SAFE CLEAN WATER PROGRAM

TECHNICAL RESOURCES PROGRAM
FISCAL YEAR 2027-2028

Altadena Post-Fire Living Streets Arterial Greenways

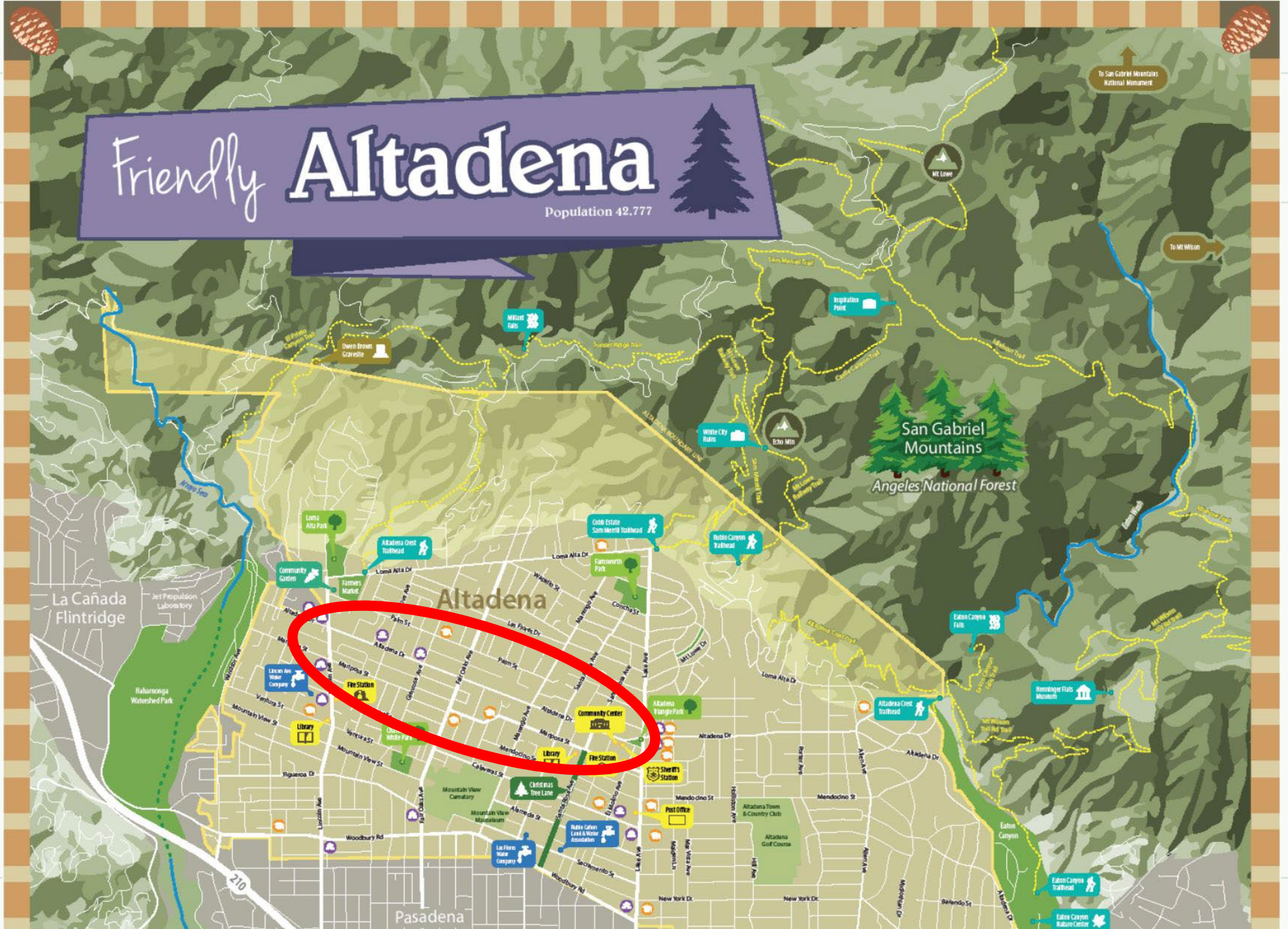
Upper Los Angeles River
WATERSHED AREA

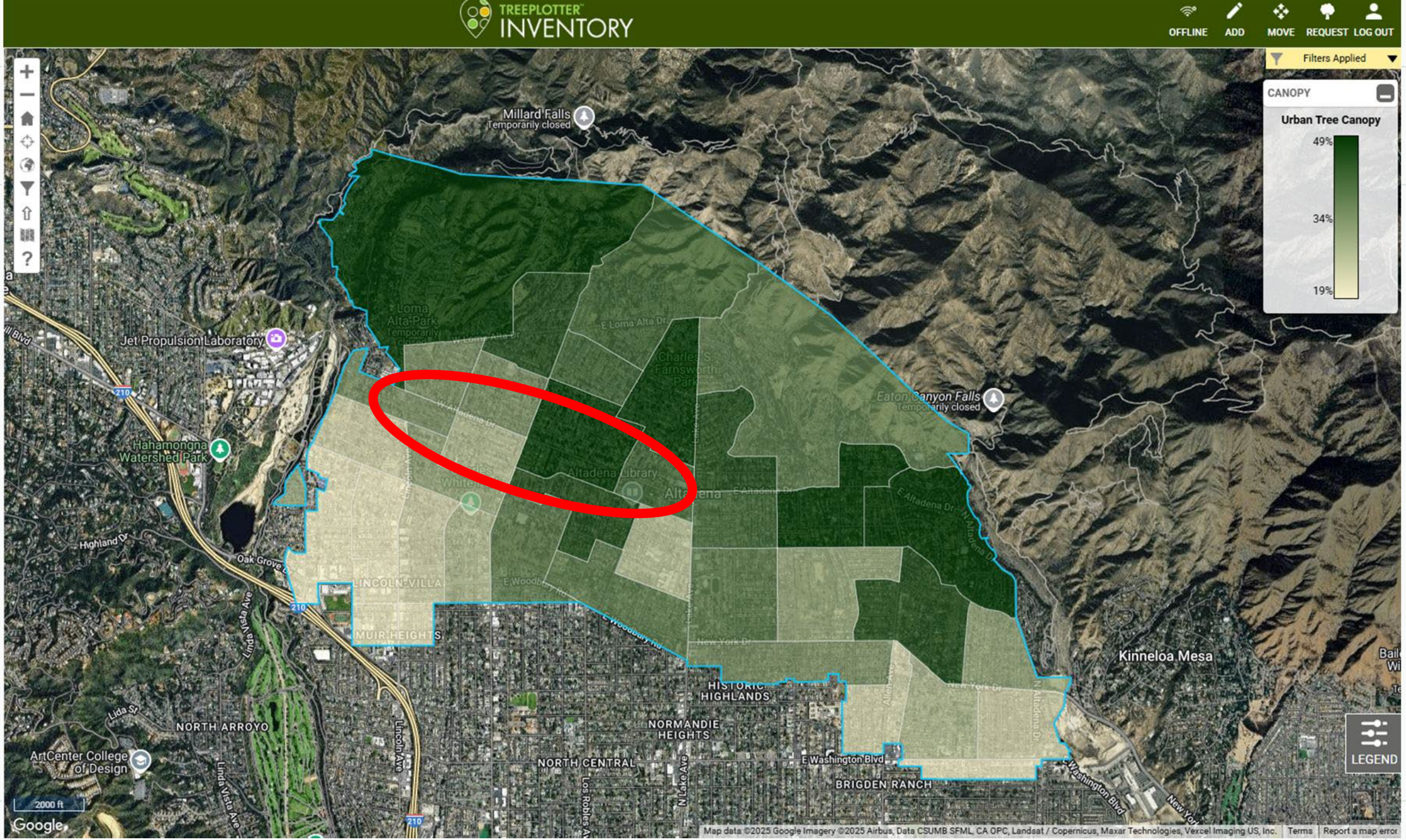
PRESENTATION DATE:
November 4, 2026

PROJECT LEAD:

Amigos de los Rios
Claire Robinson
i




Friendly Altadena
Population 42,777
San Gabriel Mountains
Angeles National Forest
Altadena
La Cañada Flintridge
Pasadena
Jet Propulsion Laboratory
Eaton Canyon
Mt Lowe
Mt Wilson
Echo Mtn
White City Ruins
Inspiration Point
Millard Falls
Owen Brown Gravesite
Loma Alta Park
Community Garden
Farmers Market
Farnsworth Park
Altadena Triangle Park
Community Center
Fire Station
Library
Sheriff's Station
Post Office
Christmas Tree Lane
Altadena Golf Course
Altadena Town & Country Club
Mountain View Cemetery
Eaton Canyon Falls
Henninger Flats Museum
Eaton Canyon Trailhead
Eaton Canyon Nature Center
Rubio Canyon Trailhead
Altadena Crest Trailhead
Loma Alta Dr
Altadena Dr
Mendocino St
New York Dr
Woodbury Rd
Lake Ave
Allen Ave
Hill Ave
Hastings Ranch
Harmonga Watershed Park
210

