



TECHNICAL RESOURCES PROGRAM
FISCAL YEAR 2027-2028

Altadena Golf Course Stormwater Capture and Improvement Feasibility Study

RIO HONDO WATERSHED AREA

PRESENTATION DATE:
October 20, 2026

PROJECT LEAD:

Altadena Community
Watershed Alliance (ACWA)

Blake Jopling



Project Overview

Local stormwater capture and infiltration infrastructure, nature-based solutions, and a multi-use public trail at the Altadena Golf Course.

Primary Objective

Utilize and enhance the Rubio Wash channel — conveying dry- and wet-weather flows into new on-site treatment and infiltration facilities.

Secondary Objectives:

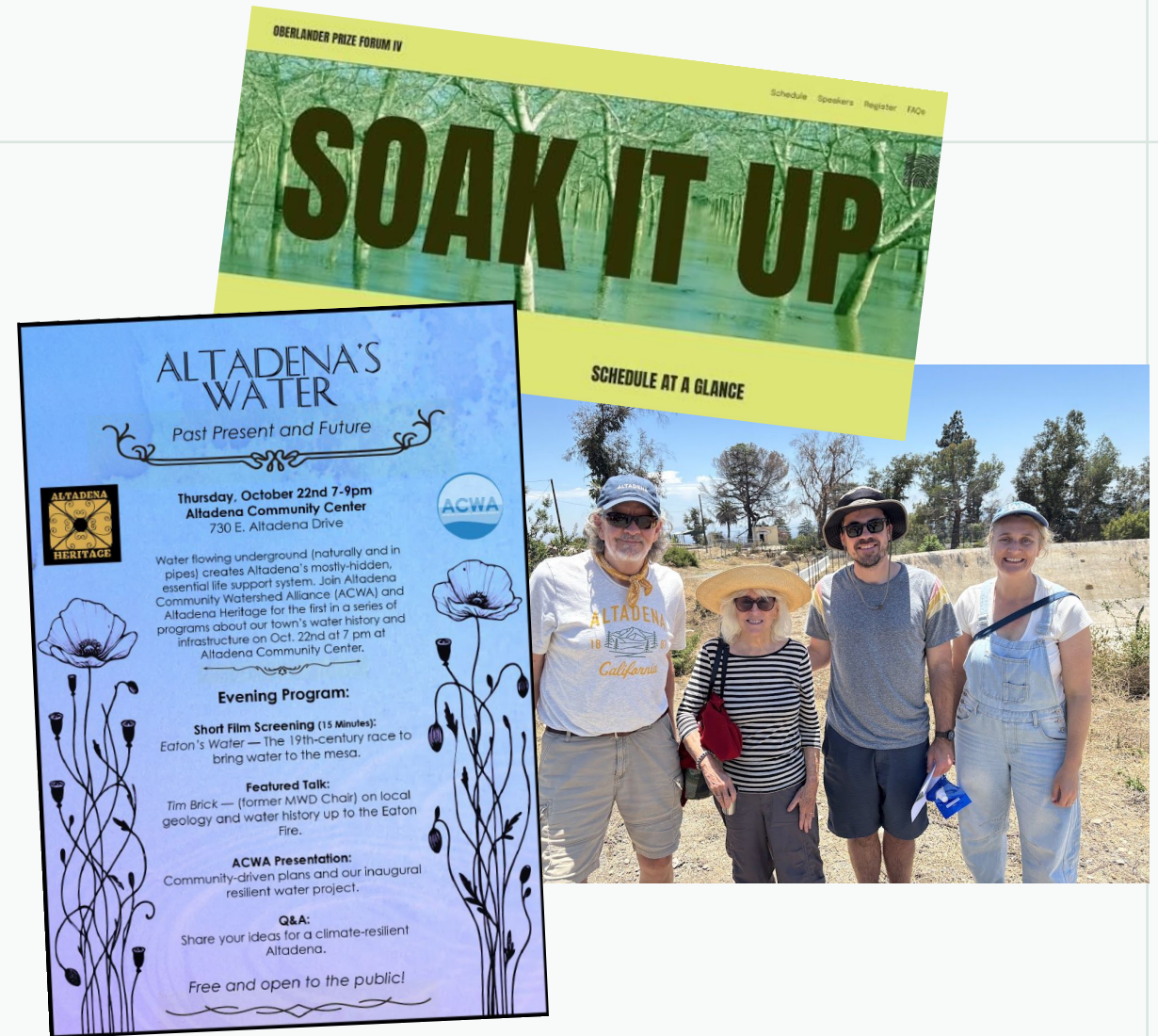
- Demonstrate ***nature-based*** stormwater capture.
- Retain water within the local aquifer and increase soil moisture to support a ***more fire resilient landscape***.
- Provide ***community trail and nature park*** experience.

