

COMMUNITY WILDFIRE EVACUATION ASSESSMENT

Baron and Squire Canyon

Evacuation Zone SLC-E251 | San Luis Obispo County, California

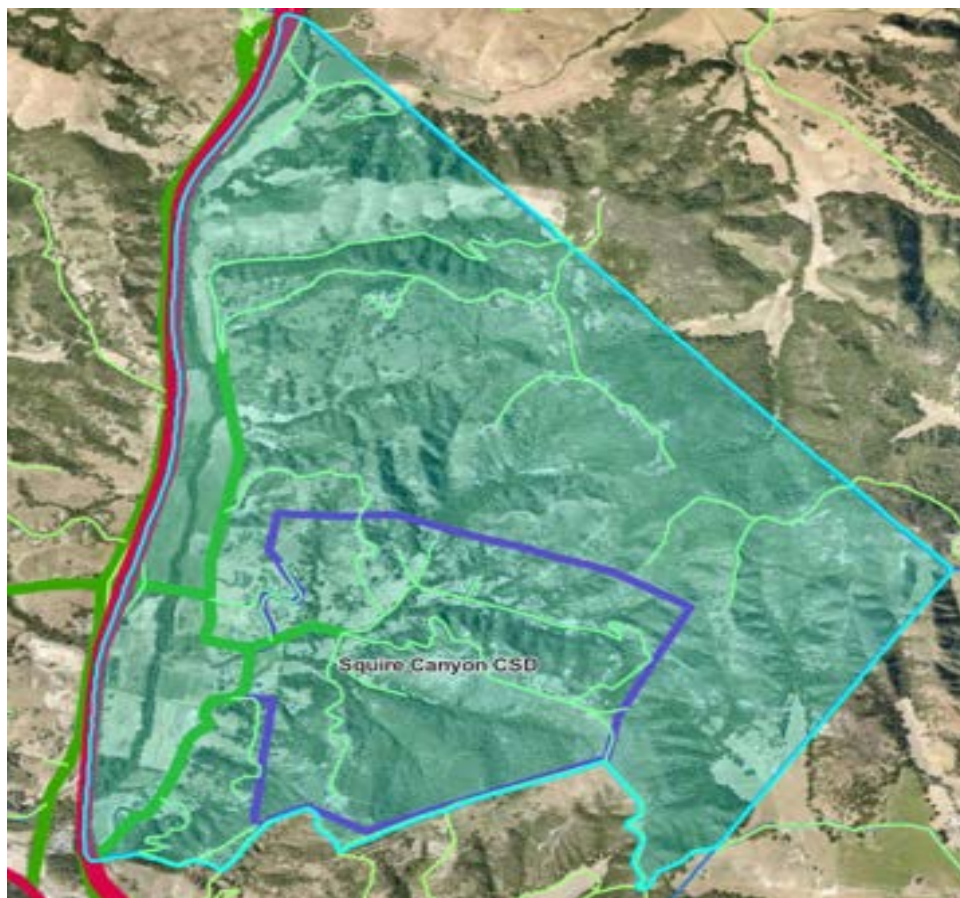


Figure 1. Supplied study-area exhibit. Highlighted area is SLC-E251



Summary

This analysis is limited to the San Luis Obispo County evacuation zone SLC-E251. The zone is a rural residential wildland-urban interface centered on Squire Canyon Road and Baron Canyon Ranch Road. Local streets collect onto a small number of west-side connections toward Monte Road, San Luis Bay Drive, and Highway 101. San Luis Bay Drive enters SLC-E251 and is an important connection between the zone, the surrounding Avila Valley roadway network, and Highway 101. The result is a network in which early departure and continuous outlet availability matter more than route choice inside the zone.

The supplied LADRLIS scenario models 149 evacuated addresses, 297 passenger vehicles. It reports a total clearance time of 1 hour 16 minutes, using a 1-hour response-time assumption and an 18-minute trip-time value.

Key findings

- The supplied fire-hazard map places nearly the entire depicted zone in the highest fire hazard severity zone.
- Highway 101 would be the primary route for evacuation with only two points of access for this zone making it critical to maintain those access points. The secondary evacuation routes are Monte rd, Baron Canyon Ranch rd, Squire Canyon rd, and a small portion of San Luis Bay dr.
- A review of CAL FIRE ignition records for 1999-2026 show that there are consistent ignition areas along the 101 and some of the community roadsides, however, the fire history in this zone shows little to no fire spread.
- The 2020 Avila Fire burned 445 acres at Avila Beach Drive and Highway 101. CAL FIRE lists its cause as human caused. It was outside SLC-E251 but illustrates fire and traffic disruption at the zone's regional gateway.