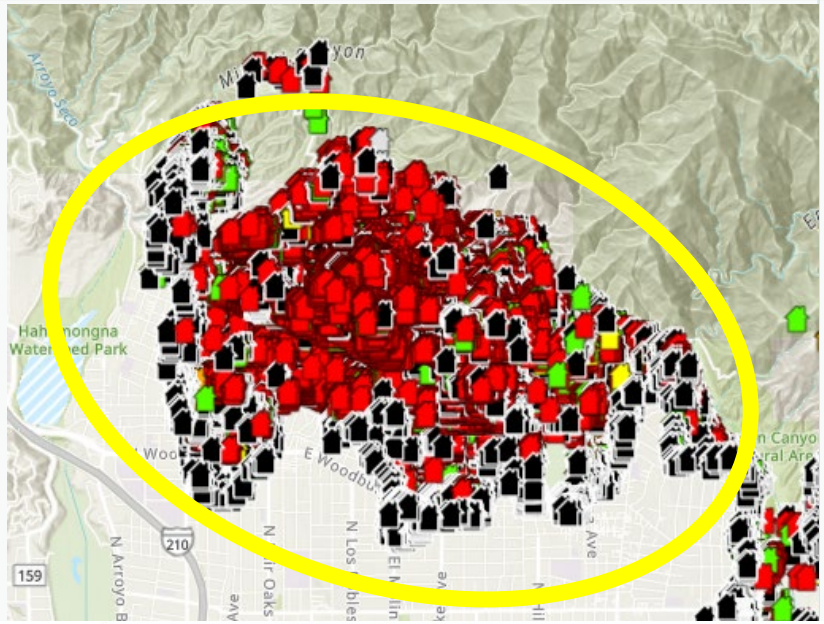

TREEPLOTTER
INVENTORY
OFFLINE
ADD
MOVE
REQUEST
LOG OUT
Filters Applied
CANOPY
Urban Tree Canopy
49%
34%
19%
Millard Falls
Temporarily closed
Loma Alta Park
Jet Propulsion Laboratory
Charles S. Farnsworth Park
Eaton Canyon Falls
Temporarily closed
Hahamongna Watershed Park
Altadena Library
Altadena
Highland Dr
Oak Grove Dr
LINCOLN-VILLA
MUIR HEIGHTS
Linda Vista Ave
Lida St
NORTH ARROYO
ArtCenter College of Design
HISTORIC HIGHLANDS
NORMANDIE HEIGHTS
NORTH CENTRAL
BRIGDEN RANCH
Kinneloa Mesa
E Washington Blvd
New York Dr
Lincoln Ave
N Lake Ave
Los Robles Ave
N Altadena Dr
E Altadena Dr
E Loma Alta Dr
E Woodbury Rd
210
2000 ft
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Terms
Report a map error

SAFE CLEAN WATER PROGRAM

Project Details Altadena Post-Fire Living Streets Arterial Greenways



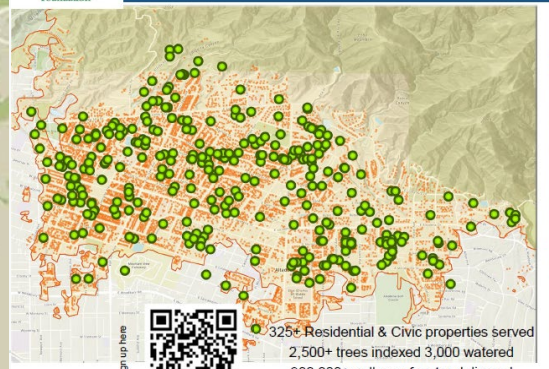
Eaton Fire Scar



Arbor Day Foundation

Altadena Tree Protection:
Natural infrastructure for our community

EMERALD NECKLACE
AMIGOS DE LOS RIOS



325+ Residential & Civic properties served
2,500+ trees indexed 3,000 watered
900,000+ gallons of water delivered
Value of trees $12M to $17M

- Participating Property
- Fire-Affected Parcels
- Eaton Fire Perimeter

Project Goals & Objectives:

- Stabilize and preserve surviving trees post-fire.
- Prevent further canopy loss through supplemental watering.
- Develop and maintain a comprehensive post-fire tree dataset.
- Engage local residents and youth through conservation corps partnerships.
- Support long-term restoration planning & Protection through data and mapping.

Post Eaton Fire – ALTADENA Legacy Tree Watering



















Project Overview

Altadena Post-Fire Living Streets Arterial Greenways

EMERALD NECKLACE
AMIGOS DE LOS RIOS

Multi-benefit greenway to capture stormwater, recharge aquifer, clean runoff, improve walkability, expand tree canopy, and restore ecology.

Primary Objective:

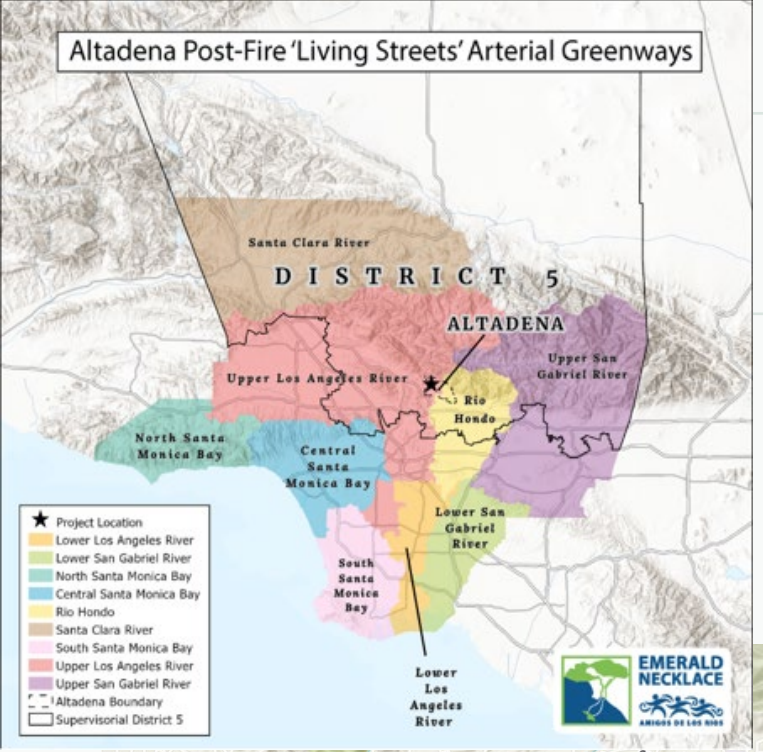
Water Sustainability - Deploy distributed green infrastructure across 1.6 miles of arterials to capture, treat, and infiltrate post-fire stormwater runoff into the Raymond Basin Aquifer.