Technical Resource Program Funding Request: \$400,000

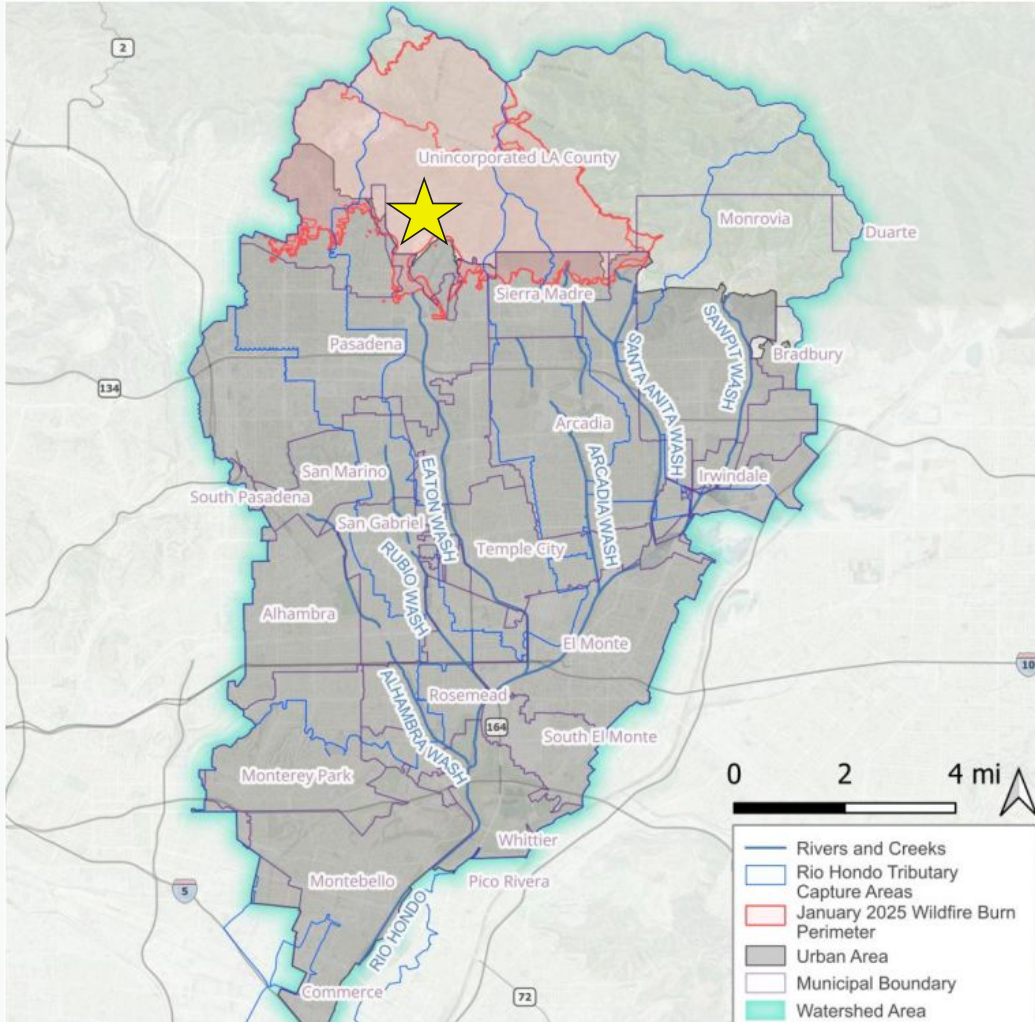
Project Background

Who is ACWA?

The **Altadena Community Watershed Alliance (ACWA)** formed when members of several local community-based organizations (Eaton Fire Collaborative, Altadena Town Council's Rebuild and Infrastructure Committee, Altgether, and Altadena Heritage) took an interest in Altadena's infrastructure and watershed after the devastating destruction of the Eaton Fire. ACWA members share deep roots in Altadena and a commitment to community service while representing a diverse mix of technical expertise (architecture, landscape architecture, geology, geographic information systems, local history, urban planning, and civic advocacy).



