MEMORANDUM REPORT

DATE: November 18, 2025

TO: Board of Commissioners of the Los Altos Hills County Fire District

FROM: Page Mill Maintenance Project Team,
Ryan Cronin, Technical Analyst/Project Manager
A. Harmon, Field Manager
Eugenia Woods, Programs, Planning and Grants Manager

SUBJECT: Elena - Taaffe Evacuation Route Project Final Reports

RECOMMENDATION:

Receive Elena – Taaffe Evacuation Route Project Final Reports

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BACKGROUND

The Evacuation Route Hardening projects conducted by the Los Altos Hills County Fire District (District or LAHCFD), with the Santa Clara County FireSafe Council (SCCFSC) as the project manager for these projects, are in their fifth year of execution. They continue as an initiative to serve the 2023-2027 Strategic Plan Goals & Strategies, specifically Strategic Goal 1 Prevention, Protection, Resiliency.

The LAHCFD Chart of Services identifies the Community-Focused Evacuation Route Hardening projects as one of the Integrated Hazardous Fuel Reduction (IHFR) programs. The IHFR programs are designed to enhance community resiliency, educate District residents, and reduce community fire hazards. The fundamental goal of these Evacuation Route Hardening projects is to provide greater protection for life safety and to reduce property losses in the event of catastrophic wildfire by providing safer egress for evacuees and ingress for emergency responders.

As these projects mature, and the District gains experience, the process and results are improving. We have enjoyed greater coordination with strategic partners including the Town of Los Altos Hills, Midpeninsula Regional Open Space District (Midpen), Santa Clara County Fire Department (SCCFD), Santa Clara County Roads and Airports, Santa Clara County Sheriff's Department, Purissima Water District and the California Department of Transportation (Caltrans). Most importantly, these projects are only possible with the dedicated support of the LAHCFD Board of Commissioners.

Primary transportation corridors are now on a maintenance schedule. Secondary and tertiary roadways that connect neighborhoods to primary evacuation routes are being added to the projects. This project treated a portion of Elena Road, a secondary transportation corridor being treated for the first time, and a tertiary transportation corridor, Taaffe Road. This treatment linked the recently treated Altamont Road with Elena Road, providing access to three under crossings of I-280.

Information about this project, and other District projects can be found on the Department website at https://www.lahcfd.org/community-projects/.

DISCUSSION

The Elena - Taaffe Evacuation Route project was successful in attaining the goal of hazardous fuel reduction and providing a safer evacuation route.

QUANTITATIVE RESULTS

Elena Taaffe Evacuation Route 2025			
Date	Cubic Yards	Distance (Miles)	Area (Acres)
Monday, August 4, 2025	35	0.8	1.94
Tuesday, August 5, 2025	32	1.1	2.00
Wednesday, August 6, 2025	40	1.1	2.67
Thursday, August 7, 2025	51	0.7	1.95
Friday, August 8, 2025	61	0.6	1.67
Monday, August 11, 2025	32	0.8	2.04
Total	**251**	**5.1**	**12.27**

Elena - Taaffe Evacuation Route data.

EXPENSES

Elena - Taaffe Evacuation Route

Project Cost Breakdown

Service Description	Contractor	Completed	Amount	Notes
IHFR Project Management	SCCFSC	May - Aug 2025	11,423.71	
Personnel Mileage	SCCFSC	July - Aug 2025	396.20	
Project Supplies	SCCFSC	Aug-25	46.83	N95 Mask and sunscreen + 25% uplift
Project Supplies Reimbursement (LAHCFD)	Credit Card Purchases	Jun-25	235.04	Signage & NOE
Traffic Control Plan	City Rise	May-25	1,120.00	$1000 + 12% uplift
Traffic Control Contractor	City Rise	Aug-25	32,444.72	$28,898.50+ 12% uplift
Fuel Reduction	Miabella	Aug-25	39,233.04	$35,084.50 + $2,629.50 dumping + 12% uplift
Biological Survey	Dudek	July & Aug 2025	5,246.36	$4474.25 + $210 + 12% uplift
Postcard, Cover Letters, & ROE Mailers	Folger Graphics	Jun-25	877.36	
Pre-Project UAS Flyover/Data	Jackson Ricketts	Apr & May 2025	3,750.00	Two advance flyovers (4/18/25 & 5/8/25)
Post-Project UAS Flyover/Data	Jackson Rickets	Aug-25	1,450.00	
Total Project Cost			**96,223.26**	

Costs directly associated with the Elena - Taaffe Evacuation Route Project.

Successes

- There were no injuries or near-misses for participants on this project. The District is diligent to maintain this achievement on all projects. Safety is our highest priority for all projects. Thoughtful measures are being taken to promote a safety mindset. Additional traffic control technicians are standard for LAHCFD projects. Bilingual safety briefings are conducted daily so all may clearly hear the safety message in their native language. Comments and suggestions are solicited from all participants.

- The District proactively communicated with Foothill College facility managers to gain access to the campus. Target fuel hazards were abated along Josepha Lane, and the service was greatly appreciated.

- Pre-treatment initial UAS observations were made. This data will be compared with subsequent data to accurately measure the regrowth of native understory vegetation that is fire resistive.

- Maintenance of the District parcel is evaluated for inclusion with every project. The established mulch layer keeps the weeds down. Trees were limbed and stinkwort growth was pulled.

Community Engagement

Community awareness was notable. This yielded a reasonable number of Right of Entry (ROE) permissions for deeper and effective treatment.

Noting on previous projects that project awareness is greatest after the work is completed, the District mailed post-project postcards to all property owners of parcels along the route and A-frame signs were posted along the route for a few days following the completion of the project.

- 26970 Taaffe Road is fronted by juniper bushes that are in poor health. Many of the plants were dead. The interior of the plants was crowded with dead vegetation, trash and rodent debris. The property is on the outside of a curve, a likely location for a vehicle collision. The homeowner was not ready to remove all the junipers but was grateful to have the dead plants, trash and interior debris removed. This was laborious, dirty handwork. The result is a significant reduction in dry, ready to ignite fuels and fuel loading.

- 26737 Taaffe Road is one of three contiguous properties on the north side of Taaffe Road. The property has not been maintained. A string of small eucalyptus trees and dead pine trees line the road. The property owner was joyful to accept the offer to remove these trees. Additionally, there is a large pile of cut tree debris on the property. This is a candidate for the Defensible Spage Brush Chipping program.

- 26635 Taaffe Road is a property actively being cleared of hazardous vegetation by the new owners. Avid participants in the Defensible Space Brush Chipping program, the owners consistently have large brush piles for chipping.

Insights/Lessons Learned

Communication is always critical to successful projects. The pre-meeting with vendors proved to be very valuable and many questions were answered and details were clarified before the first day of the project. Discovered in the pre-meeting was a need for emphasizing that only the right-hand shoulder is to be treated and that the route will return to capture the other shoulder of the road. Adding details, such as highlighting the route, directional arrows, and waypoints with comments to the Route Map will assist with clarification.

Traffic Control added lane clarifying arrows to center-line cones to keep traffic in the appropriate lane and to transition as needed.

Community outreach continues to be challenging. A-frame signs announcing the project, postcards, mailers, social media posts, a media release and webpages have had some impact, but many residents claim to have not been informed of our projects.