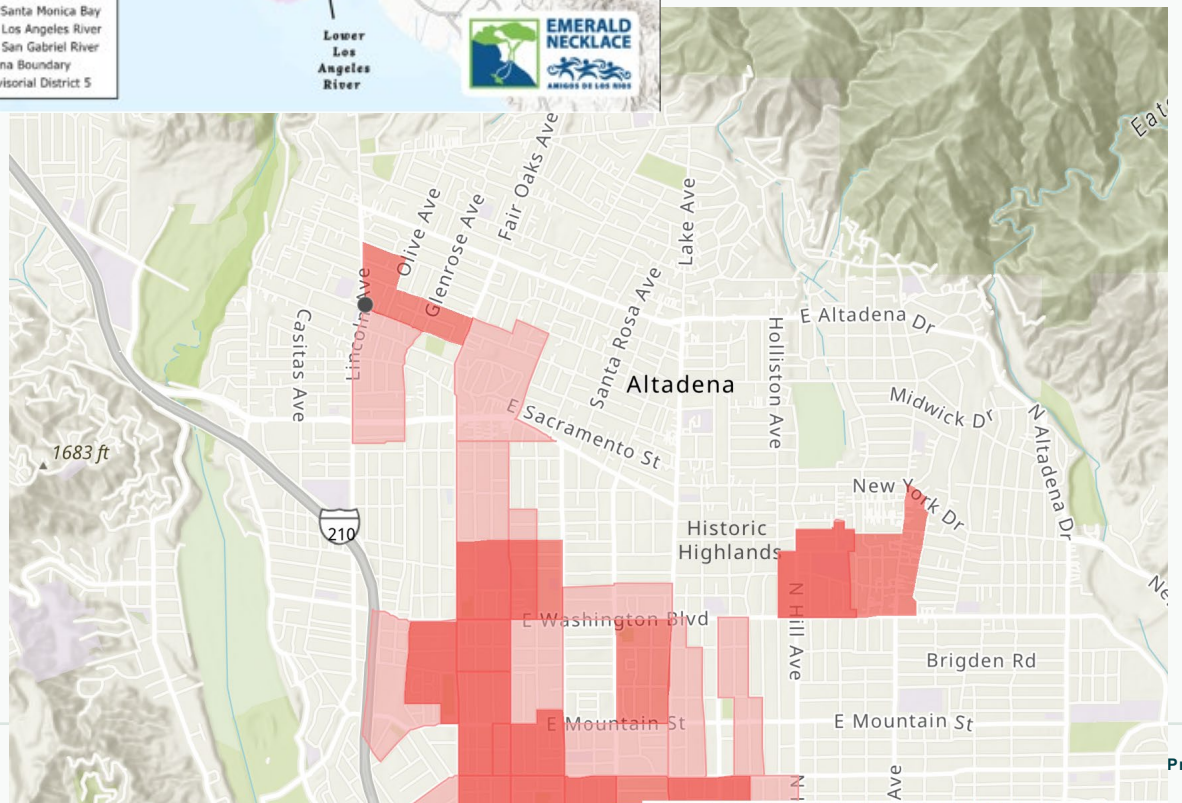
Secondary Objectives:

Flood Risk Reduction: Alleviate severe post-Eaton Fire street flooding **Urban Heat Mitigation:** Expand native tree canopy to reduce thermal inequity.
Natural/Cultural Heritage & Active Transit: Enhance walkability & celebrate Altadena heritage**.**

Technical Resource Program **-** Hydrology analysis distributed stormwater capture, geotechnical testing soil infiltration rates, feasibility study, and O & M development.

Altadena Post-Fire Living Streets Arterial Greenways





Project Location: West Altadena; major arterials: Altadena Drive, Lincoln Avenue, Mariposa Avenue, and Lake Avenue

Watershed Area: Upper Los Angeles River (ULAR)
Capture Area: 80- 130 Acres TBD

Municipalities that Project will benefit:
Unincorporated Los Angeles County (Altadena)

Disadvantaged Communities (DAC) Project will benefit: Census tract 6037460302

SAFE CLEAN WATER PROGRAM

Project Details



- Description of current site conditions and completed studies/ analysis

project. Edit values as appropriate or remove)

EQUITY & COMMUNITY IMPACT

Targeted Support for Disadvantaged Communities

TARGET LOCATION

DAC Census Tract 6037460302

Equitable Infrastructure Investment

Environmental Resilience

Urban greening, heat mitigation, and post-fire ecological restoration.

