### Community Hazard Assessments County of Maui East Maui

### Coordinated and Developed by:

Hawaii Wildfire Management Organization, a 501(c)3 nonprofit organization dedicated to protecting Hawaii's communities and natural resources from wildfire.



### In Collaboration with:

Hawaii Fire Department and State of Hawaii Department of Land and Natural Resources Division of Forestry and Wildlife





Disclaimer: The HWMO Hawaii Hazard Assessment Maps have been prepared to increase awareness on potential wildfire threats to communities across the Hawaiian islands. However, HWMO does not guarantee a house will survive a wildfire event and having a low hazard rating does not "fire proof" an individual house or a given area or subdivision; instead, reducing the hazard rating lowers wildfire threats and improves the potential for wildfire suppression to be successful.

It is important to recognize that the HWMO hazard assessment process is a qualitative ranking system that arbitrarily ranks different factors perceived to contribute to the threat of wildfires at the wildland-urban interface (WUI). The assessment does not include the full range of realistic fire and ember exposures at the WUI and offers no actual quantification of the potential exposure of homes to the ignition, spread, and intensity of wildfires or embers produced by wildfires. Furthermore, the HWMO Wildfire Hazard Assessment is a community-level assessment that produces a rating based on a select number of houses in a given area or subdivision. While such an approach gives an indication of the general wildfire risk for a given area, the actual risk of individual homes can deviate from this assessment based on the characteristics of the site around an individual home.

# Subdivision Rating

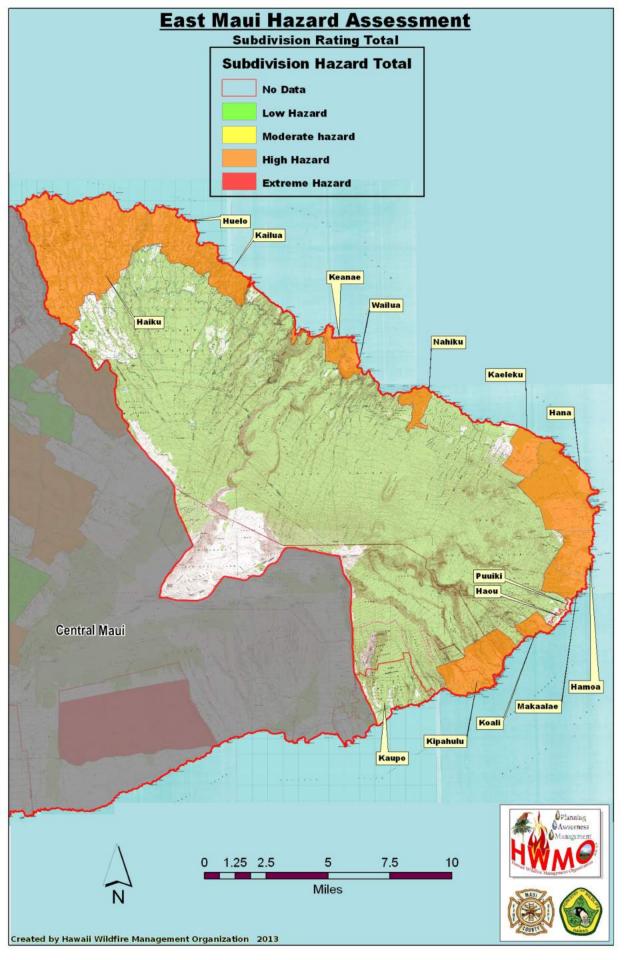
### HWMO Wildfire Hazard Assessment Key

### **Subdivision Hazard Rating**

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Rating Element	Low	Moderate	High
	(Score =1)	(Score=2)	(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 maintenances 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.
Structure Density	Low structure density and low ignition probability.	Density and ignition probability are both moderate, or one is high but is balanced by the other being low.	Dense structures with high ignition probability.
Home Setbacks	Majority (50%+) of homes are set back from property lines and slopes by at least 30 feet.	10-50% of homes have defensible setbacks from property lines and sloped areas.	<10% of homes have defensible setbacks from property lines. Buildings located close to dangerous topographic features such as the tops of slopes.