Supporting Documents:

1. LAHCFD 2023-2027 Strategic Plan, Goal 1
   (https://www.lahcfd.org/wp-content/uploads/2023/03/LAHCFD-2023-27-Strategic-Plan.pdf)
2. LAHCFD Chart of Services, V19, 2025

   (https://www.lahcfd.org/wp-content/uploads/2025/01/ChartOfServices-SP2023-27_V19.pdf)
3. Santa Clara County FireSafe Council Final Report: Elena - Taaffe Evacuation Route project
4. Jackson's Drones Vegetation Assessment Report

Santa Clara County FireSafe Council

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FINAL REPORT

Elena - Taaffe Evacuation Route

August 18th, 2025

Introduction:

The Elena and Taaffe Roads in Los Altos Hills, California, represents a significant thoroughfare for the Los Altos Hills Community. This road is a primary means of egress and ingress in case of an emergency evacuation. To secure this egress/ingress' integrity, Los Altos Hills County Fire District and Santa Clara County FireSafe Council proposed a roadside treatment of fuels.

Cooperators:

There were multiple agencies, contractors, property owners, and organizations that contributed to the project; Santa Clara County Fire Safe Council, Los Altos Hills County Fire District, Dudek, Miabella Expert Tree Service, BATS/City Rise Safety, the County of Santa Clara, and the Town of Los Altos Hills to name a few.

Goals For This Project:

1. Trim woody vegetation and weed whip grasses and weeds adjacent to the road.
2. Remove dead or dying woody debris of less than 8 inches DBH.
3. Reduce ladder fuels around larger trees.
4. Remove dead, diseased, or damaged trees smaller than 8 inches DBH posing a hazard.
5. At street corners where vegetation is thick and blocks visibility, trim and remove to meet standards of shrubs less than 3 feet high and trees limbed up to at least 6 feet above ground. Per Los Altos Hills Municipal Code Title 10-Zoning , "shrubs and plants shall be pruned to a height not to exceed three (3') feet above the road level at its nearest point in an area bounded by the center line of intersecting roads or easements for vehicular access, public or private and a straight line joining points on such center lines eighty (80') feet distant from their intersection. All side limbs of trees in such an area shall be pruned to a height of not less than six (6') feet above the road surface."
6. Clear all vegetation for three (3) feet around the circumference and ten (10) feet above fire hydrants. Advise property owners and the fire department of any other obstruction that cannot be mitigated.

Project Site:

The Elena - Taaffe Evacuation Route Project is one of four frontage roadways being treated to provide alternative connectivity to the I-280 access ramps and the I-280 under passages. The Elena - Taaffe Evacuation Route Project treated all portions of Taaffe Road, the remaining untreated portion of Elena Road and portions of Josefa Lane.

From the intersection of Altamont Road, Taaffe Road provides an easterly, downhill directed evacuation route, roughly midway between the two I-280 access ramps at Page Mill and El Monte Roads. Taaffe Road terminates as Elena Road. Elena Road is a frontage road to I-280 that distributes traffic to both the Page Mill and El Monte Roads access ramps. Additionally, Elena Road provides access to the Robleda and La Barranca Roads I-280 underpasses as well as its own underpass. Elena Road has previously been treated from its terminus at Purissima Road to La Barranca Road, an I-280 underpass. Josefa Lane provides pedestrian connectivity with the Elena - Taaffe Evacuation Route Project, to Robleda Road, a maintained evacuation route and I-280 underpass, by way of a Town of Los Altos Hills pathway which connects Duval Way.

Taaffe Road in its entirety is approximately 0.88 miles long, meaning 1.76 miles of roadside has been treated, from Altamont Road and Taaffe Road - 37°21'40.3"N 122°09'05.9"W to Taaffe Road and Elena Road - 37°21'59.3"N 122°08'24.3"W. Elena Road is approximately 1.55 miles long from the intersection of Elena Road and La Barranca Road - 37°22'09.7"N 122°08'46.0"W to the intersection of Elena Road and Moody / El Monte Road - 37°21'30.5"N 122°07'46.9"W meaning 3.1 miles of roadside has been treated. Josefa Lane in its entirety is approximately 1,582.07 ft or 0.3 miles long, meaning 0.6 miles of roadside to be treated, from the intersection with Elena Road - 37°21'48.1"N 122°08'10.7"W to the terminus - 37°21'51.9"N 122°07'52.5"W. The length of roads in the project area was approximately 2.4 linear miles, or approximately 4.8 miles when accounting for each side of the road.

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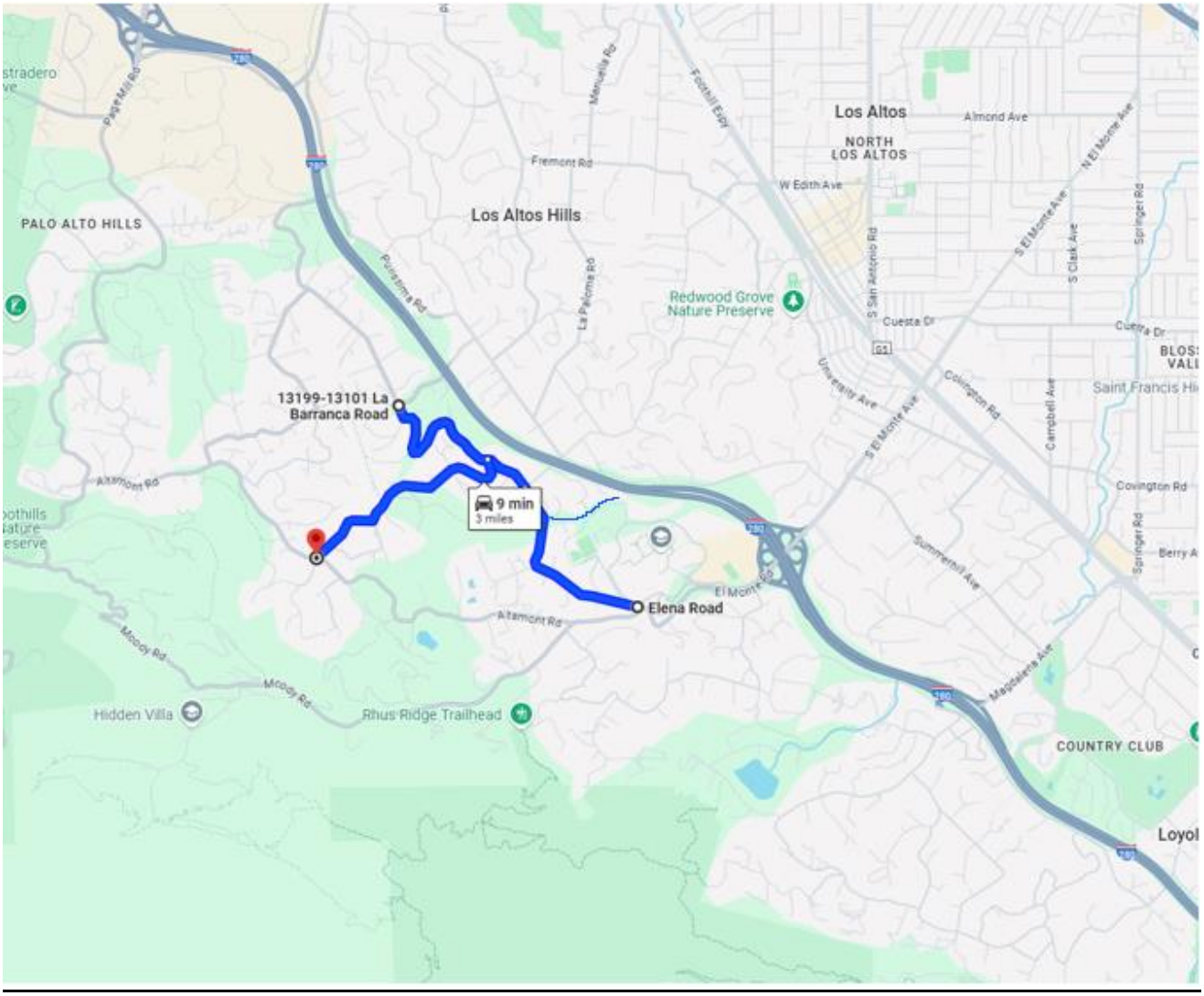
Elena - Taaffe Evacuation Route Project Map