Water Sustainability

Local stormwater capture paired with active groundwater recharge.

Active Mobility

Improved walkability and dedicated infrastructure for active transportation.

Community Identity

Integrates cultural interpretation elements honoring the local community.

Project Background

Why was the Project location selected?

Project Concept Location: Selected along key arterial corridors to provide distributed storm water & water quality management while advancing the tree canopy, 'Town Cultural Trail', improving mobility , community connections and deficient sidewalks through green infrastructure throughout Altadena.

How was the Project developed?

Expanding on post-Eaton Fire recovery, the project scales up the Mariposa Green Street demonstration through deep community engagement to drive urban forest recovery, natural infrastructure, resilience, and environmental justice. By implementing distributed stormwater management aligned with the Upper Los Angeles River Watershed EWMP, it fulfills county obligations to capture first-flush runoff, filter heavy metals (zinc, copper, lead), and recharge the Raymond Basin

Description of benefits to municipality/municipalities.

This living streets project proposes developing distributed rain gardens, bioswales and integrating pervious pavement to create infiltration areas along major arterials that will divert stormwater from entering into LACFCD-maintained storm drain system, instead capturing and infiltrating water into local Raymond Basin Aquifer.

Description of benefits to Disadvantaged Communities. Located within Disadvantaged Community census tract 6037460302, these improvements deliver equitable stormwater and green infrastructure investment to a low-income area. The project yields multi-benefit outcomes across stormwater capture, groundwater recharge, post-fire restoration, urban greening, heat mitigation, improved walkability, active transportation, and cultural/natural heritage interpretation. Project Concept Description

Coordination and Collaboration

Who are the implementation partners already identified?
Non Profit 501(c)3Poly/Ana – Directed by Landscape Architect Shawn Maestretti & Leigh Adams, Active SGV, Altadena Co Lab –Build with Community, Altadena Green, Altadena Wild, Amiable Construction, Angel City Lumber, Designing Resilience, Altadena Earth Commons, Group Sport Arts Studio, Local Corps Collective, Outward Bound Adventures, Audubon Society, Soil Wise, James Urban, Fellow ASLA Emeritus

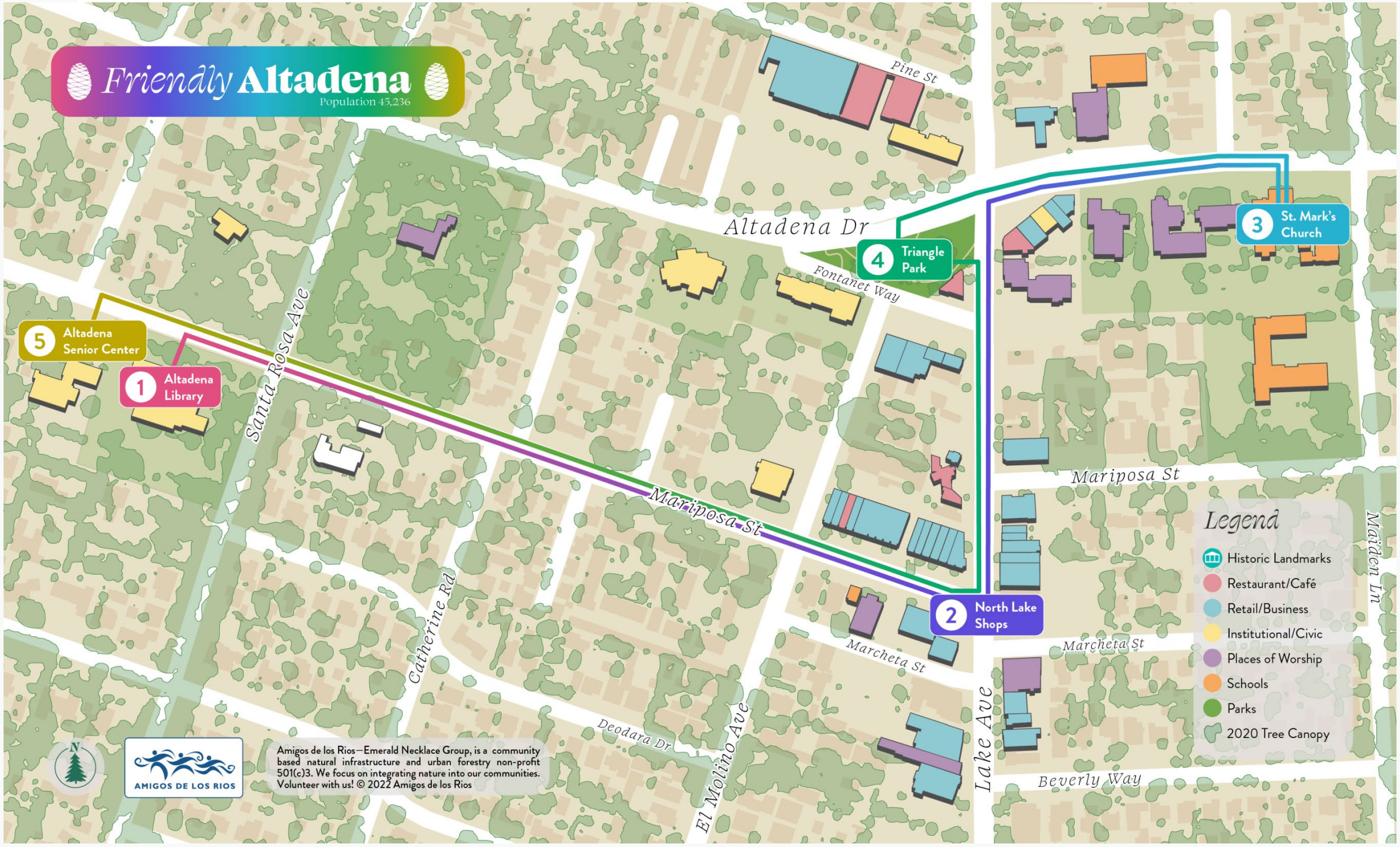
Have you received a letter of concurrence from the underlying property owner? In Process