1. Study Area / Scope / Purpose

This assessment focuses only on evacuation zone SLC-E251. Its purpose is to describe evacuation demand, roadway dependence, wildfire exposure, fuel conditions, nearby fire history, ignition patterns, utility infrastructure, flood constraints, and modeled fire approaches. Areas outside the purple zone boundary are discussed only when they influence access, hazards, or the regional evacuation outlet.

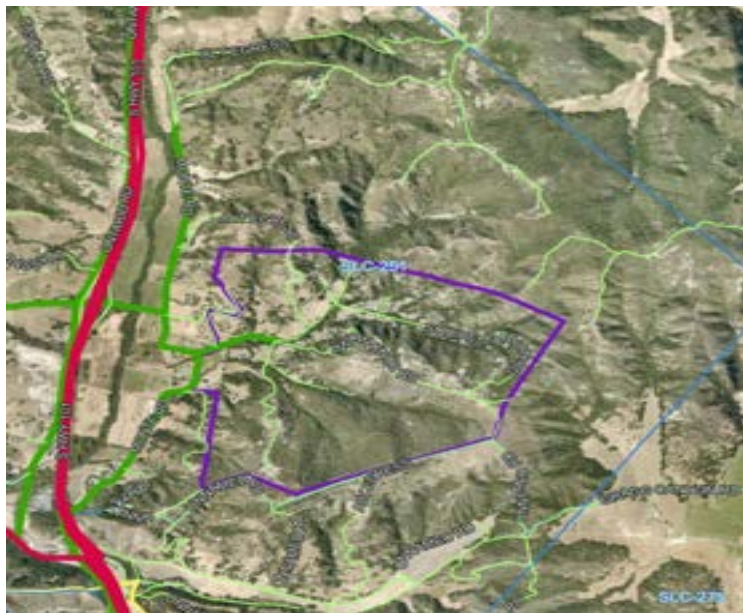


Figure 2. The picture depicted above shows the SLC-E251 zone with Primary road shown in red and Secondary roads in green.

2. Roadway Network

This Community is a mostly rural area with few roads going in and out of the zone. Highway 101 is the Primary road that should be used for evacuation. All roads connect to it and give the fastest evacuation for the community. The secondary roads are Squire Canyon rd, Baron Canyon Ranch rd, Monte rd, and parts of San Luis Bay dr.

Functional road hierarchy

Road / connection	Planning function	Primary concern
<u>Highway 101</u>	The fastest and most critical road to this zone.	Ramp control, background traffic, smoke, collision, and concurrent regional evacuation demand
Squire Canyon Road / Baron Canyon Ranch Road	Critical internal collectors and residential origin corridors.	Two-way resident departure, responder ingress, curves, vegetation, and localized blockage.
Local/private branches	Feed dispersed homes into Squire Canyon Road and Baron Canyon Ranch Road.	Gates, narrow widths, limited turnarounds, address visibility, and fire apparatus access.
Monte Road	Western feeder toward the Highway 101 corridor	A single closure can isolate or delay zone traffic.
San Luis Bay Drive	Enters SLC-E251 and provides an important zone connection toward Monte Road and Highway 101.	Intersection control, background traffic, smoke, collision, and queue spillback.