Permissions:

One of the biggest challenges in these types of projects is getting permission to treat the properties. During planning of the project, we conducted an extensive public outreach effort to get the permissions needed. It included mailers, newspaper articles, door-to-door visits, and a social media campaign. We were able to include 12 of the 100 parcels involved. Prior to the project, LAHCFD staff conducted a survey of the area to identify key parcels within the project scope. SCCFSC's timeframe for ROE forms to be returned was 14 days with a due date of July 18, 2025. LAHCFD and SCCFSC Staff went out to conduct door knocking 2 weeks prior to project start date.

Biological Precautions:

As with all of our projects, protecting the biodiversity of the area is a high priority. A Biological Survey was conducted on July 22, by Dudek, 13 days before the project started. The biologist identified and flagged wood rats nests, no active birds' nests, and any habitat within the treatable area. The biological review was completed within the nesting season. Heritage trees were identified during the field verification stage and were not included in the work plan. Finally, a buffer of 25 feet was implemented along stream beds and seasonal waterways.

Project Duration:

The project started on Monday August 4, 2025, and was completed on Monday August 11, 2025. A total of 6 Days. We encountered 0 red flag days.

Jurisdictions And Funders Involved:

Santa Clara County Fire Safe Council, Los Altos Hills County Fire District, Santa Clara County, County Roads and Airports, and Town of Los Altos Hills.

Contractors Selected:

Dudek was selected for this project due to availability and competitiveness of the bid.

Miabella Expert Tree Service was selected due to their availability, familiarity with evacuation route projects within SCCFSC, commitment to self and public safety, and ability to complete the project within the requested time frame.

BATS/City Rise Safety provided a traffic control plan and provided four to five flaggers and traffic control for project duration.

Project Photos


BE
PREPARED
TO STOP

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By The Numbers:

- Area treated – 5.02 miles total area treated for both sides were treated during this project. Most of which were treated 15 to 30 feet from the edge of the road unless marked for riparian area. On ROE properties treatment extended 30-50 feet from the edge of the road if needed. The daily average was approximately 1 mile per day.
- Acres treated = 12.13 acres with an average of 2.02 acres treated per day.
- No poison oak was treated during this project.
- 6 days of treatment on the project itself were carried out by Miabella Expert Tree Service.

We overcame many challenges to complete this critical part of growing the evacuation route and vegetation treatment system in Santa Clara County. This project also supports goals in the LAHCFD CWPP annex as well as the overall Community Wildfire Protection Plan.

We would like to acknowledge the contribution made by Miabella Expert Tree Service, Dudek, and BATS/City Rise Safety. All entities were committed to assisting Santa Clara County FireSafe Council with the project from start to finish.

Bats/City Rise Safety provided four traffic control personnel on the first through third day and then provided five personnel for the remaining three days to make sure that the work could be done in an efficient and safe manner. All roads worked on are commuter roads with multiple driveways, high bike and foot traffic routes; additional traffic control personnel were necessary for the safety of the tree crews, SCCFSC staff, LAHCFD staff, general traffic, pedestrians and bicyclists in the Los Altos Hills area. I'm happy to report, with BATS/City Rise Safety traffic control coverage and the safe working practices of Miabella Expert Tree Service, we were able to finish the project with no reported injuries or incident reports. In addition to that, Los Altos Hills County Fire District granted permission for the project crew to use their parcel for a staging area.

Safety briefings were held by the safety officers, Ryan Cronin and Barbara Gonzalez each morning before start of work to discuss traffic control, personal protective equipment (PPE), local emergency services, environmental hazards, and weather conditions.

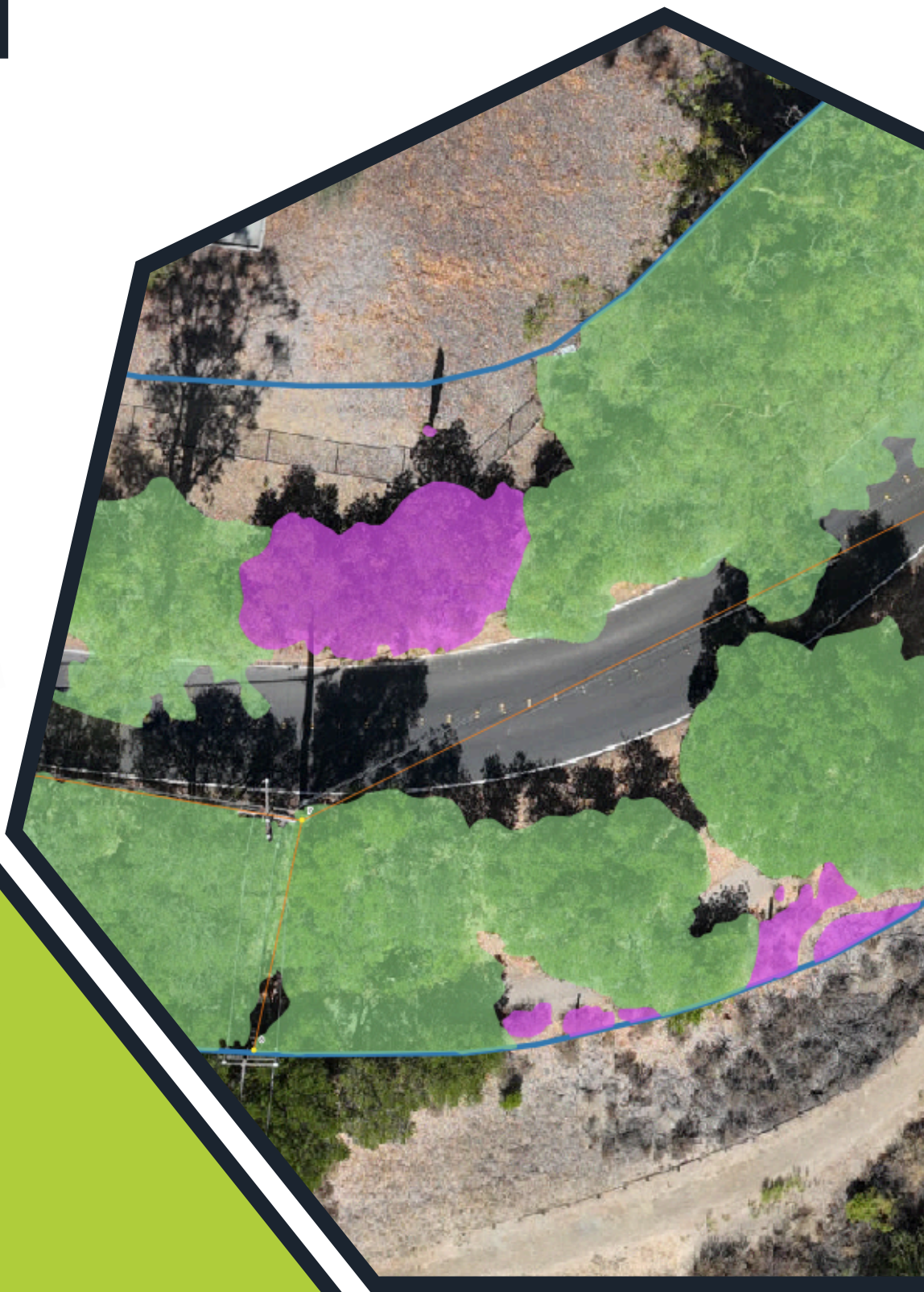
We would like to thank all the cooperators and property owners for all their support. If you have any questions or concerns, please feel free to direct them to:

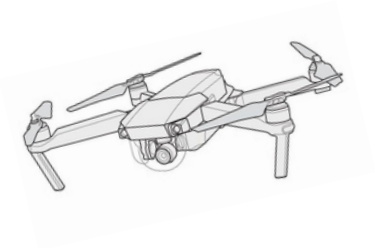
Barbara Gonzalez -
Project Manager
e-mail: bgonzalez@sccfiresafe.org
Phone: (408) 444-0711

Amanda Brenner-Cannon – Program Director
e-mail: abrennercannon@sccfiresafe.org

POST TREATMENT REPORT

ELENA ROAD
TAAFFE ROAD



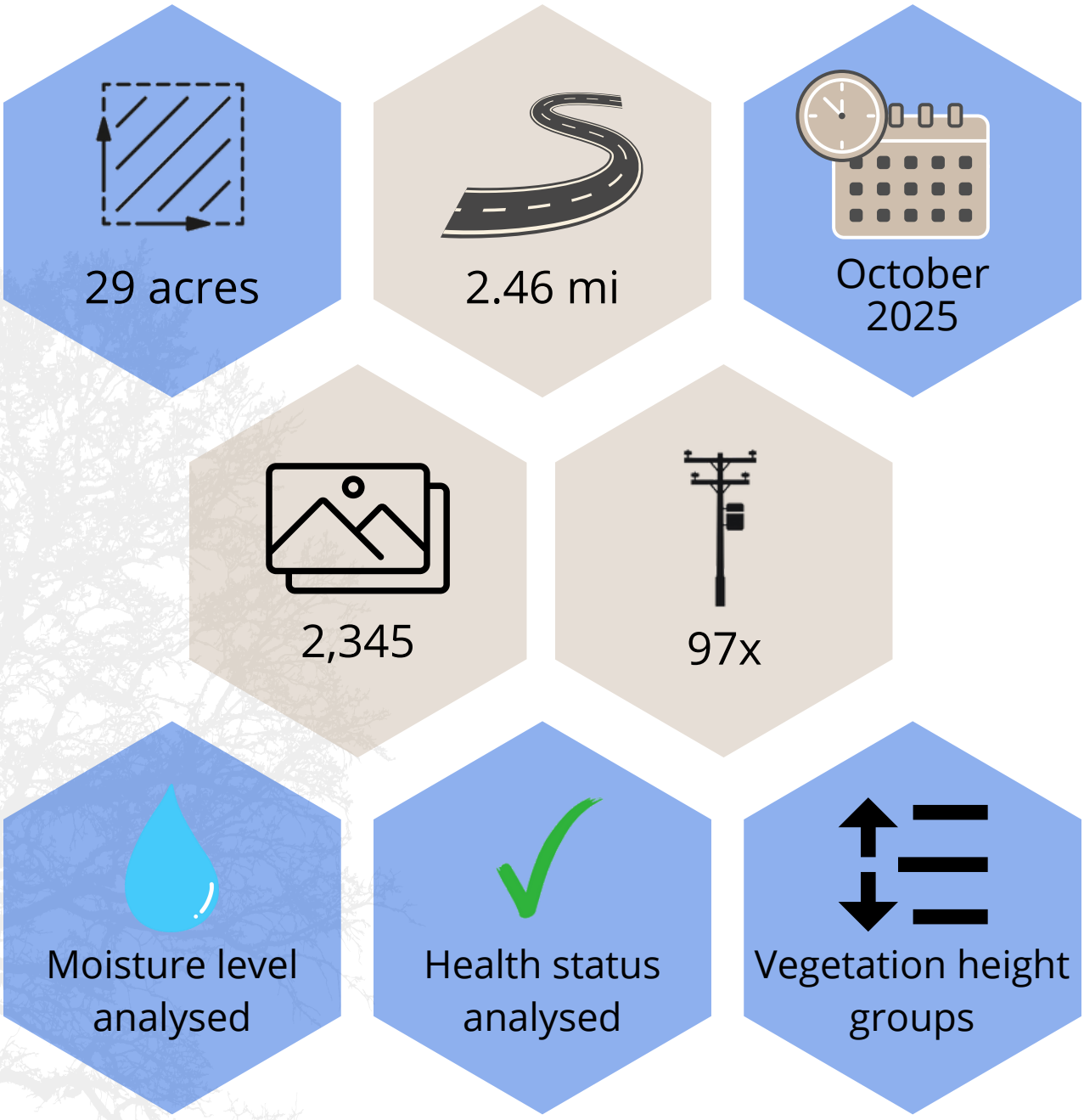


LOS ALTOS HILLS COUNTY FIRE DISTRICT

JD JACKSON'S DRONES

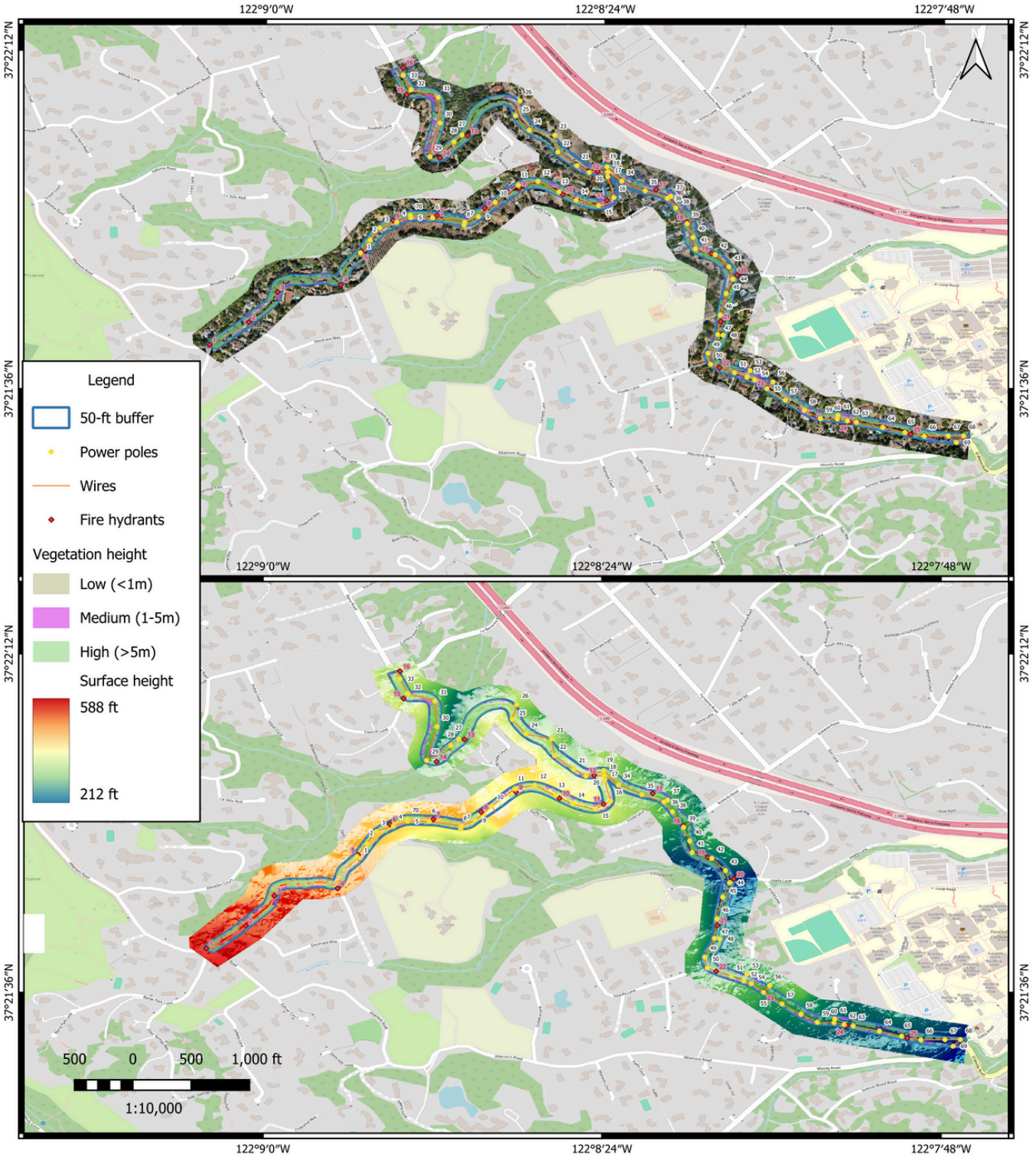
OCTOBER 2025

EXECUTIVE SUMMARY



JACKSON'S DRONES

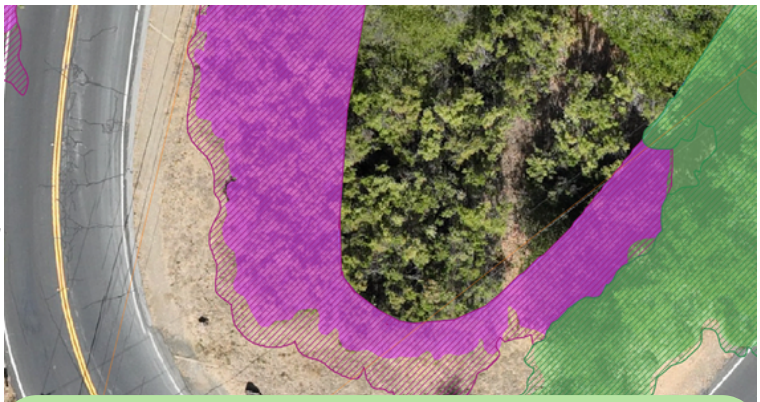
