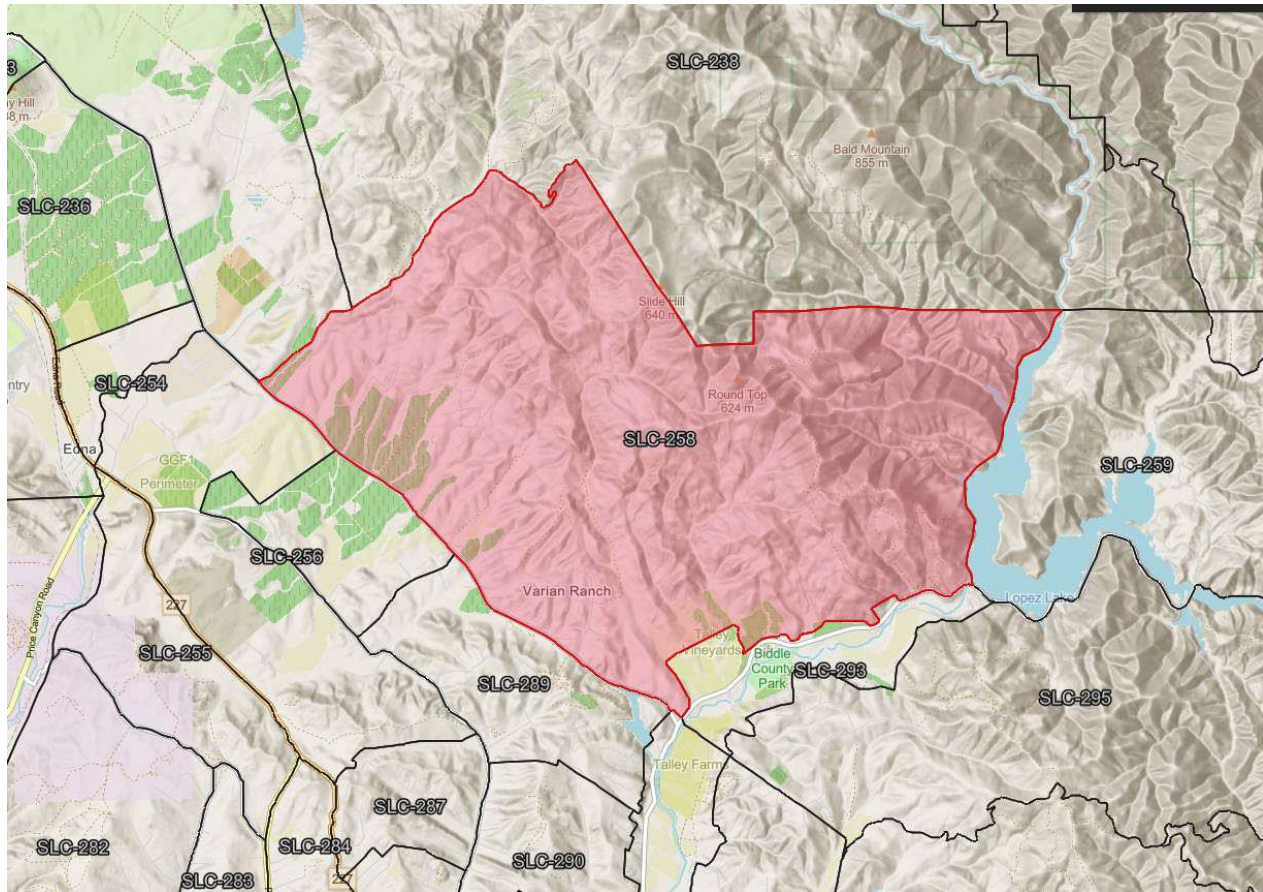


COMMUNITY WILDFIRE EVACUATION ANALYSIS



Varian Ranch Community

San Luis Obispo County Evacuation Zone SLC-258



Evacuation zone SLC-258, including the Varian Ranch community and surrounding rural area.

Document	Information
Prepared for	Varian Ranch Community
Prepared by	SLO Fire Safe Council
Date	July 31, 2026
Status	Planning-Level Draft

PURPOSE

This report summarizes the supplied evacuation-zone map and LADRIIS planning-level simulation, identifies evacuation strengths and constraints, and provides practical actions for community preparedness.

Executive Summary

Varian Ranch is located within San Luis Obispo County evacuation zone SLC-258, a large rural zone extending from the Edna area toward Lopez Lake. The supplied map shows dispersed development, steep terrain, drainage corridors, and long internal travel paths. These characteristics can increase the importance of early warning, phased departure, clear access, and route redundancy during a wildfire.

MODELED OUTCOME

The LADRLIS simulation evacuated 97 addresses and 185 passenger vehicles. All 185 modeled vehicles departed and arrived. The displayed total evacuation clearance time was 1 hour 7 minutes, with a clearance range of 1 hour 1 minute to 1 hour 7 minutes.