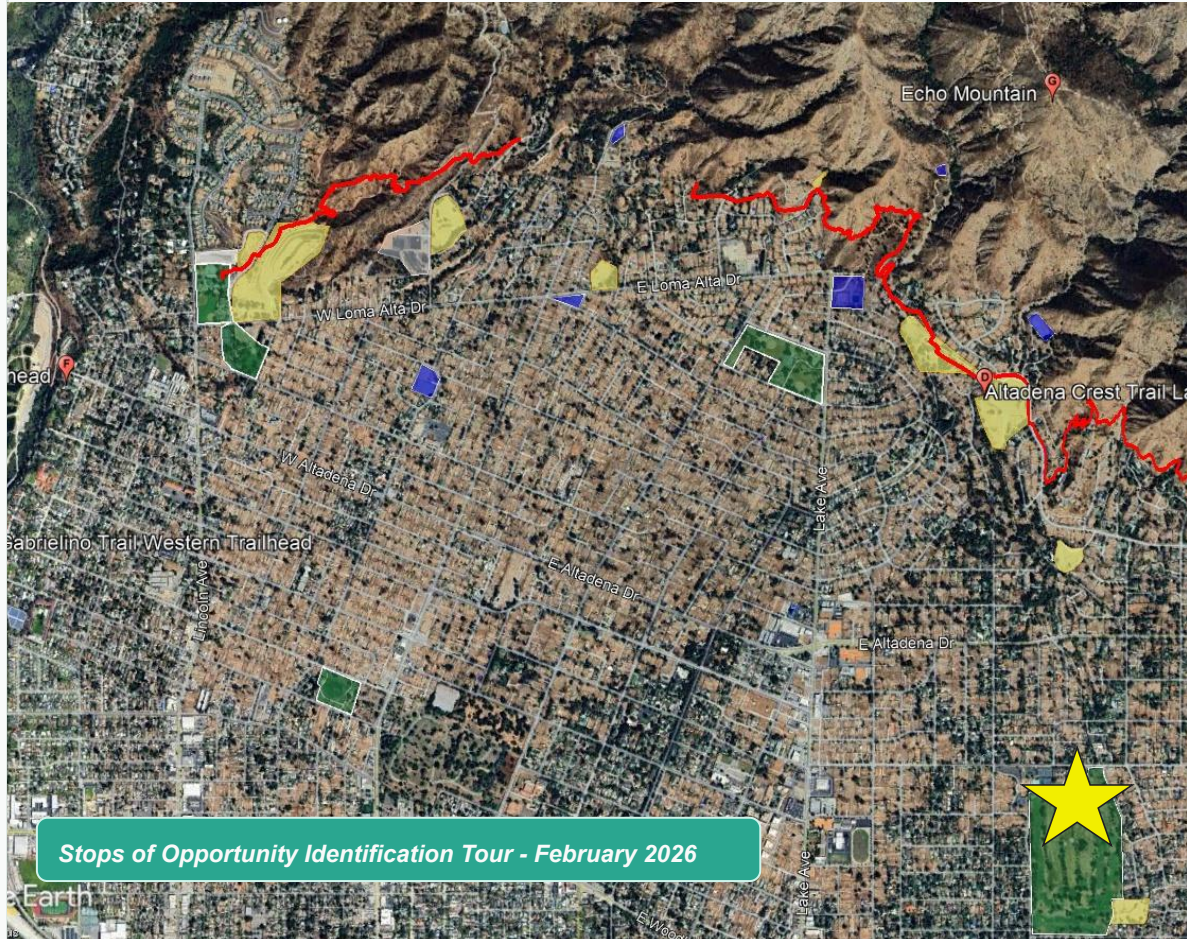
Project Background



Altadena is upstream

- At the top of the watershed, Altadena has a great responsibility and opportunity to care for our water.
- Altadena sits upon deep alluvial soils. We have the capacity to infiltrate much of what flows through, allowing Altadena to maintain and enhance our groundwater resilience.
- Our proximity to the San Gabriel Mountains compels us to provide and support meaningful habitat and wildlife corridors.

Project Background



Why was the Altadena Golf Course selected?

- At a key location along the flood control channel
- Historically part of flood control strategy
- Located at a central community open space
- Timing is right with the rebuilding of Altadena

How was the Project developed?

- Assessment of site drainage area and relationship to the Rubio Wash Channel
- Toured potential sites in Altadena with subject matter experts
- Review of known soil conditions
- Subject-matter expert interviews
- Coordination with LA County Parks Dept.