3. Evacuation Analysis

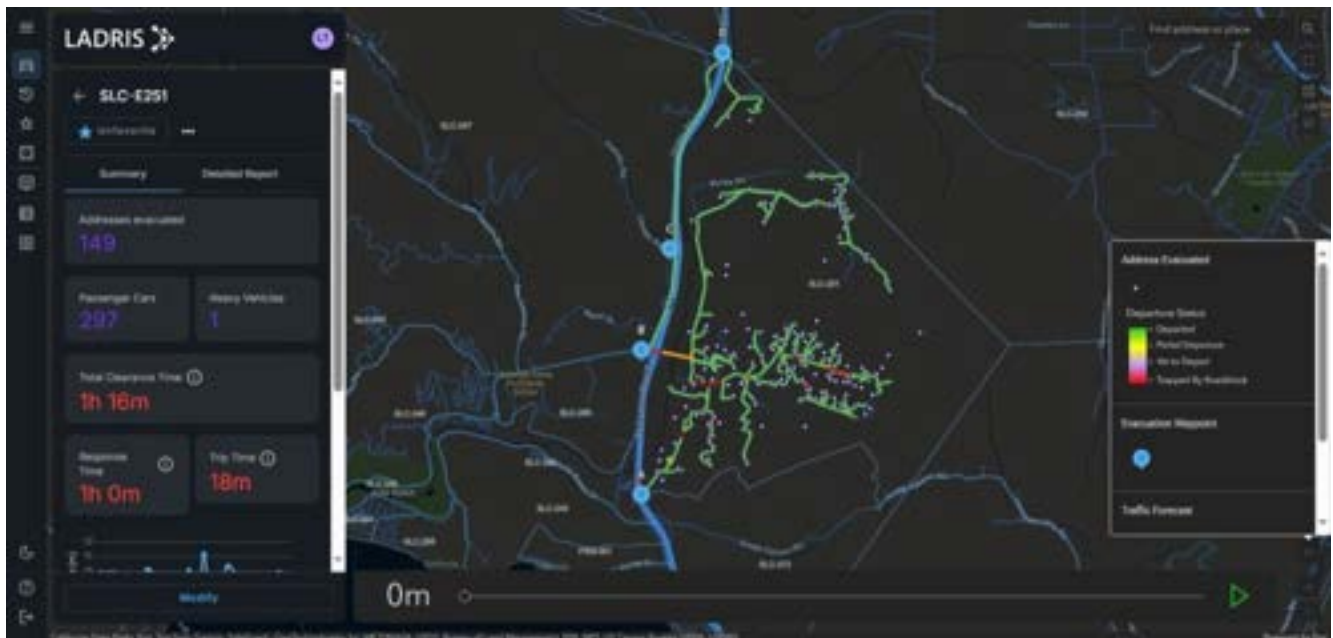


Figure 3. Supplied LADRIIS scenario for SLC-E251: 149 addresses, 297 passenger cars, 1 hr 16 min total clearance, 1 hr response time, and 18 min trip time.

This evacuation simulation was run with all waypoints of exit on Highway 101. If the 101 were to be blocked or unavailable, the time to fully evacuate would take longer than the stated 1hr 15mins from this simulation.

Scenario limitations

- The result should not be interpreted as the time required for every real event. Fire location, warning timing, smoke, roadway obstruction, and simultaneous regional traffic can materially change clearance.

4. Wildfire Severity Zone

The map provided below shows the SLC-E251 as it appears on the Fire Hazard Severity Zone map. It is considered to be almost entirely in the very high category with some of the surrounding area in the high or moderate zone.