Key Findings

- The modeled demand equals approximately 1.91 passenger vehicles per evacuated address.
- No heavy vehicles were included in the supplied simulation.
- The simulation used three evacuation waypoints identified as A, B, and C.
- The displayed response-time assumption was 1 hour; average trip time was shown as 20 minutes.
- All modeled vehicles reached a waypoint, indicating no modeled trapping or incomplete evacuation in the supplied run.
- The supplied ignition-density map (1999-2022) shows multiple recorded ignition concentrations along the developed road network surrounding Varian Ranch and near the Lopez Lake corridor.
- The supplied PG&E map shows electric distribution infrastructure serving the developed portions of the community and following key access corridors; line class, voltage, ownership, and overhead/underground status require utility verification.
- The 1985 Las Pilitas Fire burned 84,271.42 acres east and northeast of the community, demonstrating the area's exposure to large, long-duration wildfires.
- Three fire-spread simulations show that fires approaching from the north, south, or directly along Orcutt Road can threaten homes and affect the principal evacuation corridor.
- The 1-hour 7-minute result is within the two-hour planning benchmark used in Greg Alex's prior evacuation analyses; it is not a safety guarantee or a recommendation to delay departure.

Priority Actions

- Verify and document the street names, ownership, gate status, and year-round passability of waypoint routes A, B, and C.
- Maintain emergency access clearances, address visibility, roadside vegetation, and turnaround areas.
- Coordinate with PG&E and fire officials to verify overhead and underground facilities, vegetation-management responsibilities, shutoff considerations, and powerline hazards along evacuation routes.
- Build a resident notification and accountability process for older adults, people with disabilities, animal owners, and residents needing transportation help.
- Coordinate decision points and traffic-control needs with the San Luis Obispo County Sheriff's Office, County OES, CAL FIRE/San Luis Obispo County Fire, and adjacent landowners.
- Use the north, south, and Orcutt Road fire scenarios to establish early evacuation decision points before fire reaches the community or compromises Orcutt Road.

1. Purpose, Scope, and Limitations

1.1 Purpose

This Community Wildfire Evacuation Analysis (CWEA) provides a concise, community-level evaluation of evacuation demand, modeled clearance time, access conditions, and preparedness priorities for Varian Ranch. It is intended to support resident education, emergency coordination, Firewise planning, grant development, and future evacuation modeling.

1.2 Scope

- Evacuation area: San Luis Obispo County evacuation zone SLC-258.
- Community focus: Varian Ranch and the residential address clusters shown within the supplied zone.
- Hazard focus: wildfire evacuation, with attention to rural access, topography, route concentration, and emergency notification.
- Model basis: one supplied LADRIIS simulation screenshot and one evacuation-zone map.

1.3 Important Limitations

LADRIIS is a planning-level evacuation analysis tool. The supplied results are not a real-time forecast and do not fully represent fire spread, smoke, visibility, falling trees, utility failure, collisions, stalled vehicles, gate failures, law-enforcement traffic control, contraflow, spontaneous route changes, visitor behavior, livestock loading, or simultaneous evacuation demand from adjacent zones.

PLANNING DISCLAIMER

This report is intended for planning and preparedness purposes only. Actual evacuation conditions may differ because of wildfire behavior, weather, warning time, congestion, infrastructure failure, road blockage, communications outages, responder availability, and human behavior. Nothing in this document creates a legal duty or guarantees safety. Residents must follow instructions from authorized public safety officials.

1.4 Data Needed for Finalization

Item	Status / Needed Information
Road and gate inventory	Field verification needed
Resident and special-needs survey	Community input needed
Livestock and trailer demand	Community input needed
Water supply and hydrant map	Agency/field verification needed

2. Community and Evacuation-Zone Profile

Zone SLC-258 covers a broad rural landscape east of Edna and west of Lopez Lake. The map depicts Varian Ranch in the southern-central portion of the zone, with other address clusters located farther north and east. The terrain is hilly to mountainous and contains multiple creek and drainage features. Development is dispersed rather than arranged on a dense urban street grid.