Project Background

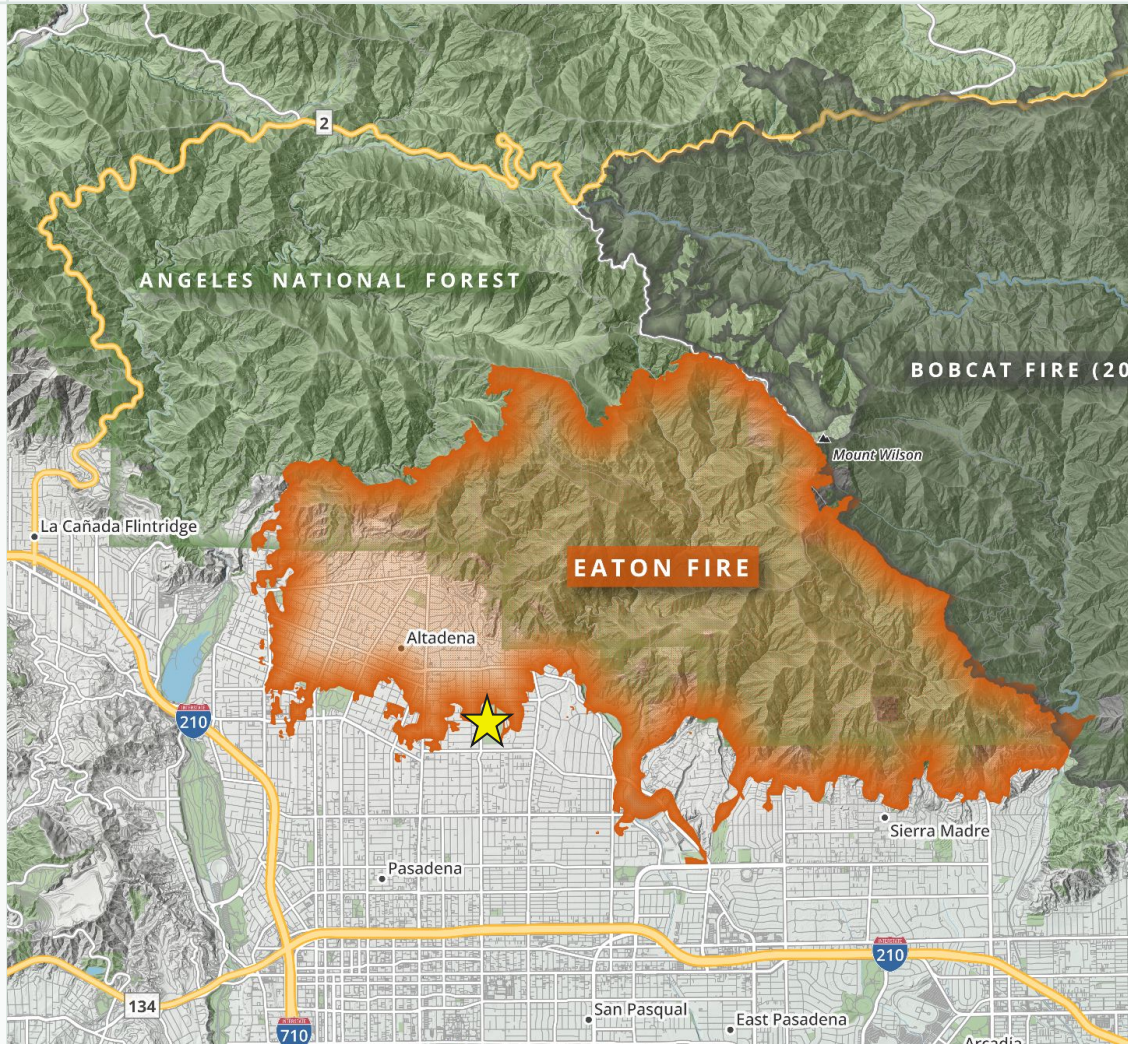


Key Opportunities

- Increase local supply of clean water.
- Enhanced infrastructure and nature-based solutions that maintain public safety.
- High year-round irrigation demand by the golf course (~**210 AF/yr**) can allow for smaller water storage/reuse infrastructure.
- High Infiltration capacity:
 - *USDA NRCS Soil Survey Soil types:*
 - *Palmview: Infiltration rate - 2.00 to 6.00 in/hr*
 - *Tujunga: Infiltration rate - 5.95 to 19.98 in/hr*



Project Background



Since the Eaton Fire of 2025, Altadena has remained a disaster-affected community.

Historically diverse and economically disadvantaged neighborhoods that suffered disproportionately high damage, displacement, and barriers to long-term recovery will benefit from this project. The multiple community benefits flowing from the project will impact neighborhoods significantly through improved water quality and supply associated with equity-driven investments. Community outreach and the improved post-fire climate resilience it fosters further address ongoing and long-standing disparities.

Benefits to Disadvantaged Communities

The Project provides a direct benefit to disadvantaged communities within the watershed (GEOID 060374614001, 060374613003).

Project Background



Coordination and Collaboration

Implementation Partners

**Altadena Community
Watershed Alliance (ACWA)**

**Los Angeles County
Department of Parks and
Recreation (LADPR)**

**Los Angeles County Board
of Supervisors Office, Fifth
District**

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

Yes!

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

Yes!

Support/Concurrence

- **LA County Flood Control District** has reviewed the Project Concept and interested in participating in the Feasibility Study.
- **LA County Public Works** provided a Letter of Non-Objection (LONO) for this Project Concept.
- **Rubio Cañon Land and Water Association** provided a letter supporting the project and expressing non-objection to the feasibility study.
- **Raymond Basin Watermaster** reviewed plans and provided feedback on our use of specific BMPs (dry wells) and validated the benefits of nature-based solutions and subterranean infiltration galleries.
- As fiscal sponsor of ACWA, **Altadena Heritage** will support community outreach and engagement efforts throughout the project development.

Project Details

Mendocino Street and Morada Place = Roadway Stormwater Capture

- Curb cuts and catch basins in curb and gutter
- Pretreatment at each basin
- Rain gardens and bioswales
- Conveyance to additional infiltration

Golf Course Parking Area = Permeable paving

- ~48,000 sq. ft. permeable pavement
- Tree wells and shallow dry wells with pretreatment
- Rain gardens and bioswales

Driving Range = High-capacity infiltration basin

- Infiltrate ~40 ac ft per year
- Stormwater conveyed from Mendocino Street and Rubio Wash

Golf Course = Rain gardens and bioswales throughout

- Aesthetic features
- Habitat enhancement
- Infiltration
- Turf grass/Irrigation reduction

Naturalized Stream = Habitat + Infiltration

Rubio Wash/ Golf Course Debris Basin = Water Infiltration/Reuse

- Catch and convey channelized flow to golf course facilities/BMPs. Above-ground cisterns for onsite water reuse (irrigation or firefighting).

Community trail = Community Benefit

- Addition of a 1.25 mile multi-use loop trail around the perimeter of the site, featuring interpretive signage and fostering a connection with local waterways.



LEGEND

- SURFACE FLOW
- - - SUBSURFACE FLOW
- RAINGARDENS/BIOSWALES
- NATURALIZED NATIVE GRASS OR NATIVE SHRUB PLANTING
- ↔ COMMUNITY TRAIL
- CATCH BASINS

STORMWATER COMPONENTS

- 1 RAINGARDENS FOR SURFACE RUNOFF
- 2 DIVERSION STRUCTURE & PUMP
- 3 PRETREATMENT
- 4 HIGH CAPACITY SUBSURFACE INFILTRATION BASIN
- 5 NATURALIZED STREAM
- 6 OVERFLOW BACK TO FLOOD CONTROL CHANNEL
- 7 ABOVE-GROUND CISTERNS FOR EMERGENCY FIRE WATER SUPPLY AND IRRIGATION
- 8 PERMEABLE PAVING