Wildfire Hazard Severity

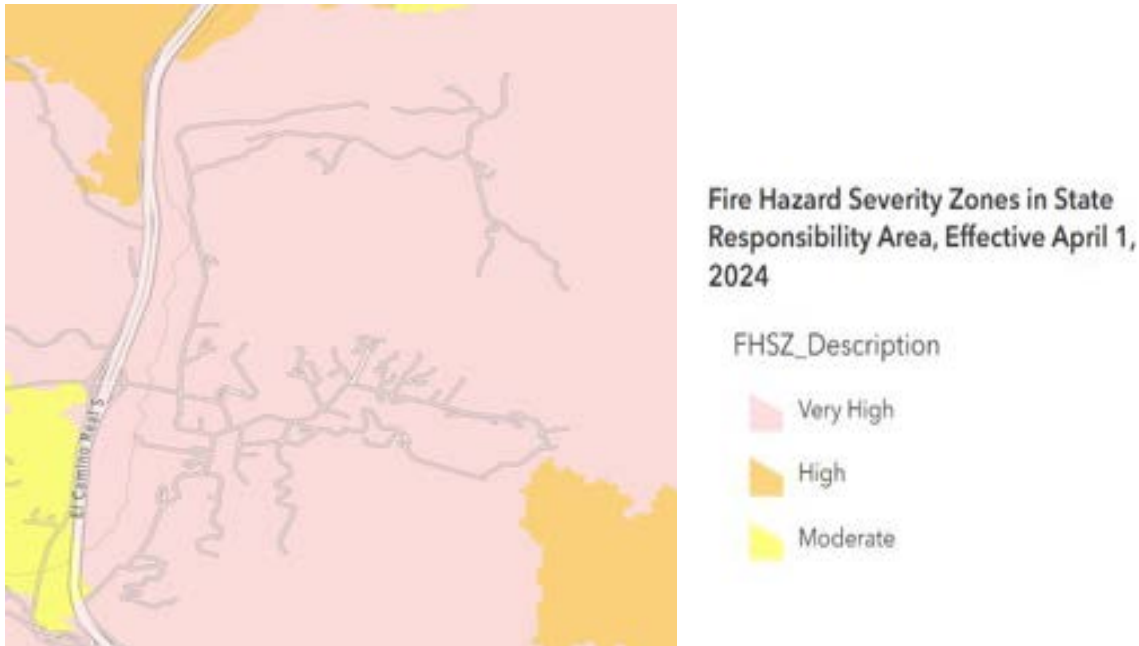


Figure 4. Supplied Fire Hazard Severity Zone exhibit with the 2025 State Fire Marshal legend. The depicted SLC-E251 road network lies predominantly within the Very High class.

- Steep canyon terrain can accelerate uphill fire spread and constrain suppression access.
- Grass, shrub, oak woodland, ornamental vegetation, and accumulated roadside fuels can support fast-moving surface fire and ember exposure.
- The rural street pattern concentrates both evacuating vehicles and incoming responders on the same narrow collectors.

5. Fuel Types

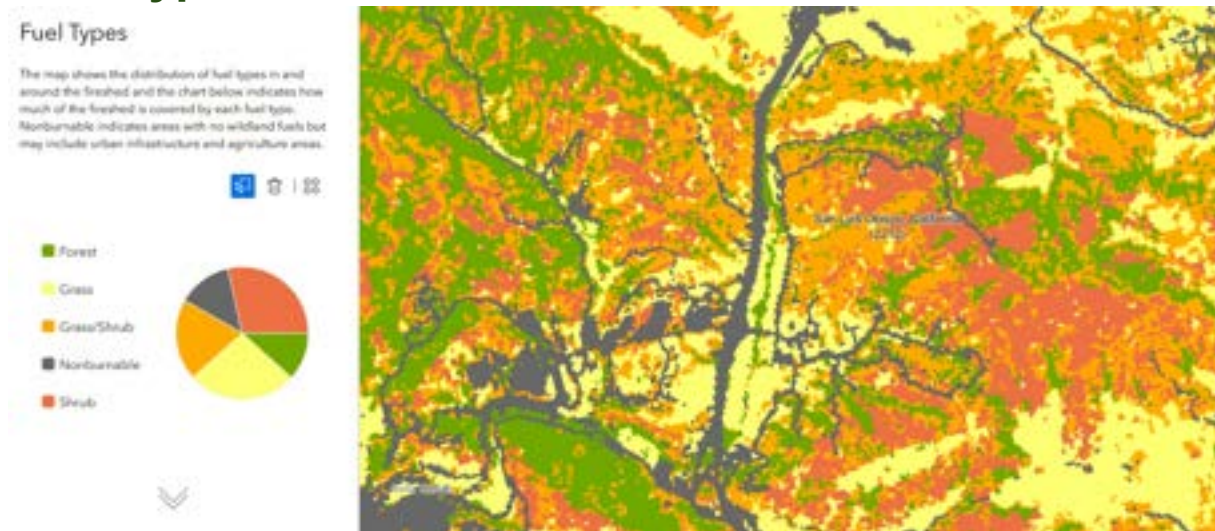


Figure 5. Supplied fuel-type exhibit for the Avila Valley fireshed. The mapped landscape is a mosaic of shrub, grass, grass/shrub, forest, and nonburnable areas.

The exhibit indicates that shrub and grass are the largest mapped fuel groups, followed by grass/shrub, forest, and nonburnable land. Shrub fuels can produce high flame lengths and sustained heat when dry; grass can ignite easily and carry fire rapidly under wind; and mixed grass/shrub fuels can combine fast

initial spread with greater flame intensity. Forest and wooded canyon patches can support ember production and longer-duration burning. Nonburnable roads and developed areas may interrupt surface fuels, but they do not eliminate ember exposure or roadside ignition risk.

Evacuation relevance

Fast-moving grass fire, sustained shrub fire, and ember production from wooded patches can occur within the same incident. Roadside treatment should therefore address both light flashy fuels and heavier vegetation capable of blocking narrow evacuation routes.

6. Fire History of the Zone

A review of the supplied zone exhibits and official incident sources did not establish a named historical fire perimeter inside SLC-E251. On the supplied historical-perimeter map, the 2020 Avila Fire is the nearest mapped named fire to SLC-E251. It was outside the zone. CAL FIRE cautions that historical perimeter records can be incomplete, particularly for small or older fires, so 'nearest' is a map-based planning conclusion rather than proof that no closer unrecorded fire occurred.