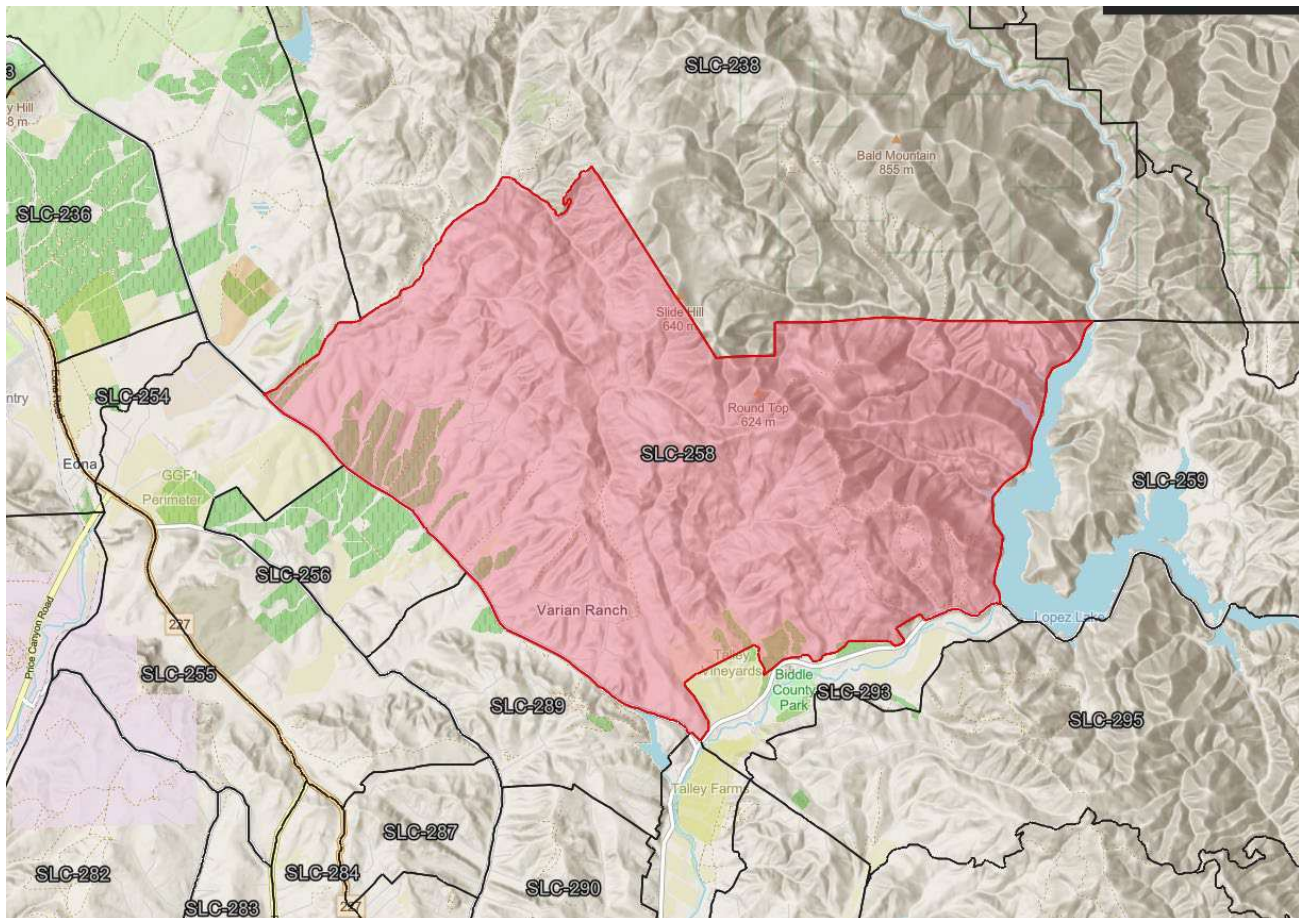


Figure 1. Supplied San Luis Obispo County evacuation-zone map for SLC-258.

General Area Characteristics

- Large rural evacuation zone with dispersed residential addresses.
- Steep and varied terrain that may affect fire behavior, visibility, travel speed, and responder access.
- Long internal travel distances before residents reach the edge of the evacuation zone.
- Creeks, drainages, and topographic constrictions that may limit route options.
- Proximity to Lopez Lake and neighboring evacuation zones SLC-256, SLC-289, SLC-293, and SLC-295.
- Potential agricultural, equestrian, visitor, worker, or service traffic not fully represented by residential-address counts.

3. Wildfire Ignition History and PG&E Powerline Exposure

Historic ignition and electrical-infrastructure information helps identify where prevention, roadside treatment, utility coordination, and evacuation-route maintenance may have the greatest value. These datasets indicate exposure and planning priorities; they do not establish the cause of any individual fire or predict where the next wildfire will begin.

3.1 Historic Ignition Pattern

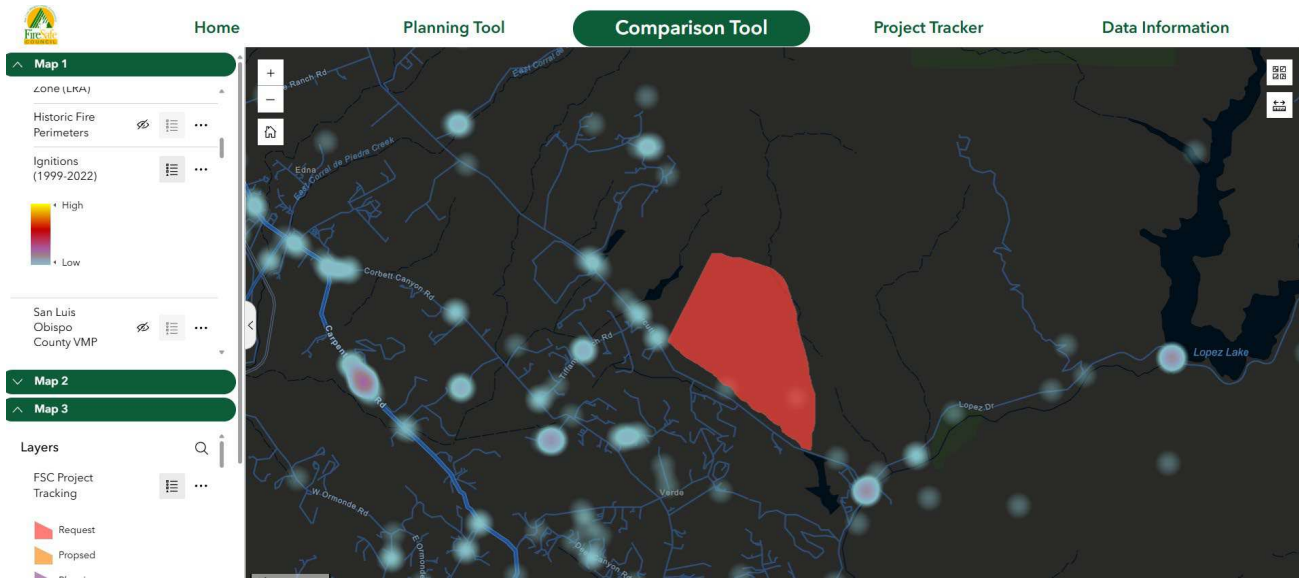


Figure 2. Supplied ignition-density map for the Varian Ranch area, showing recorded ignitions from 1999 through 2022.