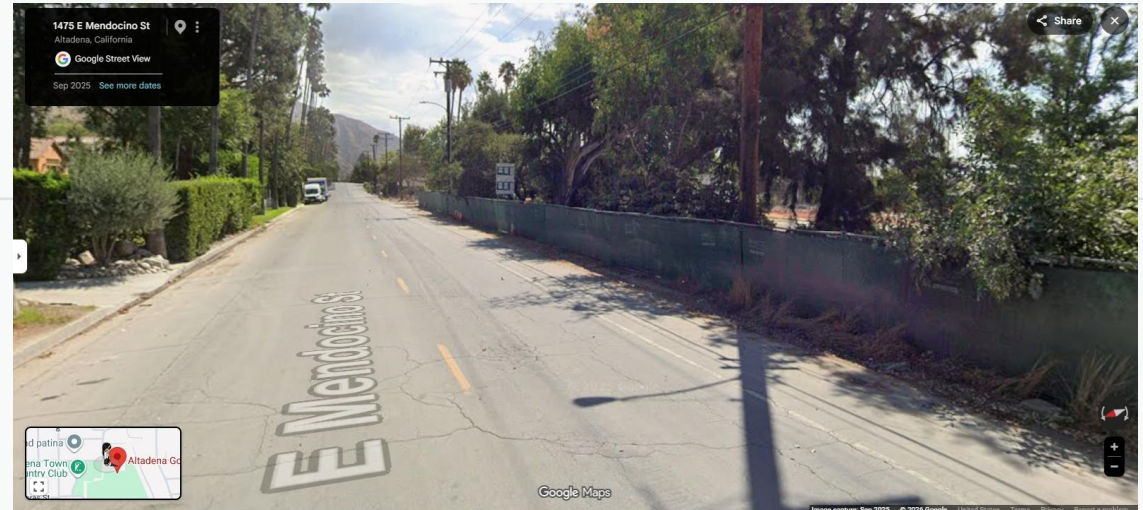
URBAN GREENING & HABITAT

- 1 NEW TREES WITHIN FLOOD CONTROL PARCEL
- 2 TURFGRASS TO NATURALIZED NATIVE GRASS OR NATIVE SHRUB PLANTING

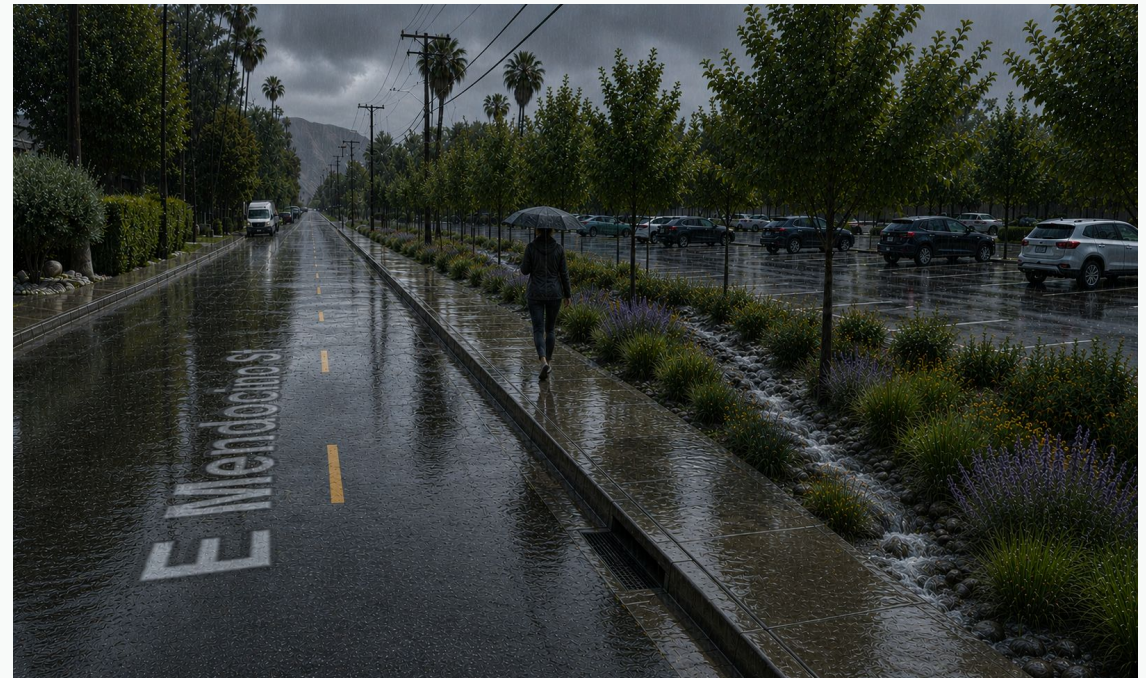
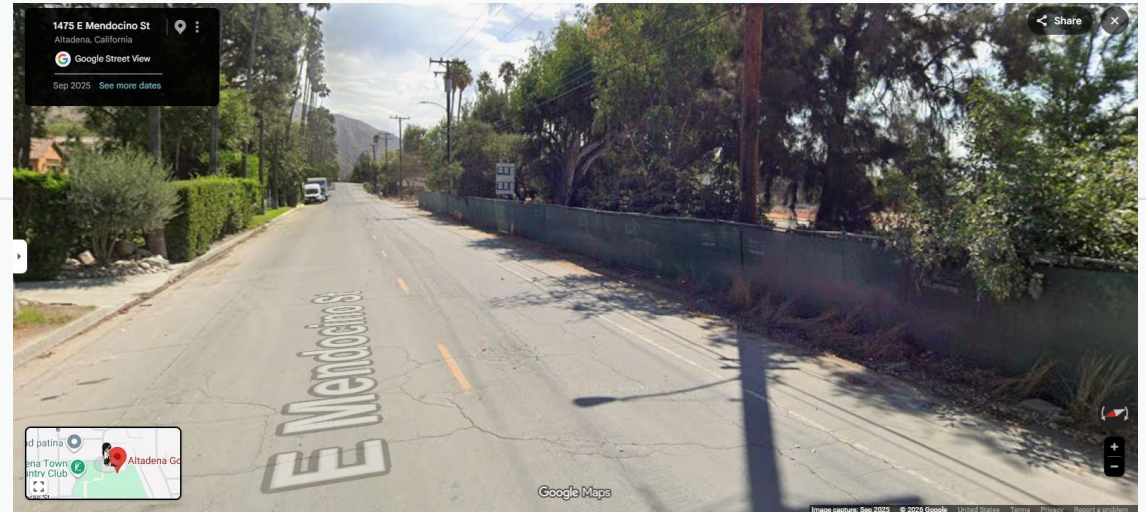
COMMUNITY RECREATION