Have you received a letter of concurrence from the Flood Control District? NA

What communities or groups have expressed support for the Project via letters of support?
Project design was informed by collaboration with Altadena fire recovery organizations and technical partners such as Dena Hive, Altadena Green, Altadena CoLab, Altadena Reciprocity Project,. Further, we have integrated Altadena urban forest recovery efforts into ongoing community outreach and Emerald Necklace Stewardship Program, enrolling Altadena residents in our tree care program and hosting community members in recovery efforts such as tree health assessments and ongoing watering. The proposed program will act as an extension of these ongoing efforts.

Have you yet engaged the appropriate vector control district about the project concept?

Yes **San Gabriel Valley Mosquito and Vector Control District**.


Friendly Altadena
Population 45,236
Pine St
Altadena Dr
Fontanet Way
4 Triangle Park
3 St. Mark's Church
5 Altadena Senior Center
1 Altadena Library
Santa Rosa Ave
Mariposa St
2 North Lake Shops
Catherine Rd
Marcheta St
Deodara Dr
El Molino Ave
Lake Ave
Beverly Way
Maiden Ln
Legend
Historic Landmarks
Restaurant/Café
Retail/Business
Institutional/Civic
Places of Worship
Schools
Parks
2020 Tree Canopy
N
AMIGOS DE LOS RIOS
Amigos de los Rios—Emerald Necklace Group, is a community based natural infrastructure and urban forestry non-profit 501(c)3. We focus on integrating nature into our communities. Volunteer with us! © 2022 Amigos de los Rios

PRIORITY CORRIDORS • PAGES 2-3

Key Retrofit Segments & Priority Pop.

SEGMENT 1 & 2

W & E Altadena Dr.

Primary east-west arterial collecting hillside stormwater discharge.

High-Volume Bioswales

SEGMENT 3

Lincoln Avenue

Disadvantaged Community (DAC) priority population corridor.

Climate Priority 4.0

SEGMENT 4

Mariposa Street

Core commercial & civic link with Town Trail integration.

Cultural Trail Spine


Friendly Altadena
Population 45,236
EMERALD NECKLACE
AMIGOS DE LOS RIOS
CAL FIRE
Pasadena Waldorf Lower School
Lake Ave
Manor St
McNally Ave
Highview Ave
Mariposa St
Fair Oaks Academy
Little Red Hen Coffee
Fountain of Life Church
Fair Oaks Ave
Grueter Construction
Farmer's Insurance
Look New Barber & Beauty
Neighbors Empowering Youth
Western Fence
Trinity Missionary Church
Raymond Ave
Mendocino St
YOU ARE HERE
Abounding Grace Ministries
Altadena Church of Christ
Johnny's Liqour
Self Service Car Wash
Harriet St


Friendly Altadena
Population 45,236
Angeles National Forest
EMERALD NECKLACE
AMIGOS DE LOS RIOS
CAL FIRE
Rite Aid
Bulgarini Gelato
Nancy's Greek Cafe & Bakery
The Bunny Museum
Pine St
Meher Montesorri School
Altadena Community Church
Chevron
Homepark Ln
Fair Oaks Ave
Lincoln Ave
Altadena Dr
YOU ARE HERE
Triangle Park
Altadena Community Center
Sheriff's Station
Fontanet Way
El Patron
Christian Science Church
Saint Mark's Church
Saint Mark's School
Lifeline Fellowship
Studio 908
Echo Mountain Project
Amigos de los Rios
Sillhouette Hair Studio
Side Pie Pizza
Sahag-Mesrob Armenian School
New Era Cleaning
Daz-E Thrift
Wet Paws Pet Shop
Nails 3000
Madison Ave
Lake Ave
Ace Smoke Shop
Rancho Bar
Cafe de Leche
Fire Station
Two Dragon Martial Arts
Mariposa St

SAFE CLEAN WATER PROGRAM

Project Details



Core SCW Program Claims

Water Quality & Water Supply Benefits

Wet Weather Project

Water Quality Primary Mechanisms

Mitigates post-fire ash and urban runoff pollutants:

Heavy Metals (Zinc, Copper, Lead): Adsorbed into soil organic matter and native root systems.