OVERVIEW



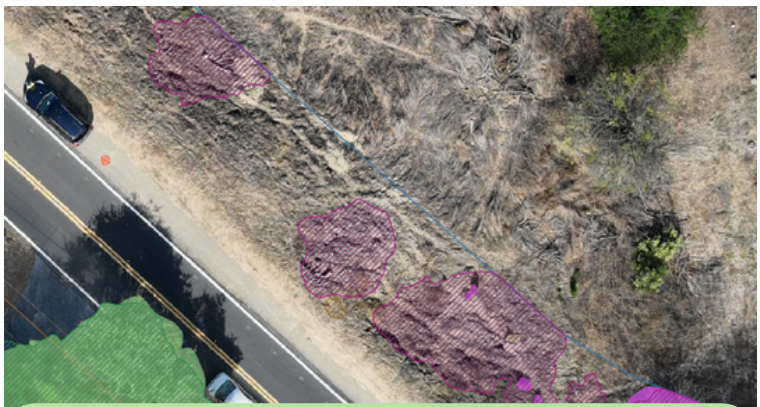
POST-TREATMENT: BEFORE-AFTER (1ST MILE)

Low vegetation before
Medium vegetation before
High vegetation before
Low vegetation after
Medium vegetation after
High vegetation after

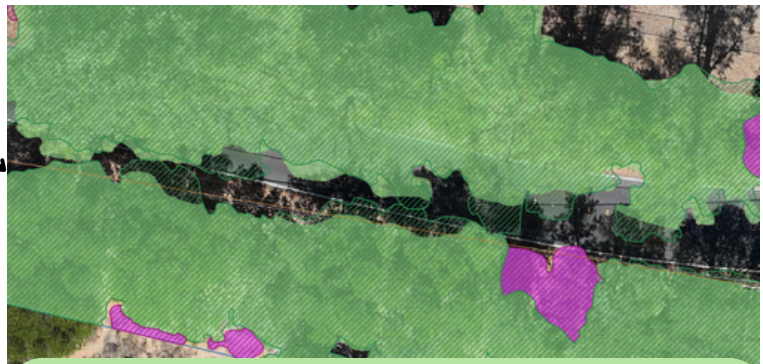
1st mile



Bushes trimmed



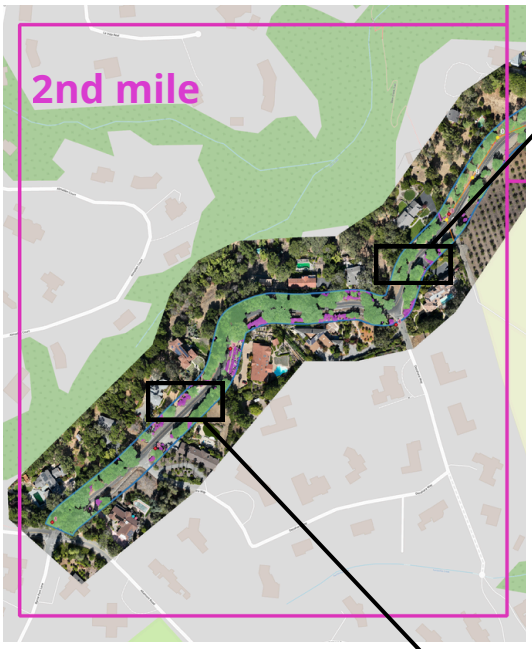
Bushes cut down

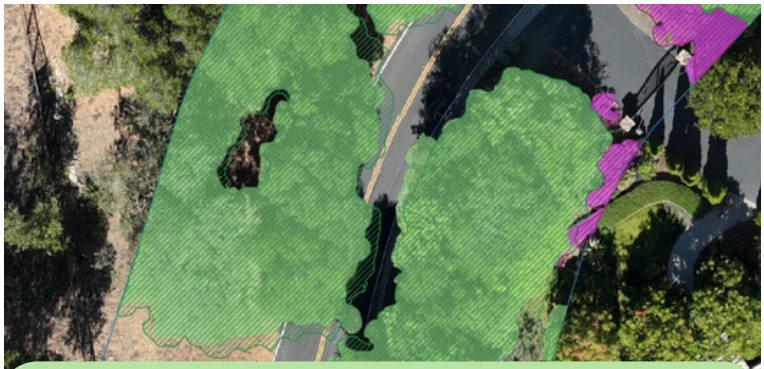


Trees trimmed

ANNUAL CHANGES: BEFORE-AFTER (2ND MILE)