- 1 LOOP TRAIL

Project Details



Project Details



Project Details



Anticipated Schedule

MILESTONE	ESTIMATED COMPLETION DATE
Initial Design Concept (10% Design)	July 2026
Feasibility Study Completion (30% design) - Existing Conditions Technical Studies - Schematic Alternatives - Preferred Alternative and Selection of Final Treatment Options 30% Concept	January 2029
90% Design 60% PS+E 90% PS+E	March 2033
Environmental Documents & Permitting (100% design) - Project Description and Categorical Exemption (<i>anticipated</i>) - County Permitting 100% PS+E - Bid Set	March 2035
Construction - Public Bid - Construction Administration - Operations and Maintenance Training	July 2036

Water Quality & Water Supply Benefits

Total drainage area: **1,579 acres**

Impervious area: **162 acres**

Anticipated Capacity: **~40 ac ft**

Weather: **Wet/Dry**



Large-scale Impact

Divert channelized flows from fire-affected National Forest land and the surrounding residential neighborhood to treat and retain water within the Upper Watershed.



Pollutant Reduction

Deploy distributed treatment solutions across the project site, prioritizing soil infiltration to reduce pollutants of concern.



Flexible Solutions

Integrate passive and active treatment systems with multiple treatment pathways and built-in redundancy to enhance reliability and continuity.



Groundwater Recharge

Provide high-capacity subsurface infiltration to recharge the Raymond Basin Aquifer.



Reduced Irrigation Demand

Capture dry-weather flows to offset potable water use for irrigating 48 acres of turf.

Community Investment Benefits and Nature-Based Solutions

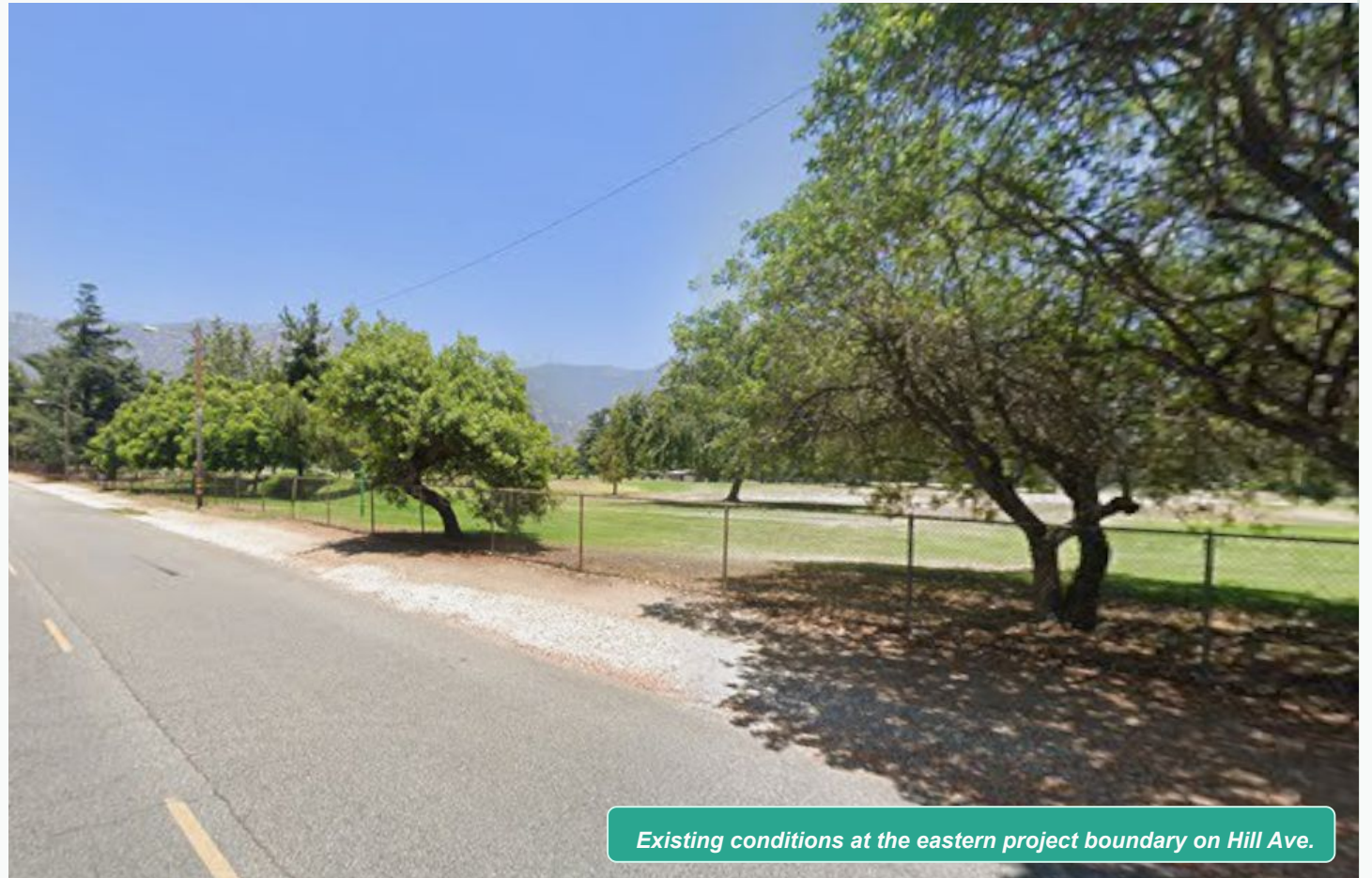
- Create new recreational 1.25 mile Community Trail.
- Provide opportunity to engage with local ecosystem and naturalized waterways.
- Increase tree canopy or other vegetation at the site location.
- Offer demonstration for local stormwater management.
- Expand water capacity for fire response.