2020 Avila Fire



Figure 6. Supplied 2020 Avila Fire perimeter exhibit. The mapped perimeter lies near Avila Beach Drive and Highway 101, outside SLC-E251 but close to the zone's regional evacuation gateway.

CAL FIRE reports that the Avila Fire started at 4:44 p.m. on June 15, 2020, at Avila Beach Drive and Highway 101, east of Avila Beach. It burned 445 acres, was active for four days, and reached 100% containment at 7:27 a.m. on June 19. CAL FIRE lists the cause as Human Caused. The published ignition point is outside SLC-E251.

7. Ignition History

Road-oriented ignition pattern

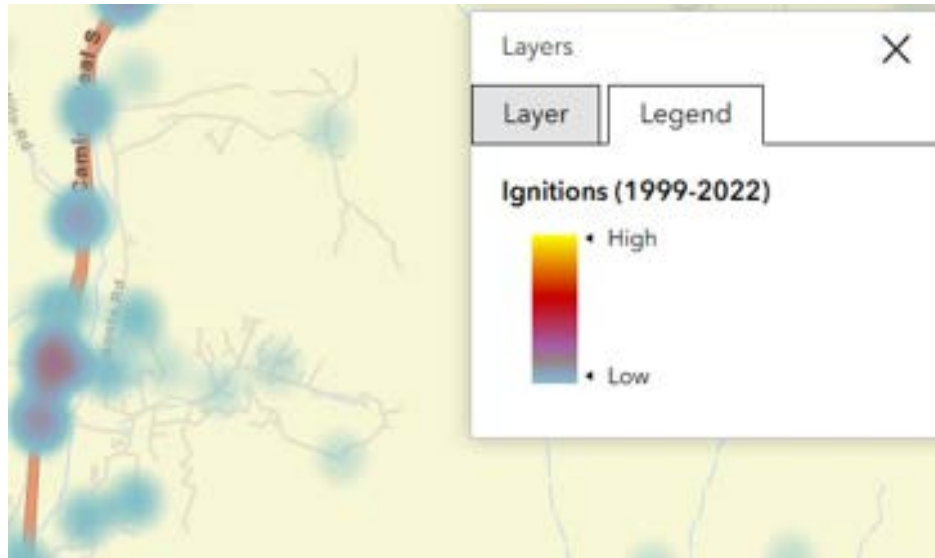


Figure 7. Supplied ignition-density exhibit for 1999-2022. Yellow/red indicates higher relative ignition density and blue indicates lower density.

The highest relative ignition colors follow Highway 101, with additional lower-density clusters near Monte road and developed roads. This supports a planning conclusion that ignitions in and near SLC-E251 tend to cluster along roadways, especially Highway 101. The image shows relative density rather than individual ignition counts and does not establish a cause.

Prevention priority

Treat roadside fuels, vehicle-fire preparedness, early detection, and defensible clearance around utility assets as one coordinated risk-reduction program along Highway 101, San Luis Bay Drive, Monte Road, Squire Canyon Road, and Baron Canyon Ranch Road.

8. Power Lines and Infrastructure

PG&E infrastructure in and near SLC-E251

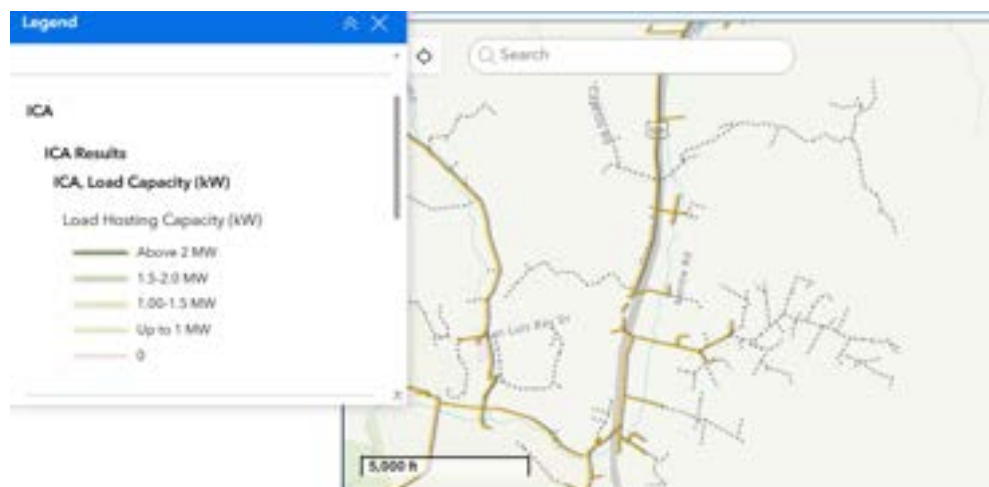


Figure 8. Supplied PG&E infrastructure exhibit. Colored linework follows Highway 101, San Luis Bay Drive, Monte Road, and branches serving the SLC-E251 roadway network.