The supplied map displays numerous ignition locations and density concentrations along the developed roadway network west and south of Varian Ranch, with additional points extending toward Lopez Lake. The pattern appears associated with areas of greater road access and human activity. The image supports the following planning observations:

- Ignition-prevention work should include roadsides, access points, utility corridors, equipment-use areas, and locations with recurring public or operational activity.
- The concentration of recorded ignitions outside the central ranch area means a fire may threaten the community from beyond its immediate residential footprint.
- Evacuation readiness should address fire approaches from the west, south, and Lopez Lake corridor rather than relying on one assumed fire direction.
- The map presents density and location patterns but does not identify ignition causes, incident size, season, suppression outcome, or whether each point falls within SLC-258.

3.2 PG&E Electric Infrastructure

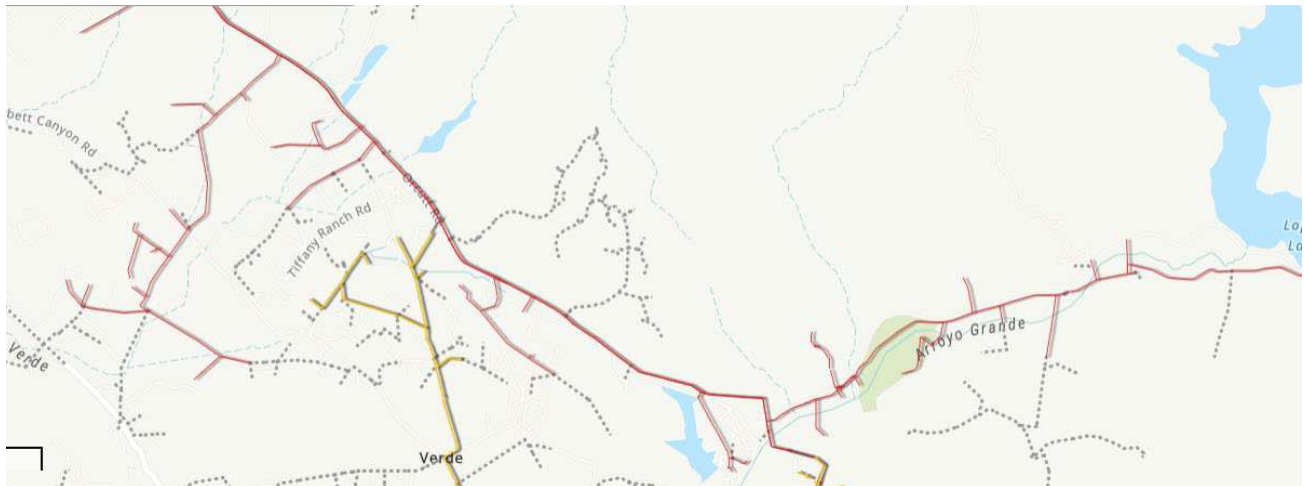


Figure 3. Supplied PG&E powerline map for the Varian Ranch and Lopez Lake corridor.

The supplied PG&E map shows electric lines serving developed areas near Tiffany Ranch Road, Verde, Arroyo Grande Creek, Lopez Drive, and the Lopez Lake corridor. Several mapped line segments generally follow or cross roads that may also carry evacuation and emergency-response traffic.

Planning Issue	Potential Relevance	Verification Needed
Road and line co-location	Utility incidents, fallen conductors, poles, or vegetation may affect the same corridors used for evacuation.	Confirm line location and whether facilities are overhead or underground.
Vegetation management	Trees and brush near electrical facilities can affect reliability, access, and wildfire exposure.	Identify PG&E and property-owner clearance responsibilities and inspection cycles.
Public Safety Power Shutoff	A shutoff may affect gates, wells, pumps, communications, lighting, and medical equipment.	Document backup power and manual gate-opening procedures.
Emergency coordination	Damaged electrical facilities can create responder and public hazards.	Confirm notification, isolation, and utility-liaison procedures.

DATA LIMITATION

The supplied powerline image does not include a visible legend. Line color must not be interpreted as voltage, ownership, circuit type, wildfire-risk classification, or overhead/underground status without confirmation from PG&E or the authoritative GIS metadata.

4. Fire History and Wildfire-Spread Scenarios

4.1 1985 Las Pilitas Fire



Figure 4. Historic perimeter and incident information for the 1985 Las Pilitas Fire.

CAL FIRE responded to the Las Pilitas Fire on June 30, 1985. The incident was contained on July 14, 1985, after burning 84,271.42 acres. The displayed incident record identifies equipment-use activity as the cause and notes that the perimeter was collected by unknown methods.

The mapped fire area lies east and northeast of Varian Ranch, beyond Lopez Lake and within the surrounding wildland landscape. Although the historic perimeter shown does not indicate that the fire burned through the Varian Ranch residential area, its size and two-week duration demonstrate that this region can support a large, landscape-scale wildfire.

