



# Communities at Risk from Wildfires

## Review of project and ingress/egress mapping

Hawaiian Electric Wildfire Safety Working Group – Ingress/Egress  
September 24, 2025



# ABOUT



**HAWAI'I WILDFIRE  
MANAGEMENT  
ORGANIZATION**

## 25 years

Wildfire experience and service in Hawai'i

## Hub Organization

For wildfire education, information, planning, mitigation, and collaboration.

## 100%

Dependent on competitive grants and donations





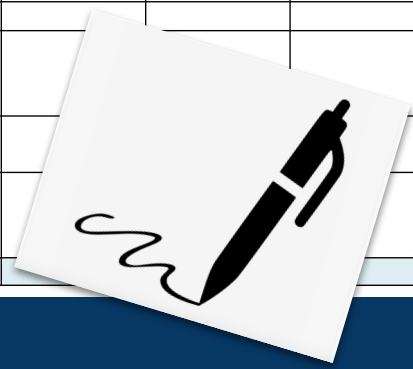
## Subdivision Hazard Rating

Rating Element	Low (Score =1)	Moderate (Score=2)	High (Score=3)
Ingress/ Egress	Multiple entrances and exits are well equipped for fire trucks with turnarounds.	Limited access routes. 2 ways in and 2 ways out. Moderate grades.	Narrow, dead end roads or 1 way in, 1 way out. Steep grades
Road Maintenance	Wide loop roads that are maintained, paved or solid surface with shoulders.	Roads maintained. Some narrow two lane roads with no shoulders.	Narrow and or single lane, minimally maintained, no shoulders.
Road Width	24'+ wide. Wide roads with drivable shoulders and good visibility allow two-way traffic. Streets in the downtown area are the widest streets in town. Interior streets are smaller and are easily blocked by parked vehicles.	20'-24' wide. Medium width roads with drivable shoulders and good visibility, support evacuation and emergency response time.	Less than 20 feet wide. Narrow roads coupled with poor visibility limit evacuation and emergency response. Traffic problems will occur. Entrapment is likely.
All-season Road Condition	Flat or gently sloping surfaced roads can support high volumes of large fire equipment.	Surfaced road with 5%+ grade or non-surfaced road with <5% grade that can still support fire equipment. Road and right-of-way <u>maintenances</u> is essential for access and visibility.	Narrow, steep, or non-surfaced roads are difficult to access. One-way traffic is a hazard. Overhanging brush may damage fire equipment. Jeep trails and seasonal roads limit 2wd emergency response equipment.
Fire Service Access	Adequate turnaround space is available for large fire equipment.	<300' with no turnaround. Short or dead-end streets will become crowded with homeowner's vehicles.	300'+ with no turnaround. Long dead-end streets will become crowded with vehicles. Two-way visibility is an issue.
Street signs	Present. Most are at least 4' in size and are reflectorized.	Present and reflectorized with some exceptions.	Not present.

Hazard levels: L=1 M= 2 H=3 according to key	Area	Area	Area Name	Area Name
<b>Subdivision Hazard Rating</b>				
	Rate each hazard per area in the columns below			
1. Ingress/ Egress	2			
2. Road Maintenance	2			
3. Road Width	1			
4. All-season road condition	1			
5. Fire Service access	2			
6. Street signs	3			
7. Structure density	2			
8. Home setbacks				
9. Unmanaged, untended, undeveloped lands				
10. Private landowner actions				
11. Proximity of subdivision to wildland areas				
<b>SUBDIVISION SUBTOTAL</b>				

Sunset Beach

Pupukea





# 2025 Communities at Risk Map Update

Based on combination of:

- Current GIS data layers from various sources (wind, precipitation, etc.)
- Updated field data from drive around collection (for what is not available/existing)
- \*\*\*New data layer being created for ingress/egress to address one way in/out
- **Quantify ingress/egress risk**
- **Provide ingress/egress data and products for risk analysis and mitigation**
- **Important piece of updated Communities at Risk Maps/Ratings**

# 2025 Communities at Risk Map Update

- Ingest & Update relevant GIS data
- Create Ingress/Egress data layers
- Perform data analysis
  - Number ingress/egress routes
  - Distance
  - Other barriers (gates, closures, etc)
- Evaluate at multiple scales
  - Neighborhood
  - Community
  - Region
  - District
  - County
- Anticipated completion Dec 2025



# 2025 CAR Map Update

- Create Network Dataset w/ transportation data
- Network analysis
- Primary/secondary/tertiary nodes with main transportation network
- Barriers
- Evaluate access levels
- Scale important!
- Update ingress/egress layers and data



The time to commit to a  
wildfire-ready and wildfire-resilient  
future is here.

*Mahalo nui loa*



**HWMO thanks Hawaiian Electric Co.  
for funding this important project.**



Artist: Gianna Groves