Figure 9. Supplied topographic powerline exhibit. Two prominent transmission corridors cross the SLC-E251 area near Baron Canyon Ranch Road and Squire Canyon Road and continue west in the direction of Diablo Canyon Power Plant.

The supplied maps show both local PG&E electrical infrastructure and major overhead transmission corridors crossing the zone. Based on the supplied alignment map, the major corridors through SLC-E251 appear to form part of the transmission system leading toward Diablo Canyon; the exact circuit names, voltages, tower identifiers, and zone crossings should be confirmed by PG&E before operational use.

9. Fire Approach and Wind Simulations

The three supplied simulations illustrate how a fire could approach or spread toward SLC-E251 under 20 mph winds. They are planning scenarios, not predictions of a specific incident. Actual fire behavior will depend on ignition location, fuel moisture, weather, slope, suppression actions, and the model settings used to create each image.

Wind and terrain pattern

The zone's commonly observed wind pattern tends to be from the southwest or northwest. These winds can channel through the north-south canyon alongside Highway 101, concentrating wind, smoke, embers, and fire spread near the same transportation corridor used for evacuation. Incident-specific observations and forecasts should always control operational decisions.

Scenario 1 - Highway 101 ignition with eastward wind

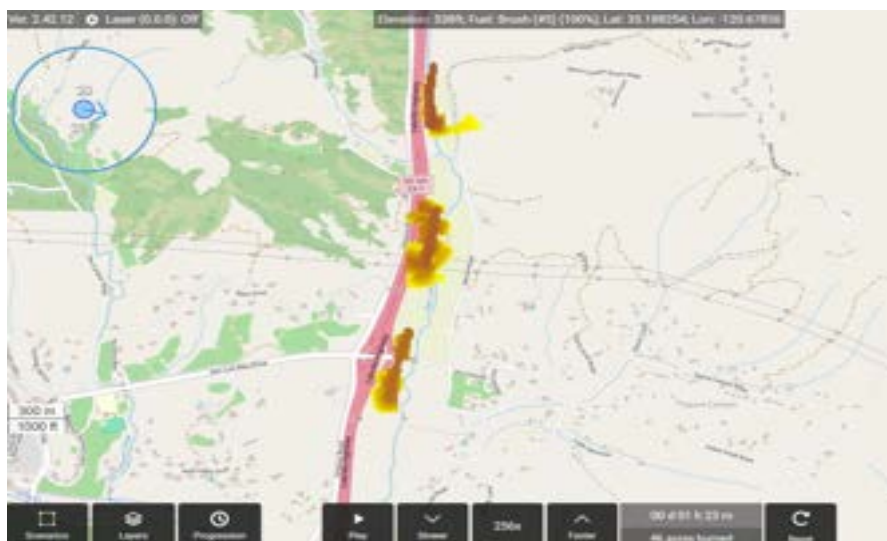


Figure 11. Simulated fire beginning along Highway 101 with a 20 mph wind blowing east.

- This scenario places the ignition along the 101 near Baron Canyon Ranch rd, Monte rd, Squire Canyon rd, and San Luis Bay rd. The simulation shows the fire growth is about 46 acres within 1 hour and 23 minutes with 20mph winds blowing to the east.
- Eastward spread could threaten residences while smoke, apparatus staging, or fire activity affects Highway 101, San Luis Bay Drive, and connections toward Monte Road.

Scenario 2 - Fire approaching from the north



Figure 12. Simulated fire approaching SLC-E251 from the north under a 20 mph southwest wind pattern.

- This scenario places the ignition coming from the north with 20 mph south-western winds which is a common wind pattern for this zone. 49 acres burn in 1 hour and 24 minutes.
- A southwest wind can align with local terrain and move fire, smoke, and embers toward Baron Canyon Ranch Road.
- Baron Canyon has a, often dry, creek that acts as a natural barrier for the community. Abnormal winds and fire intensity increases could easily cause it to jump and reach the community however.