Suspended Solids & Post-Fire Ash: Physical straining through living topsoil and organic mulch.

Hydrocarbons & Oils: Biological breakdown by living soil biomes.

Addresses ULAR TMDL Pollutant Priorities

Water Supply Augmentation

10 – 18 AFY

Average Annual Water Supply Infiltration Benefit

Managed Aquifer Recharge: Directly recharges the **Raymond Groundwater Basin** by capturing first-flush storm events (1.0–2.5 AF capacity per 85th percentile storm).

Diverts runoff from LACFCD storm drains to natural storage



Elmer Avenue Project Watershed Council for Health

Implementation Timeline

Anticipated Project Schedule

Target Completion: 2033

Milestone Phase	Key Activities	Estimated Date
Stakeholder & Agency Alignment	Partner coordination, LA County Public Works alignment	**10/2027**
Geotech & Hydrologic Surveys	Soil testing, infiltration rate evaluation, hydrologic modeling	**01/2028**
Final TRP Feasibility Report	30% design completion & presentation to ULAR WASC	**07/2028**
Environmental Clearance & Permits	CEQA compliance, ROW permits, LACFCD coordination	**07/2030**
Final Engineering & Contractor Selection	100% design completion and bidding process	**07/2031**
Construction & Surface Finishing	Civil work, subsurface storage, planting 200 trees / 2k shrubs	**07/2032**
Plant Establishment & Full Ops	Youth Conservation Corps O&M handover & monitoring	**07/2033**

Community Investments & Nature-Based Solutions

Multi-Benefit

Community Investment Benefits

Flood Mitigation:
Alleviates severe street flooding and mudflow risks along steep foothill slopes following the Eaton Fire.

Heat Island Reduction:
Cools urban corridors via shade canopy and evapotranspiration, mitigating extreme thermal inequity.

Active Transportation & Recreation:
Creates safe, shaded, ADA-accessible greenways connecting residents to civic hubs and libraries.

Nature-Based Solutions (NBS)

200 Trees + 2,000 Shrubs

Water-smart native plant palette tailored to Southern California climate

Natural Processes: Restores living soil biomes and mycorrhizal root networks (6-7 ft deep) to naturally filter toxics, prevent soil erosion, and boost recharge.

Leveraging Funds

Cal Fire & Forestry: Urban & Community Forestry Grant target application.

Prop 4 Grants: Pursuing CA Natural Resources Agency natural infrastructure funds.

County Prop A: Targeted for arterial greenway recreation trail segments.

Philanthropic Match: Foundation support for environmental justice.

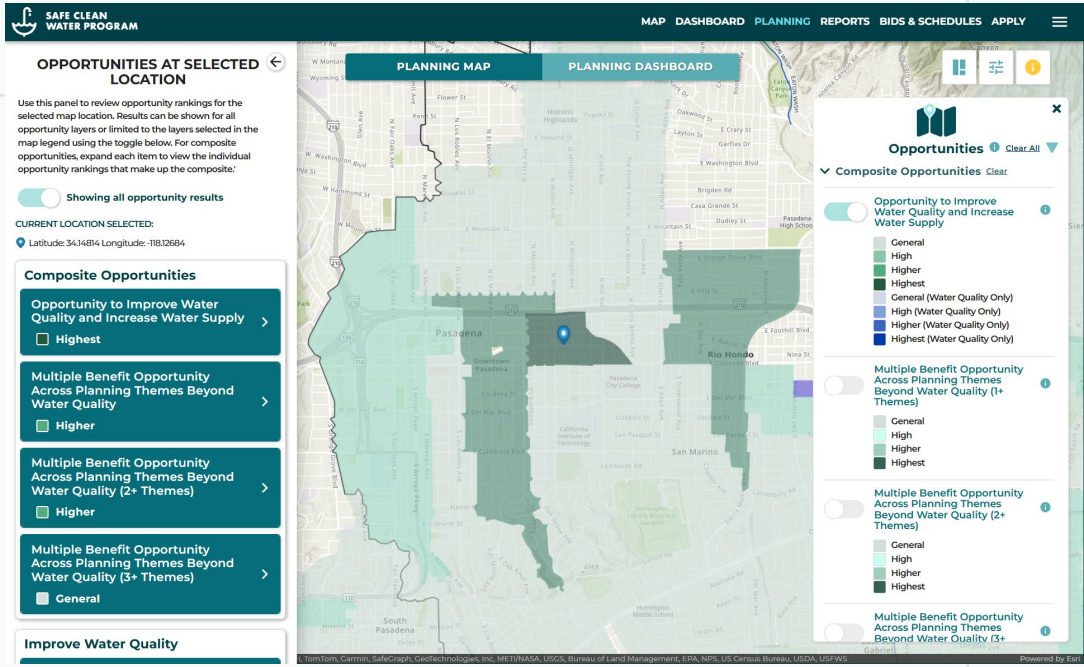
Community Outreach Strategy

Emerald Necklace Stewardship Series: ~100 volunteer events/yr, engaging 4,000 + residents in hands-on community natural infrastructure.projects.