Low vegetation before
Medium vegetation before
High vegetation before
Low vegetation after
Medium vegetation after
High vegetation after





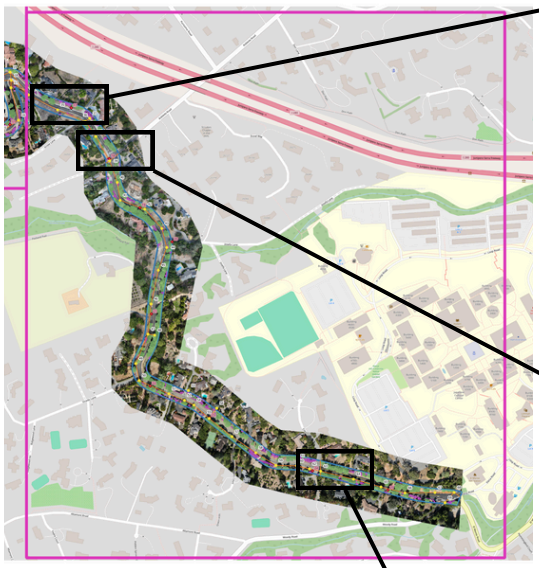
Trees trimmed

Bushes trimmed

POST-TREATMENT: BEFORE-AFTER (3RD MILE)

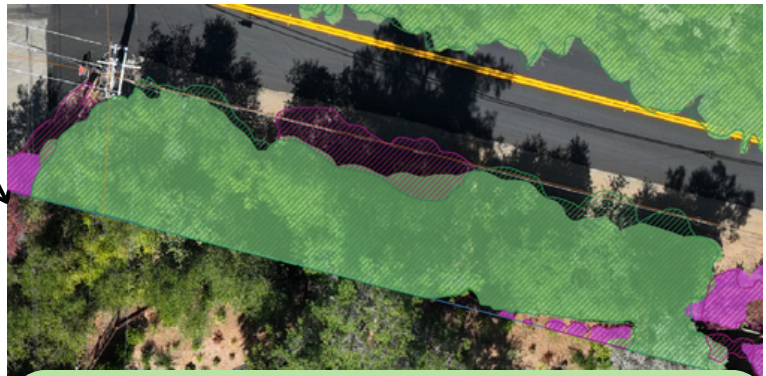
3rd mile

Low vegetation before
Medium vegetation before
High vegetation before
Low vegetation after
Medium vegetation after
High vegetation after



Bushes cut down

Trees cut down

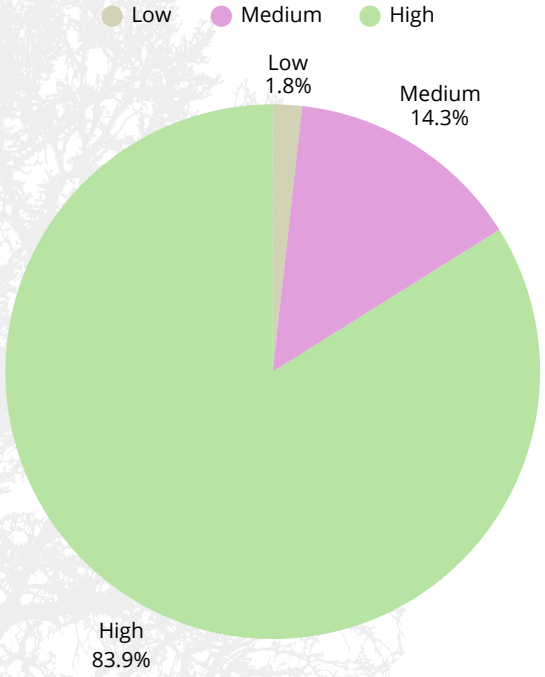


Bushes and trees trimmed

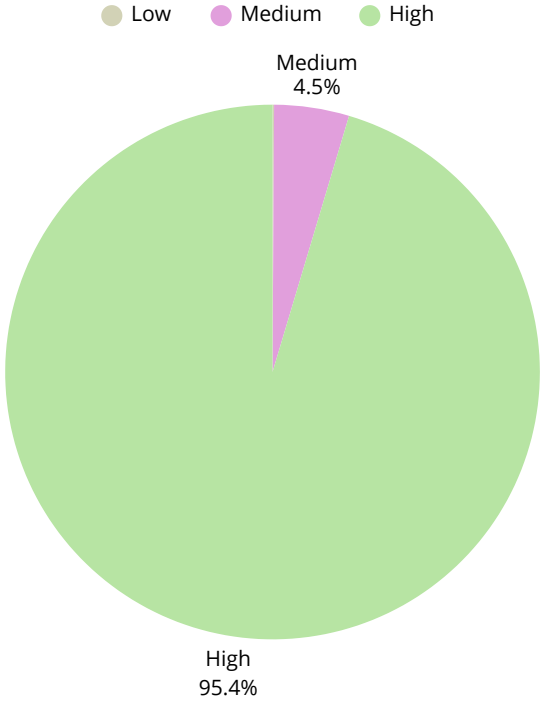
SHAPSHOT OF VEGETATION PROFILE

A primary goal of an evacuation route treatment is to reduce low height vegetation such as grasses and medium height vegetation such as shrubs and saplings that are ladder fuels. Finally the retention of a healthy tree canopy in the high height provides shade and cooler temperatures.