Scenario 3 - Fire approaching from the south

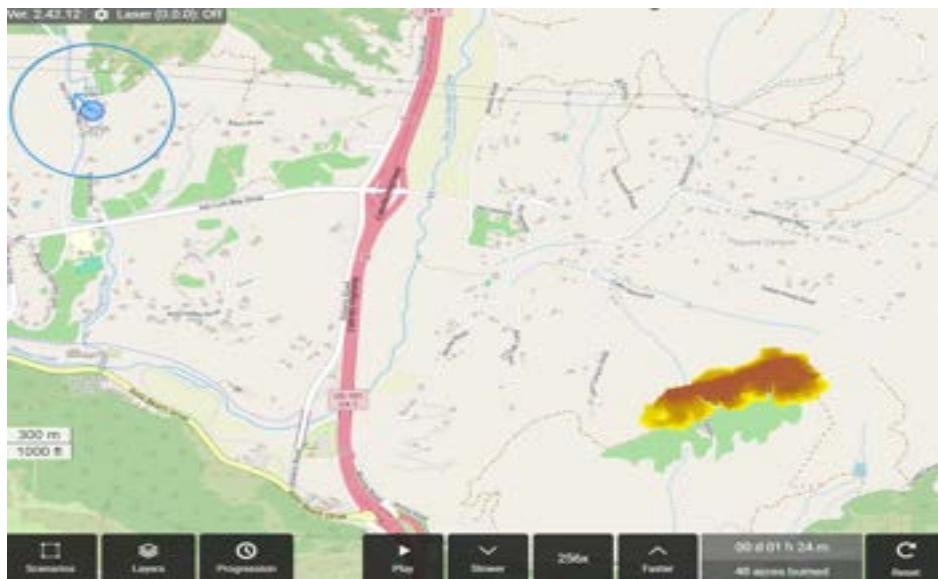


Figure 13. Simulated fire approaching SLC-E251 from the south under a 20 mph northwest wind pattern.

- This scenario places the ignition coming from the south with a 20mph north-western wind which is also common for this zone. The simulation shows that in 1 hour and 24 minutes about 48 acres will burn.

- This burn pattern was slow and more east to west despite having winds blowing north providing some safety for this zone.
- Main concern would be if fire reaches the 101 it could pose a threat for a smooth evacuation.

Evacuation implication

The three scenarios approach the zone from different directions, but each can affect the Highway 101 canyon corridor or the limited roads connecting SLC-E251 to it. Decision points should account for fire position, wind alignment, spotting potential, visibility, and outlet conditions - not distance from residences alone.

10. Operational Evacuation Plan

Agency approval required

The thresholds and assignments below are planning recommendations. San Luis Obispo County public-safety agencies must approve them before operational use. Incident command may change any action based on current conditions.

A. Evacuation Decision and Action Matrix

Level	Proposed Planning Threshold	Require Action	Lead
Monitoring	Red Flag conditions or a reported fire within the local approach area	Verify fire behavior, route status, staffing, and public-information readiness.	Fire / County OES
Warning	Projected route impact within two hours, or one Highway 101 access point is degraded.	Issue an Evacuation Warning; begin early movement of people needing assistance and livestock; deploy traffic staff.	Sheriff / County OES
Order	Projected route impact within 90 minutes; active fire or dense smoke reaches a collector; or both Highway 101 access points are threatened.	Issue an Evacuation Order with current route direction and closures. Stop entry except authorized response resources.	Sheriff / Incident Command
Route Failure	Primary access is unusable or expected to become unusable before clearance is complete	Close the route and issue one approved reroute or protective-action message. Use only preapproved emergency access or refuge locations.	Incident Command

B. Chokepoints & Traffic Control



- The areas on this Ladris run that are highlighted red and orange are all the chokepoints in this zone if it were to be evacuated. All residents will be coming from Baron Canyon Ranch rd and Squire Canyon rd towards Highway 101. Emergency responders should be given tasks to help the flow of evacuation.