Planning Implications

- A large incident can affect smoke, road access, utility service, emergency resources, and public use around Lopez Lake even when the main perimeter is outside the community.
- Equipment use is a documented historic ignition cause in the surrounding landscape, supporting seasonal prevention measures for mowing, welding, grading, agricultural work, and other spark-producing activity.
- Historic perimeter mapping should be considered with fuels, topography, wind, and current development; it does not by itself predict future fire behavior.

HISTORICAL CONTEXT

The Las Pilitas Fire provides evidence of regional wildfire scale. Community evacuation decisions must still be based on the location, direction, rate of spread, weather, and official warnings for the current incident.

4.2 Fire Approaching from the North

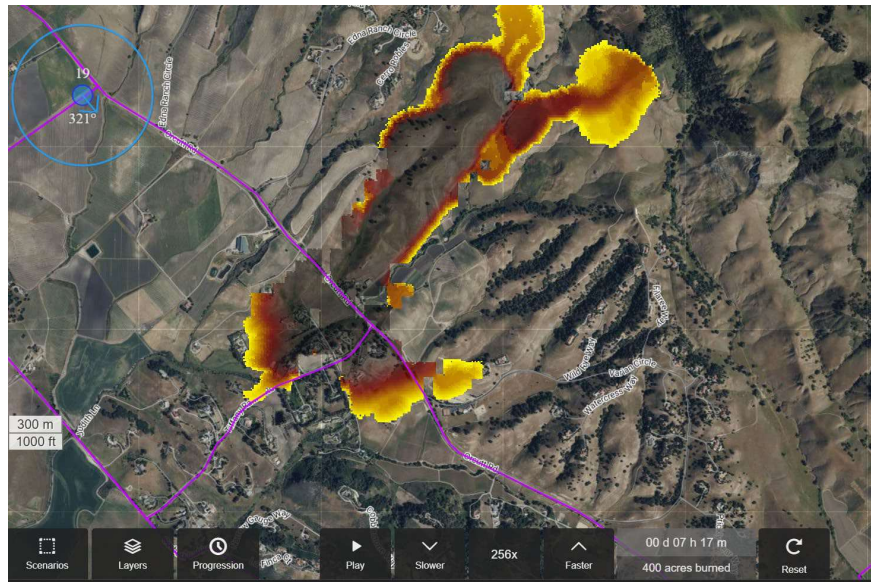


Figure 5. North-origin scenario: 19 mph from 321 degrees; 7 hours 17 minutes; 400 acres.

The simulation shows fire advancing toward developed areas north of Orcutt Road and producing additional growth near the community's western approach.

4.3 Roadside Fire along Orcutt Road

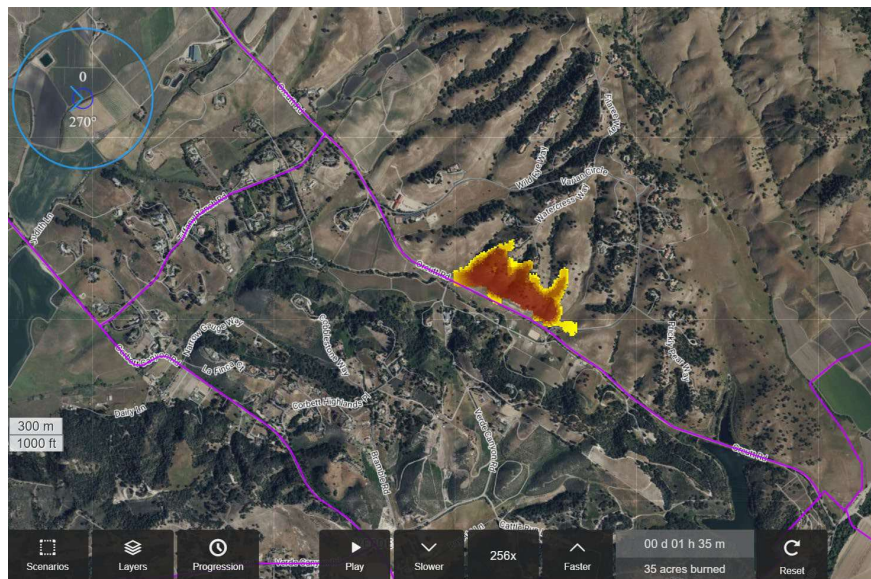


Figure 6. Orcutt Road roadside scenario: 1 hour 35 minutes; 35 acres burned.

This scenario begins immediately adjacent to Orcutt Road. Smoke, fire, emergency apparatus, or closure could affect the primary evacuation corridor before a large acreage develops.