Vegetation area, %

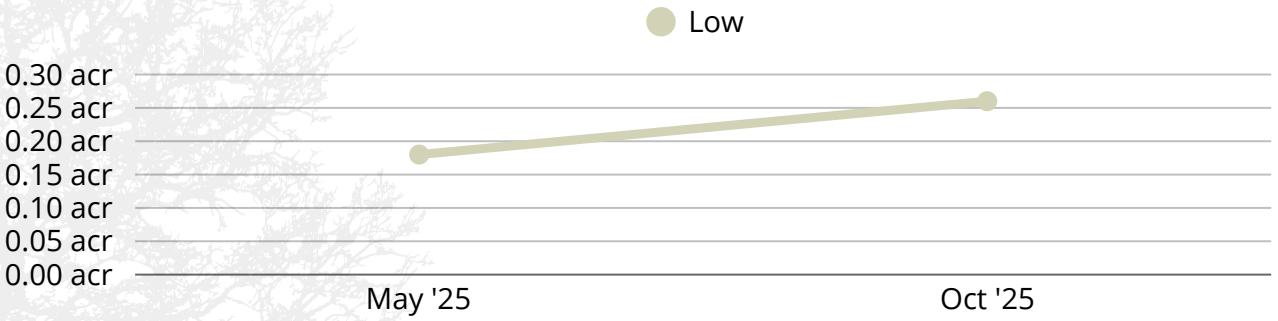


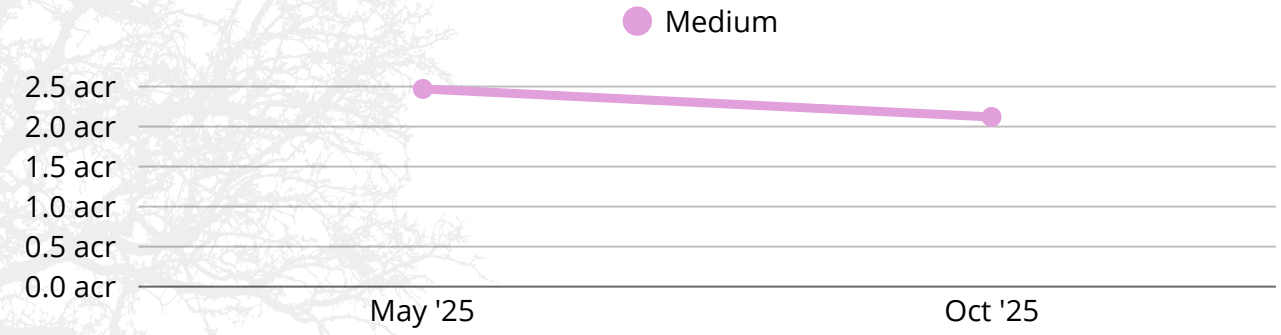
Vegetation volume, %

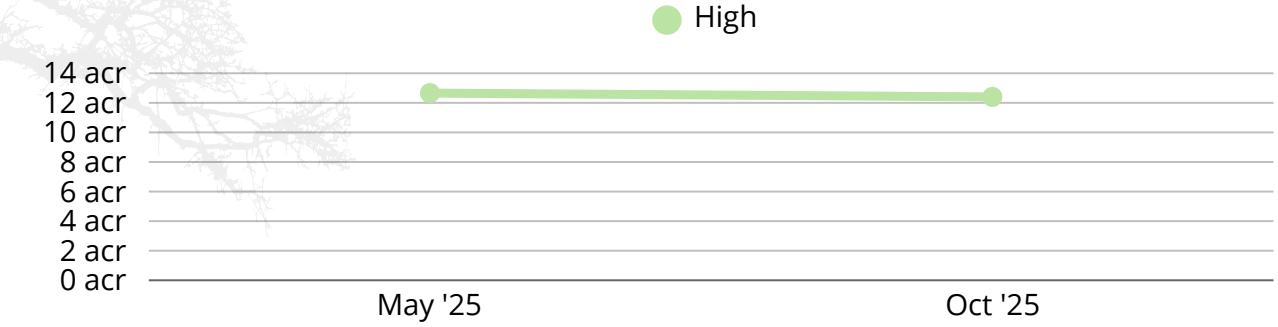


SHAPSHOT OF VEGETATION PROFILE

Vegetation height/ Areas (acres)	May '25	Oct '25	Acreage change
Low (up to 1 m)	0.18	0.26	+44%
Medium (1-5 m)	2.47	2.12	-14%
High (more than 5 m)	12.66	12.4	-2%



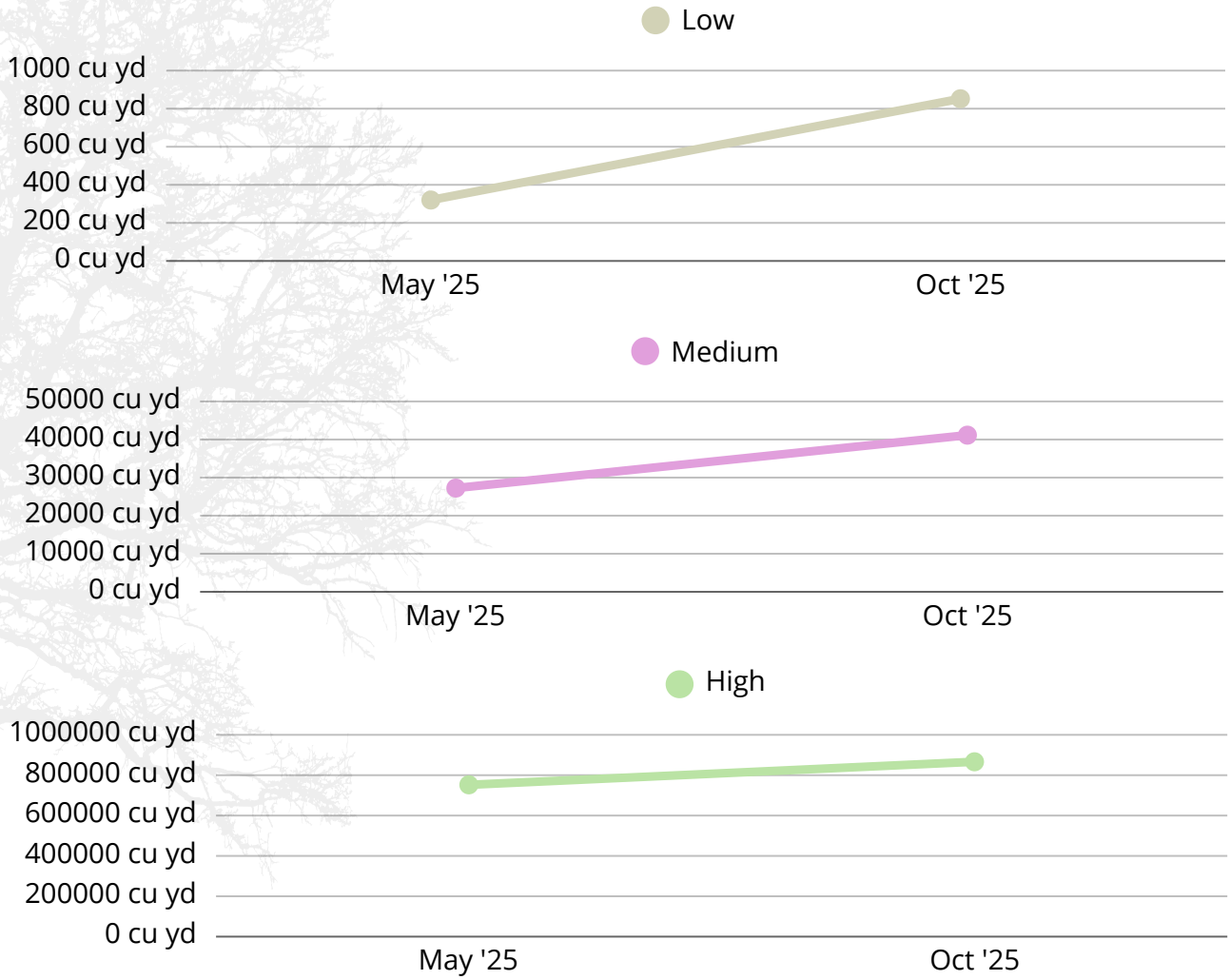




SHAPSHOT OF VEGETATION PROFILE

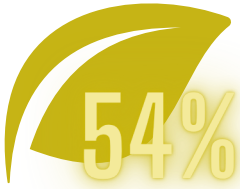
Volume is another way to measure a primary goal of an evacuation route treatment. Again the goal is to reduce low height vegetation and medium height vegetation. Retention of high height vegetation creates a shaded fuel break effect.