Grassroots Engagement: Street tabling, door-to-door, water walks, and local business alignment.

Cultural Interpretation: Signage celebrating Altadena's pioneer African American architects & history.

Watershed Planning Alignment



Targets

- **Water quality:** reduce priority pollutants (zinc, total phosphorus, bacteria)
- **Water supply:** capture stormwater and recharge the Raymond Basin
- **Public health and nature-based solutions (NBS):** more canopy, heat reduction, greening
- **Equity:** serves a DAC census tract, advancing ULAR's 45% DAC benefit ratio

Needs

- Located in the highest-opportunity area to improve water quality and increase water supply

Strategies the Project Uses

- **Distributed Capture & LID:** Bioretention and pervious pavement capture runoff at the source, easing loads on regional storm drains and complementing centralized projects.
- **ROW Retrofits & Green Streets:** Parkway greenways turn impervious roads into nature-based filtration corridors.
- **Multi-Benefit Design:** Bioretention reduces pollutants (metals, nutrients, bacteria) while increasing groundwater recharge and tree canopy, supporting key ULAR targets.

Multi-Benefit Opportunity Area

- The Project is in a multi-benefit opportunity area on the Watershed Planning Tool.
- **Greatest-impact layerAlignment Updates**
- **Yes.** Opportunities to refine alignment will be evaluated during feasibility study development, if funded.

Community Priorities (CSNA Dashboard)

- Altadena has **11 CSNA responses**.
- Stated priorities include **stormwater capture, flooding reduction, shade and trees, green space, schools, and wildlife and habitat**, among others.

Upper LA River Watershed Plan Alignment

ULAR Plan Alignment

Theme 1: Improve Water Quality

Mitigates post-fire ash, zinc, and particulate loads in underserved Western Altadena via living soil BMPs.

Theme 2: Increase Drought Preparedness

Maximizes stormwater capture and recharges Raymond Groundwater Basin to support local water security.

Theme 3: Improve Public Health & Equity

Cools extreme heat islands in DAC census tracts and provides green jobs for local youth conservation corps.



SCW Planning Tool Opportunities

- ✓ **Water Quality & Supply:** General Alignment
- ✓ **Groundwater Recharge:** High Opportunity
- ✓ **Canopy & Cooling Creation:** High Opportunity
- ✓ **Zinc & Bacteria Reduction:** Targeted

(ULAR) Watershed Area Plan Alignment

Altadena: Key physical and regional characteristics from **Watershed Area Description & Needs**

- **Topography & Hydrology:** Critical drainage zone managing steep San Gabriel foothill runoff and post-wildfire stormwater.

Priority Infrastructure Corridors: Lake, Altadena, and Lincoln Avenues targeted for green street retrofits, bioretention, and heat mitigation.

- **DAC & Environmental Needs:** Focus on Western/Central Altadena to improve water quality, boost groundwater infiltration, and serve disadvantaged populations.

(ULAR) Watershed Area Plan Alignment

Altadena: How Distributed Solutions & ROW Bioretention Alighn w/ ULAR Targets?

- **Distributed Capture & LID:**
  Localized bioretention & pervious pavement capture runoff at source, easing regional storm drain loads.

- **ROW Retrofits & Green Streets:**
- Parkway greenways convert impervious roads into nature-based bio-filtration corridors. fulfilling plan's mandate to integrate **Nature-Based Solutions (NBS)** into public spaces.

- **Multi-Benefit Compliance:**
  Incorporating bioretention into greenways reduces pollutant loads **(metals, nutrients, bacteria**) while enhancing groundwater recharge & urban canopy cover.

Complement centralized regional projects by reducing localized flooding, capturing urban runoff near the source, and lessening the strain on regional storm drain infrastructure.

Altadena Post-Fire Living Streets Arterial Greenways

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DAC COMMUNITY BENEFITS - Water Resilience

- **Flood Mitigation:** Captures first-flush stormwater using rain gardens, bioswales, pervious pavement to prevent street flooding and ease legacy storm drain capacity.

- **Heat Island Abatement:** Plants ~200 climate-adapted trees & ~2,000 native shrubs to expand, shade canopy, lowe surface temperatures, and protect vulnerable residents.

- **Air & Soil Remediation:** Uses living soil, organic mulch, and mycorrhizal networks in bioswales to bioremediate traffic PM and post-fire heavy metals (lead, zinc, copper).

- **Safe Community Mobility:** Upgrades W. Altadena Dr., Lincoln Ave., and Mariposa St. with shaded, ADA-accessible greenways connecting low-income residents to schools and commercial hubs.

- **Community Identity /Cultural Heritage:** Installs interpretive signage celebrating West Altadena's history as a pioneering haven for African American homeownership and architectural legacy.

- **Local Job Creation:** Channels construction, planting, and ongoing maintenance contracts to local youth via Conservation Corps partnerships (SGVCC, UCC, CCC).

Thank you

QUESTIONS?

Project Lead Organization AMIGOS DE LOS RIOS

Presenter CLAIRE ROBINSON & SHAWN MASETRAETII POLY /ANNA