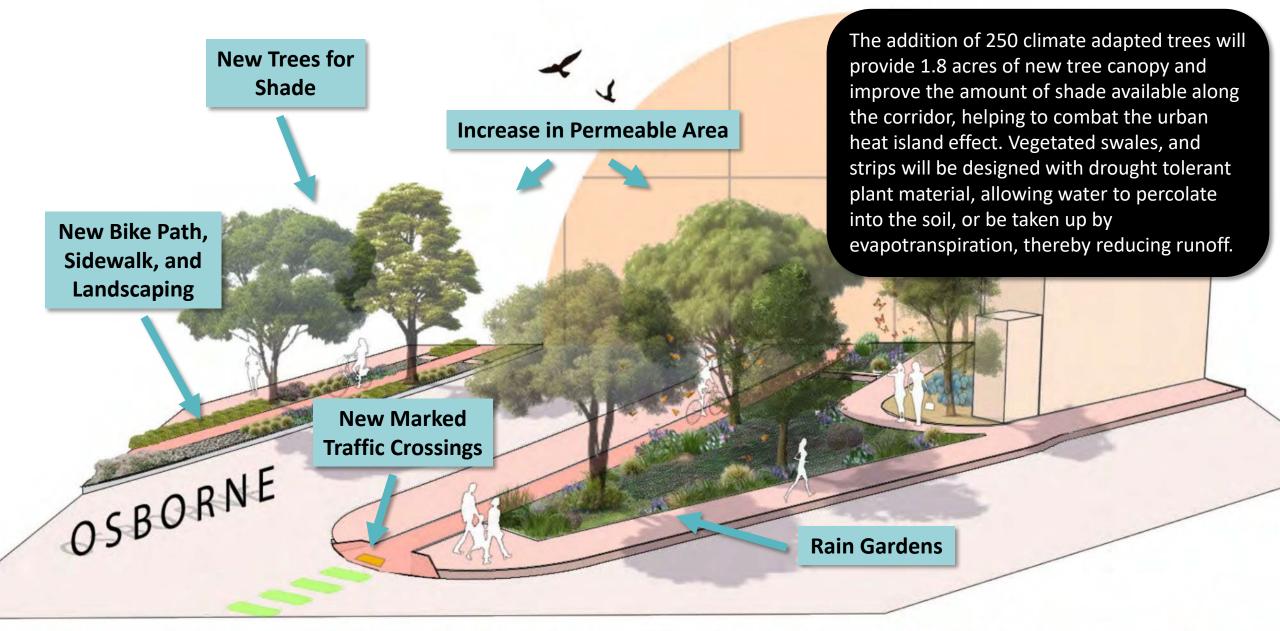
Pretreatment Device

Drywell

Existing Storm Drain

Project Details (Community Benefits Illustration)







Cost & Schedule



Phase	Description	Cost	Completion Date
Planning	Planning includes early concept design, site investigations, and California Environmental Quality Act (CEQA) and other environmental impact studies and permitting	\$597,400	6/2025
Design	Design includes, pre-project monitoring, site investigations, formal project design, intermediate and final project completion audits.	\$4,659,600	6/2026
Construction	Construction cost includes the cost of labor, equipment, material, plus overhead and contingencies.	\$11,947,800	6/2028
	TOTAL	\$17,205,000	

- Annual O&M: \$169,850 / Annual Monitoring: \$38,800
- Project Lifespan: 30 years
- (Module-generated) Life-Cycle Cost for Project: \$21,103,312.49
- (Module-generated) Annualized Cost for Project: \$1,129,515.95



Funding Request



Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	\$150,000	Planning	Project planning will be completed during Year 1
2	\$1,194,780	Design	Project design and permitting will be completed during Year 2
3	\$3,262,088	Construction	Project construction will begin in Year 3
4	\$4,893,132	Construction	Project construction will be completed in Year 3
5	-	-	
TOTAL	\$9,500,000		

Leveraged Funding: \$7,705,000 (45% Cost Share)





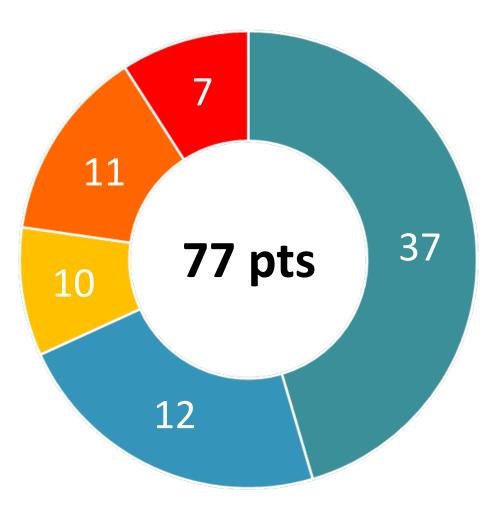
Water Quality

Water Supply

Community Investment Benefits

Nature Based Solutions

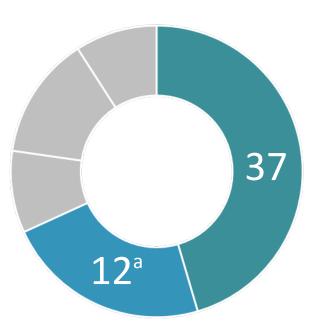
Leveraged Funds and Community Support



The Scoring Committee confirmed this score on December 7, 2023







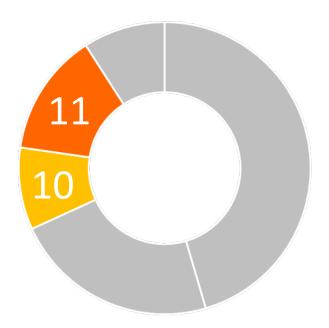
Water Quality Benefits	 ✓ 5.1 ac-ft, 24-hour management of flows from 122-acre drainage area (85th Percentile Storm) ✓ 98.4% Zinc Removal / 91.0% Bacteria Removal ✓ 0.43 AF / \$ M ✓ Contribute to ULAR WMP Implementation Metric
	OF F of the annual everage conture for water supply
	 95.5 ac-ft annual average capture for water supply Recharge benefits to the underlying San Fernando Valley
Water Supply	Groundwater Basin
Benefits	 Capture of first flush flows up to design capacity
	✓ Cost Effectiveness: \$ 11,825 per ac-ft

^a Calculated using alternative pilot scoring rubric

The Scoring Committee confirmed this score on December 7, 2023







- Community \checkmark Investment
- Improved flood management \checkmark Creation of habitat and park space
 - **Recreational enhancements** (protected bike lanes and walkways)
 - \checkmark Accessible, safe route to Hansen Dam Recreation Area
- \checkmark Heat island effect reduction with 131,000 sf of permeable, vegetated areas
- Increased shade with 250 new trees

Nature-based **Solutions**





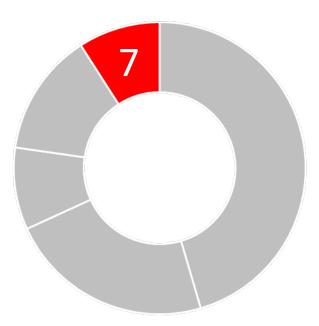


Vegetation

The Scoring Committee confirmed this score on December 7, 2023







Leveraging Funds and Community Support

- 45% leveraged funding match using municipal and Active Transportation Program funds
- Project demonstrates strong, local, community-based support
 - Project has been developed as part of a partnership with local NGOs and CBOs

 \checkmark



Questions?

SH ANSW LINGARD

Mark Prieto-Ines StreetsLA

Curtis Fang Geosyntec Consultants