4.4 Fire Approaching from the South

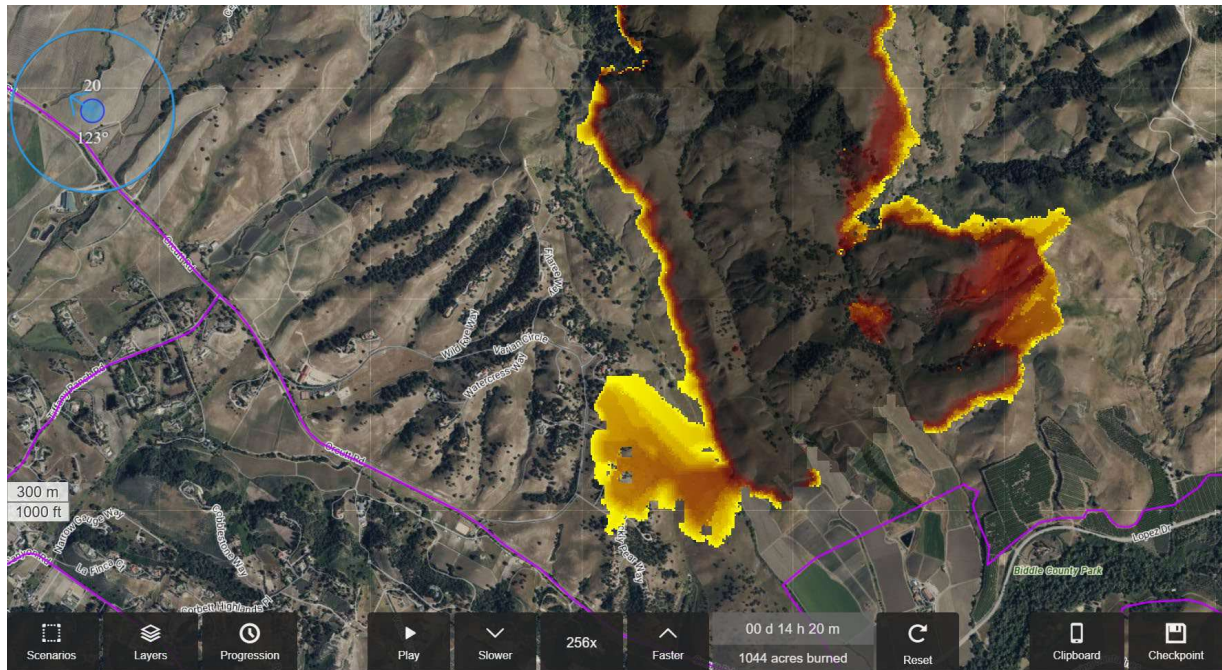


Figure 7. Supplied south-origin fire-spread simulation at 14 hours 20 minutes, showing 1,044 acres burned under the displayed scenario settings.

The south-origin simulation shows a larger fire moving through the hills east and southeast of Varian Ranch and approaching the residential area and connecting roads. The displayed scenario shows 20 mph wind from 123 degrees, 14 hours 20 minutes of progression, and 1,044 acres burned.

Comparison of Supplied Fire Scenarios

Scenario	Displayed Conditions	Primary Planning Concern
North	19 mph / 321 degrees; 7 hr 17 min; 400 acres	Fire and smoke approaching developed areas and the northern/western access network.
Orcutt Road roadside	Displayed wind 0 / 270 degrees; 1 hr 35 min; 35 acres	A smaller incident can quickly threaten or disrupt the principal evacuation corridor.
South	20 mph / 123 degrees; 14 hr 20 min; 1,044 acres	Extended fire growth through hills east and southeast of the community.

SIMULATION LIMITATION

These images are planning scenarios, not forecasts. Results depend on the ignition point, fuels, moisture, weather, model settings, suppression assumptions, and selected simulation time. The screenshots do not document every model input. Use them to compare threat directions and decision needs, not as predicted arrival times.

5. Evacuation Modeling and Network Analysis

The supplied LADRIIS simulation applies evacuation demand to the roadway network and routes modeled vehicles toward three evacuation waypoints. The output is useful for comparing evacuation performance, identifying route concentration, and framing operational questions. It should be paired with fire-spread information, field observations, and emergency-agency knowledge.