Organization	Preassigned Function
Law Enforcement	Closures, traffic direction, evacuation sweeps, and preventing unauthorized entry.
Fire/ Incident Command	Route safety, fire arrival estimate, responder ingress, and protective action decisions.
Public Works/ Cal Trans	Signs, barriers, debris removal, road status, and Highway 101 connection.
PG&E	Electrical hazard isolation and access coordination near damaged facilities

C. Warning Disruption

Send official messages simultaneously through available county alerting systems, Wireless Emergency Alerts, emergency broadcast channels, agency websites, and social media. If cellular or internet service fails, use law-enforcement public-address systems, door-to-door notification, local radio, and assigned neighborhood contact teams. Every message must state:

- Zone SLC-E251 and the affected geographic area.
- Evacuation Warning, Evacuation Order, or route closure.
- The currently approved travel direction and roads that are closed.
- Instructions for people requiring transportation and for animal movement.
- Issuing agency, issue time, and the next update source.

11. Recommended Community Actions

- Enroll residents in a county wide alert program
- Have the evacuation zones and routes known across the community and any backup routes out if main exits are compromised
- Educate the community on how to become a firewise community
- Educate residents on how to follow the Zone 0 rules for their individual homes Have residents with gateways and private roads reach out and offer their roads to public for emergency purposes
- Coordinate with the local fire jurisdiction to request fuel reduction projects such as chipping events or fuel break

12. Evacuation Readiness Checklist

- ☐ Know your official evacuation zone and sign up for local emergency alerts
- ☐ Maintain go-bags, medications, important documents, sturdy shoes, masks, flashlights, and vehicle chargers.
- ☐ Know at least two ways to reach San Luis Bay Drive, Monte Road, and Highway 101 when incident officials identify them as usable.
- ☐ Plan to evacuate in one car if possible. Keep vehicles fueled or charged; park facing outward when wildfire conditions are elevated.
- ☐ Plan in advance for children, older adults, mobility needs, pets, livestock, and trailers.
- ☐ Practice opening gates manually and confirm that address signs are visible in smoke or darkness Leave early when directed and never enter a smoke-covered or closed road.
- ☐ Review the household plan annually and after any change in roads, gates, utilities, or occupants.

13. Conclusion

Baron and Squire Canyon's evacuation readiness depends heavily on a limited and interconnected roadway network. Highway 101 should serve as the primary evacuation route within Zone SLC-E251. The secondary roads are Baron Canyon Ranch rd, Squire Canyon rd, Monte rd, and San Luis Bay rd. Because nearly all evacuation traffic must eventually reach Highway 101 through only a few connections, a wildfire, traffic collision, fallen tree, utility failure, or road closure could quickly restrict the community's ability to evacuate.

Although documented wildfire activity within SLC-E251 has been relatively limited over the years, the absence of frequent fires should not be interpreted as an absence of risk. Much of the zone is located within a high fire-hazard landscape where steep canyon terrain, dry grass, dense shrubs, wooded areas, and wind can cause conditions to change rapidly. A fire approaching from Highway 101 or spreading through the surrounding canyons could threaten residences and evacuation routes with little warning. The community should continue participating in vegetation management and fuel-reduction projects, particularly along roads, utility corridors, private driveways, and other locations where burning vegetation or falling trees could block evacuation.

The LADRIS evacuation simulation evaluated 149 addresses, 297 passenger vehicles, for an estimated total of 298 evacuating vehicles. The modeled scenario produced a total clearance time of approximately 1 hour and 16 minutes, including a one-hour response and preparation period and an estimated 18-minute travel time. The fire simulations show that if the community was evacuated that everyone should be able to exit before any fire reaches most of the residents.

Residents should plan to evacuate early when directed so they are not trapped by the very limited number of evacuation routes serving the zone. The community should evaluate potential alternate and emergency-access routes, while recognizing that those routes may not always be available or officially approved during an incident. Individual property owners should maintain defensible space, reduce vegetation around homes and driveways, keep gates accessible during emergencies, and prepare household evacuation plans for family members, pets, livestock, and vehicles. By continuing fuel-reduction work, improving evacuation preparedness, and working together toward recognition as a Firewise Community, residents can strengthen the entire community's ability to prepare for, respond to, and recover from wildfire.

Primary source materials

1. CAL FIRE : start date/time, location, 445 acres, containment date, and cause listed as under investigation.
2. California Public Utilities Commission : CALFIRE ignition datasets for 1999-2026.
3. CAL FIRE Fire and Resource Assessment Program : statewide perimeter source and completeness cautions.
4. County of San Luis Obispo, : county fire environment, fire history, ignition-pattern findings, and evacuation/egress priorities.
5. User-supplied exhibits: study area, zone map, hazard and flood maps, LADRIS screenshot, fire simulations, fuel types, ignition density. PG&E infrastructure, transmission corridors, and 2020 Avila Fire perimeter.