Inspired by Nature

Project will restore natural hydrology by slowing, spreading stormwater, reducing erosion, maintaining soil moisture, supporting deeper-rooted vegetation, and mimicking natural stream and floodplain processes.

- **Rain gardens** capture stormwater from surrounding roads and impervious surfaces before it reaches the storm drain.
- **Naturalized stream/swale:** the project includes diverting water from the flood control channel into a meandering rocked swale that mimics a seasonal streambed.
- **Planting:** The shrubs and trees in the rain gardens and naturalized stream/swale will prioritize the use of locally-native plants.

Community Investment Benefits and Nature-Based Solutions



Leveraging Funds and Community Support

Implementation Funding Opportunities

- LA County Infrastructure Recovery Plan
- West San Gabriel Valley Capital Improvement Plan
- Altadena Wildfire Recovery Infrastructure Financing District (AWRIFD)
- California Proposition 4 (Safe Drinking Water, Wildfire Prevention, Drought Preparedness, and Clean Air Bond Act of 2024)

Operations & Maintenance

- LA County DPR provides reliable long-term care for the site. Improvements will be made in coordination with ongoing recovery efforts at the Golf Course.

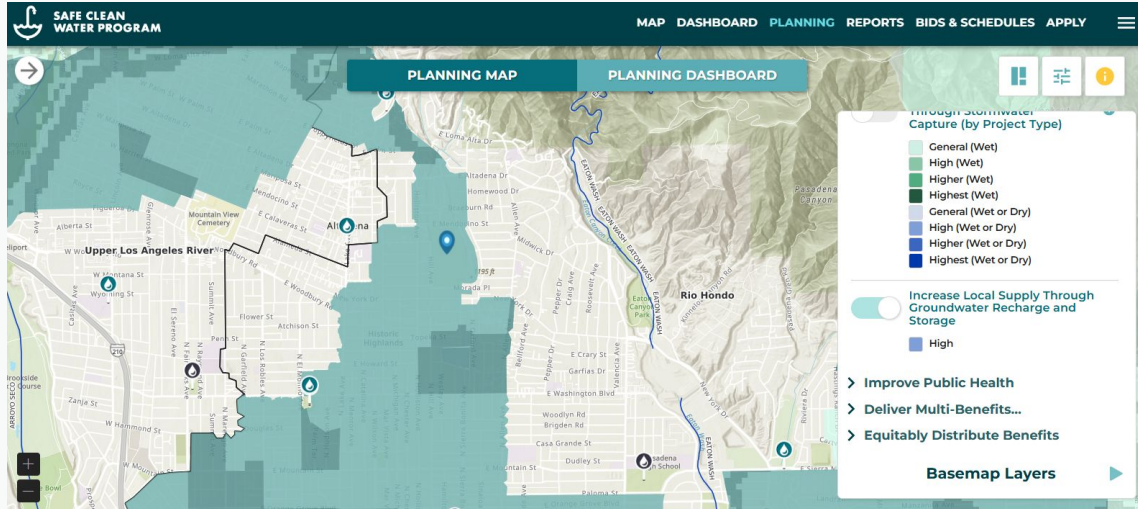
Community Led

ACWA is a multidisciplinary coalition of neighbors connected by their love for the Altadena watershed and a shared commitment to integrating stormwater capture into recovery efforts. Throughout the Project's development, the Project Team will engage the community and neighbors through targeted outreach, small-group listening sessions, public programs to educate residents about Altadena's unique watershed position and history, partnerships with trusted local organizations, multilingual materials, and a Community Advisory Group to ensure that community priorities are incorporated into the project design from the beginning.