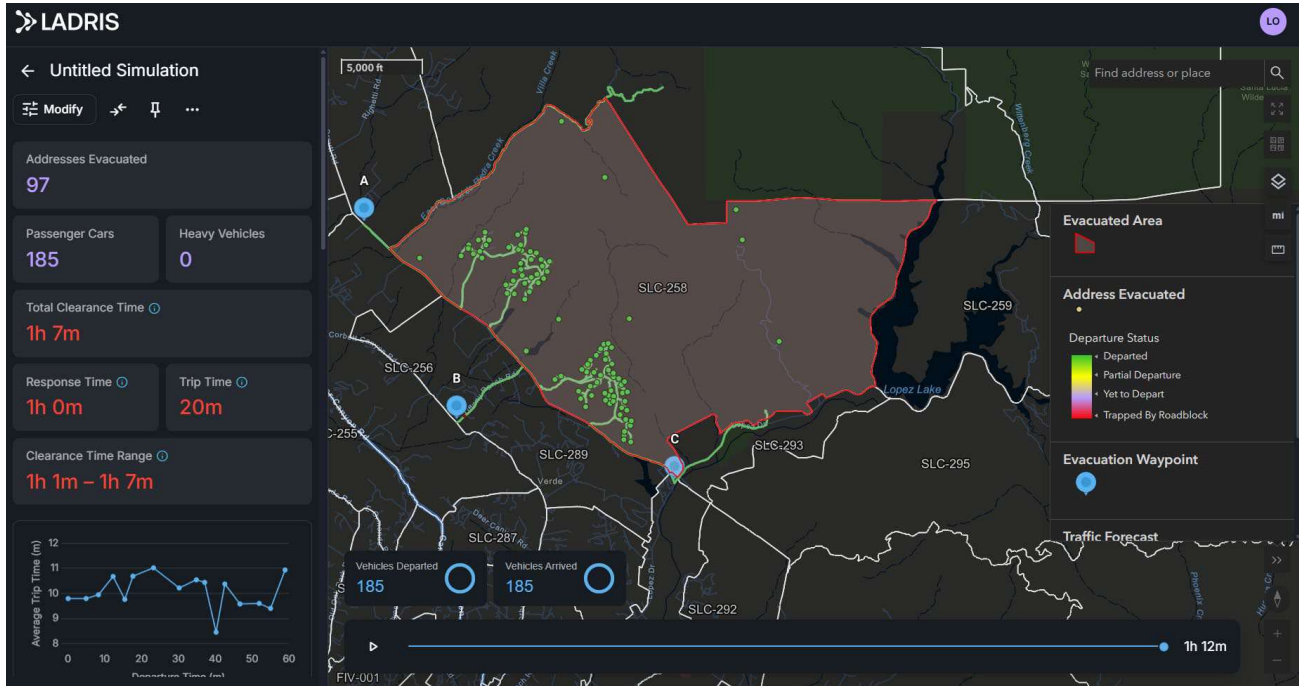


Figure 8. Supplied LADRIIS simulation result for evacuation zone SLC-258.

Simulation Inputs and Outputs

Measure	Displayed Result	Planning Interpretation
Addresses evacuated	97	Modeled residential origin points
Passenger cars	185	Approx. 1.91 vehicles per address
Heavy vehicles	0	Trailers/heavy vehicles not represented
Vehicles departed	185	All modeled vehicles entered network
Vehicles arrived	185	All modeled vehicles reached a waypoint
Total clearance time	1 hr 7 min	Displayed completion time for modeled run
Clearance range	1:01-1:07	Variation among modeled departures/paths
Response time	1 hr 0 min	Displayed response/departure assumption
Trip time	20 min	Displayed average trip-time measure

6. Evacuation Routes and Access Assessment

The County evacuation-route map identifies Orcutt Road and Lopez Drive as primary routes in the Varian Ranch area. Tiffany Ranch Road and connections toward Corbett Canyon Road are shown as secondary routes. Local roads connect homes on Varian Circle, Wild Way, Watercress Way, and nearby streets to the larger route network.

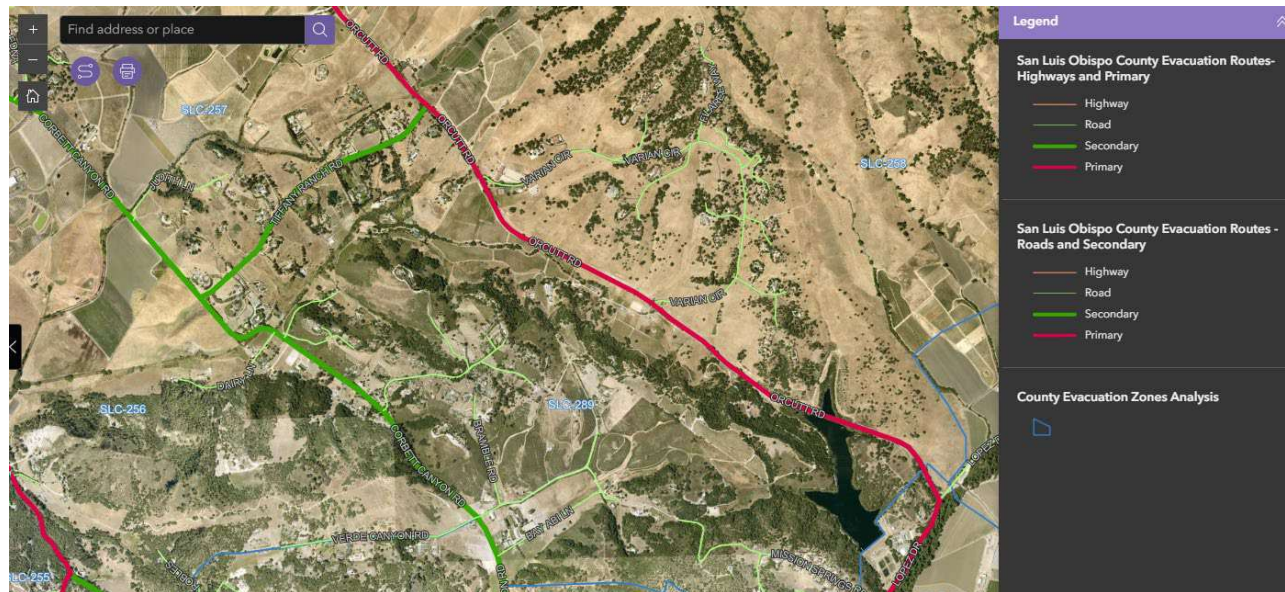


Figure 9. San Luis Obispo County evacuation-route map for Varian Ranch and surrounding zones.

Route Classification	Mapped Routes / Function	Operational Consideration
Primary	Orcutt Road and Lopez Drive	Principal movement toward the regional network; roadside fire or closure may have immediate consequences.
Secondary	Tiffany Ranch Road and mapped connections toward Corbett Canyon Road	Potential alternate distribution; verify continuity, width, gates, bridges, and downstream capacity.
Local roads	Varian Circle and neighborhood streets	Collect residential traffic and may contain narrow segments, private drives, or limited turnarounds.

Potential Evacuation Constraints

- Dependence on a limited number of internal roads and zone-edge connections.
- Possible single-lane or narrow rural-road segments, gates, bridges, culverts, and limited turnarounds.
- Slow-moving trailers, livestock loading, disabled vehicles, or emergency apparatus moving against outbound traffic.
- Roadside fuels, smoke, ember exposure, falling limbs, and fire crossing a route.
- Merging demand from adjacent zones or public use areas near Lopez Lake.
- Loss of power or communications affecting gates, pumps, alerts, and resident coordination.