Vegetation height/ Volume (cubic yards)	May '25	Oct '25	Volume change
Low (up to 1 m)	320	852	+166%
Medium (1-5 m)	27,248	41,143	+51%
High (more than 5 m)	752,294	866,455	+15%



VEGETATION HEALTH STATUS (NDVI)

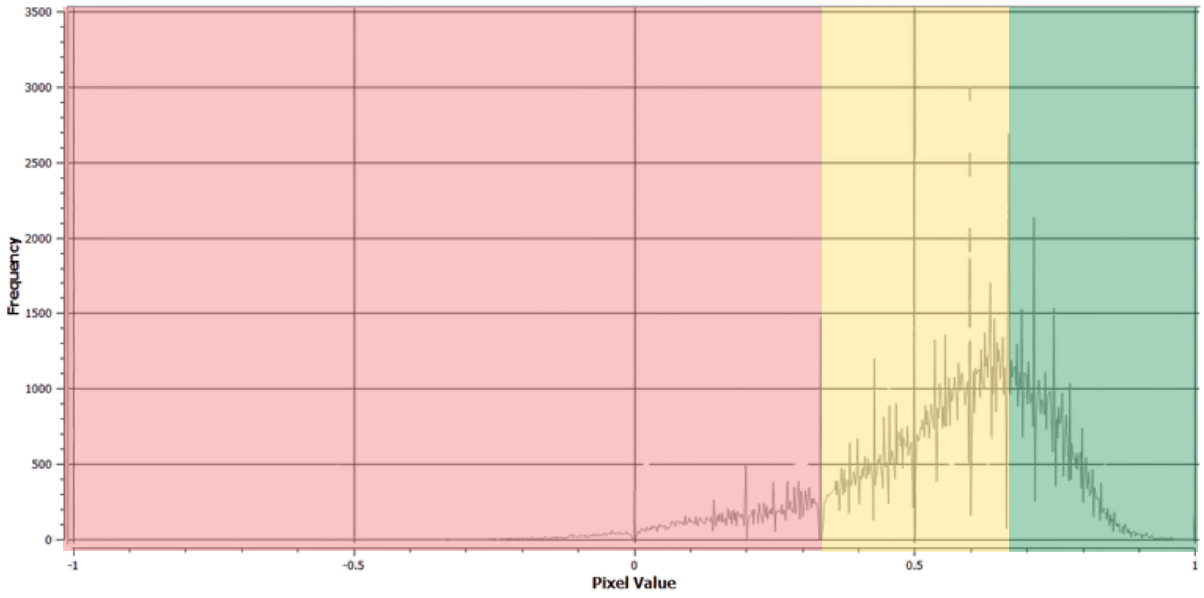
Very stressed



Moderately stressed

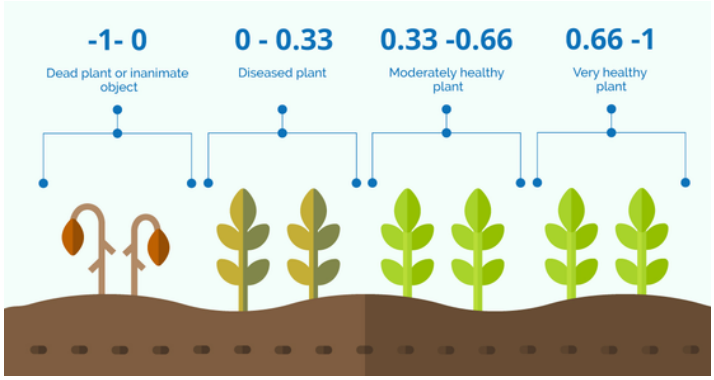
Low stressed

NDVI Distribution Chart



NDVI, or Normalized Difference Vegetation Index, is a numerical indicator used to assess the presence and health of vegetation by analyzing how surfaces reflect light at specific wavelengths. It is calculated using the formula (NIR - Red) / (NIR + Red), where NIR stands for near-infrared reflectance and Red refers to red light reflectance.

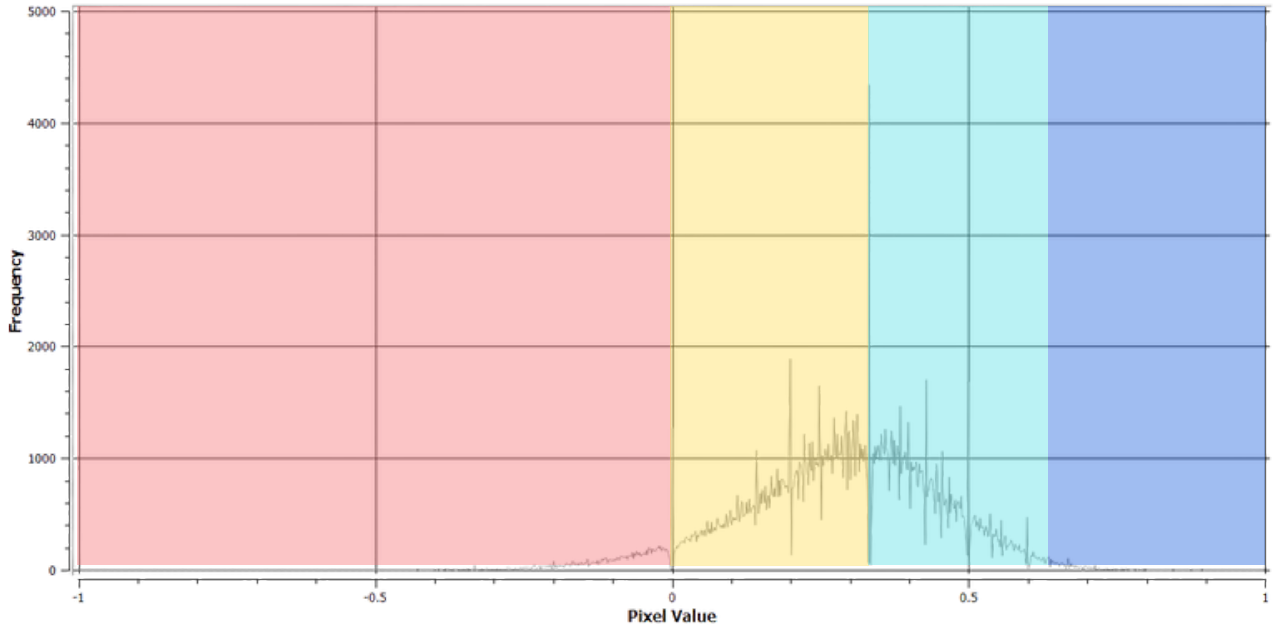
The NDVI values range between -1 and +1. Values closer to +1 indicate dense, healthy vegetation, such as a forest canopy or thriving crop field. Moderate values (around 0.3 to 0.66) suggest sparser or less healthy vegetation like grasslands or shrubs. Values near zero or negative values typically represent diseased or dead plants.



MOISTURE CONTENT (GNDVI)

5%	52%	42%	1%
Water stressed	Low level of water content	Medium level of water content	High level of water content

GNDVI Distribution Chart



GNDVI, or Green Normalized Difference Vegetation Index, is a vegetation index similar to NDVI but it uses the green band instead of the red band. It is particularly sensitive to chlorophyll content in leaves and is often used for assessing plant water stress, nitrogen content, or overall plant vigor, especially in crops with high chlorophyll concentrations.

The output values range from -1 to +1, just like NDVI. Higher values indicate high level of moisture in plants, while lower or negative values suggest sparse and water stressed vegetation. Compared to NDVI, GNDVI may be more sensitive to early signs of water or nitrogen deficiency, since green reflectance changes earlier in response to plant stress.