Watershed Coordinators. The Project Team has collaborated closely with the Watershed Coordinators for the Rio Hondo (Jenna Cobb) and Upper LA River (Kristina Kreter, Alonso Garcia) Watershed Areas.

Watershed Planning Alignment

Rio Hondo Watershed Area Initial Watershed Plan



Selected Opportunities: Multiple Benefits Opportunities Across Planning Themes Beyond Water Quality and Increase Local Supply Through Groundwater Recharge and Storage

Is the project in a multi-benefit opportunity area?

Yes!

Planning Themes Highest Compatibility

1. Improve Water Quality (1.2)

Use best management practices to catch and filter water to address pollutants of concern listed in Watershed Plan.

2. Increase Drought Preparedness (2.1, 2.2, 2.3, and 2.4)

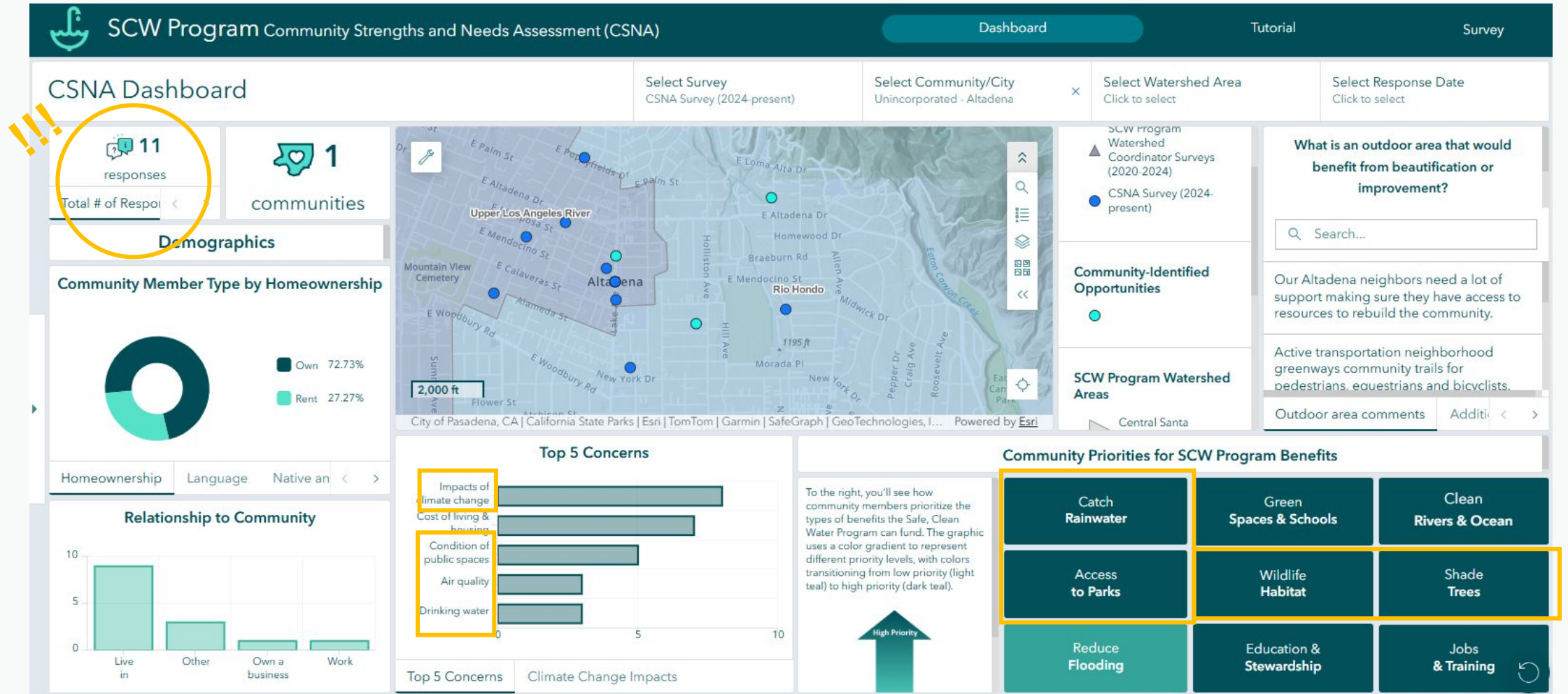
Divert water from existing LACFCD open channel and site-adjacent surface flows for infiltration into the Raymond Basin Aquifer. Intent to capture and infiltrate flows to the maximum extent possible; estimated to be 100% of diverted flows based on site conditions and area.

3. Improve Public Health (3.2 and 3.3)

Restore and enhance a County-owned public golf course which suffered extensive damage as a result of the Eaton Fire in 2025. The use of local-native vegetation, additional shade trees, and a multi-use public trail creates and enhances park and green space for the fire-affected community of Altadena and two DAC-designated census block groups.

Watershed Planning Alignment

Rio Hondo Watershed Area Initial Watershed Plan - Community-Stated Priorities, Concerns or Opportunities



Thank you

QUESTIONS?

Altadena Community Watershed
Alliance (ACWA)

Blake Jopling