OPERATIONAL PRINCIPLE

Use the route directed by public safety officials. A route mapped as primary or secondary is not guaranteed to remain safe or open. Evacuation decisions should be made early enough that residents can move before fire, smoke, congestion, and emergency operations reduce roadway capacity.

7. Community Preparedness Assessment

The following scorecard separates known modeled information from items requiring community or agency verification. Scores are intentionally provisional. A final CWEA should be updated after a field visit, resident survey, and coordination meeting.

Assessment Area	Provisional Rating	Basis / Next Step
Modeled evacuation completion	4 - Strong	All 185 modeled vehicles arrived; test route-loss cases
Route redundancy	3 - Moderate	Three model waypoints shown; verify independence and usability
Emergency access condition	Not rated	Complete road, bridge, gate, clearance, and turnaround inventory
Warning and notification	Not rated	Document alert enrollment and backup notification methods
Resident readiness	Not rated	Survey evacuation plans, go-kits, transportation, and mobility needs
Animal evacuation	Not rated	Inventory livestock, trailers, staging, and assistance needs
Home hardening / HIZ	Not rated	Complete parcel-level assessment
Ignition prevention	3 - Moderate	Historic ignition layer supplied; add cause, date, and jurisdiction analysis
Utility resilience	Not rated	Verify PG&E facility attributes, clearances, backup power, and shutoff readiness
Fire-scenario readiness	3 - Moderate	Three directional scenarios supplied; convert results into agency-approved trigger points

Rating Scale

1 = Critical deficiency | 2 = Needs improvement | 3 = Moderate | 4 = Strong | 5 = Best practice

Resident Information to Collect

- Number of full-time, part-time, rental, and visitor-occupied residences.
- Household vehicle count and vehicles requiring extra loading time.
- Residents who may need mobility, medical, language, transportation, or notification assistance.
- Horses, livestock, pets, trailers, and expected loading time.
- Private gates, access codes, locked connections, and alternate routes.
- Backup power, water supply, radio capability, and neighborhood communications.

8. Recommended Actions

No.	Recommended Action	Lead / Partners	Target
1	Create a confidential resident assistance and animal-evacuation roster; identify households needing early notification or transportation.	Community preparedness team	0-3 months
2	Enroll residents in county alerts and establish redundant phone, text, radio, and door-to-door notification procedures.	Residents, County OES	0-3 months
3	Conduct roadside-fuel, address-sign, gate, bridge, and apparatus-turnaround inspections; correct priority access deficiencies.	Property owners, Fire, road associations	3-12 months
4	Run LADRIIS sensitivity scenarios: loss of each waypoint, 50% route-capacity reduction, adjacent-zone demand, delayed departures, and animal-trailer demand.	Safety Zone Laboratory, agencies	3-6 months
5	Hold a community evacuation exercise that tests alerts, accountability, route choice, and animal loading without creating roadway hazards.	Community, Sheriff/OES, Fire	6-12 months
6	Complete an ignition-cause and powerline exposure review; field-check utility crossings, vegetation conditions, manual gate operation, and backup power needs.	Community, PG&E, Fire, property owners	3-12 months

Conclusion and Source Framework

The modeled evacuation completed in 1 hour 7 minutes, but readiness depends on early warning, usable routes, functioning gates, and departure before fire or emergency operations affect Orcutt Road. The north, south, and roadside scenarios should be used with field verification to establish operational decision points.

Sources: supplied LADRIIS and SLC-258 maps; County evacuation-route map; Fire Safe Council ignitions (1999-2022); PG&E powerline map; CAL FIRE 1985 Las Pilitas Fire record; supplied north, south, and Orcutt Road fire simulations; Cal OES Evacuation Planning Technical Advisory (2023); U.S. Fire Administration National Wildfire Evacuation Planning Guidance (2025); AB 747, SB 99, PRC 4290-4291, and locally adopted Fire Code access provisions.



9. Community Evacuation Action Sheet

Complete this page with the community and emergency agencies. Distribute only after routes and instructions are approved by the appropriate public safety authorities.

Field	Community Entry
Primary evacuation route	
Alternate evacuation route	
Waypoint A official location	
Waypoint B official location	
Waypoint C official location	
Gate locations / access process	
Neighborhood coordinator	
Backup coordinator	
Animal evacuation lead	
Residents needing assistance	Maintain on confidential roster; update at least annually
Emergency information source	Official San Luis Obispo County and public safety alerts
Assembly/accountability method	
Backup power / manual gate plan	

Before a Wildfire

- Register for official emergency alerts and keep contact information current.
- Keep vehicles fueled or charged and positioned for departure.
- Prepare go-kits, medications, documents, pet supplies, and protective clothing.
- Load livestock early when directed or when conditions indicate extra time will be required.
- Maintain defensible space, visible address signs, gates, driveways, and turnarounds.

When Evacuation Is Ordered

- Leave promptly using the route directed by public safety officials.
- Do not rely on a preferred route if officials direct traffic elsewhere.
- Do not delay to gather nonessential property or wait for visible flames.
- Close gates as appropriate without locking out emergency responders.
- Report urgent access problems or neighbors needing help through approved emergency channels.