### HWMO Wildfire Hazard Assessment Key

Unmanaged, untended, undeveloped lands	Few to no weedy vacant lots. Few to no undeveloped unmaintained vegetated areas or corridors between homes. Less than 10% of lots remain undeveloped and pose an additional wildfire hazard due to lack of maintenance and/or restricted access.	Some isolated unmaintained lots or undeveloped vegetated areas within subdivision. 10-50% of lots have not been developed and pose an additional wildfire hazard due to lack of maintenance and/or restricted access. Hazard ranking is dependent on ignition risk, size of area, and fuel type.	Abundant unmanaged, vegetated corridors and vacant lots throughout community. Agricultural lands irregularly maintained leaving dry weedy species causing increased ignition risk. Numerous ladder fuels and high risk fuels. Greater than 75% of lots have not been developed or Separation of adjacent structures that can contribute to fire spread
Private landowner actions / Firewise landscaping and defensible space	70% of homes have improved survivable space around property, reduced ignition risk, hardened homes, and no ladder fuels.	30-70% homes have improved survivable space around property and well-maintained landscapes.	<30% of homes have defensible space, hardened home features, or Firewise landscaping
Proximity of subdivision to wildland areas	Wildland areas share no borders with the subdivision. Little to no undeveloped and unmaintained vegetated areas within community. Little to no ladder fuels along community boundaries.	Wildland areas adjoin subdivision on 1-2 sides.	Wildland areas surround subdivision on at least 3 sides.



### East Maui Hazard Assessment Subdivision Rating - Ingress/Egress

### INGRESS / EGRESS MODERATE HAZARD

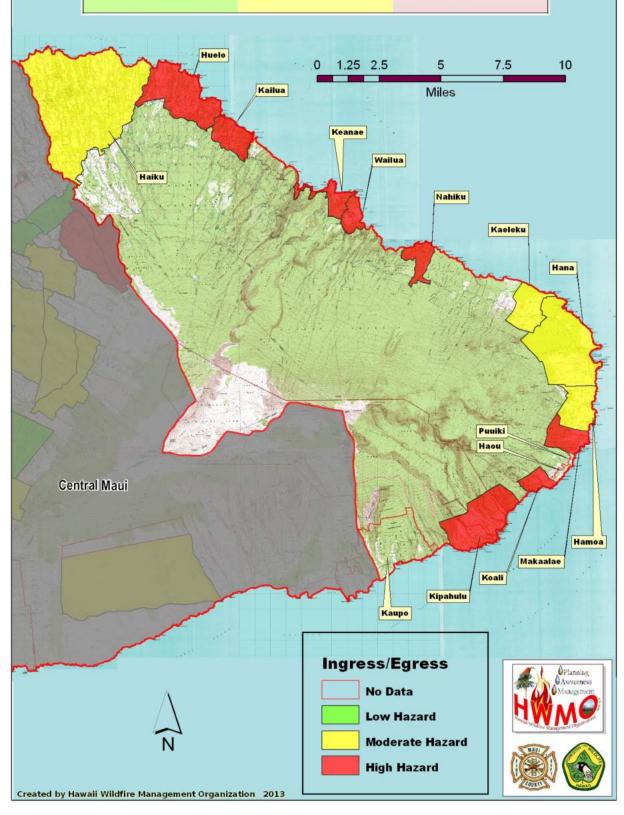
Multiple entrances and exits are well equipped for fire trucks with turnarounds. Moderate grades.

Low HAZARD

Limited access routes. Two ways in and two ways out.

### **HIGH HAZARD**

Narrow, dead end roads or one way in, One way out. Steep grades.



**Subdivision Rating - Road Maintenance** 

### ROAD MAINTENANCE

### LOW HAZARD

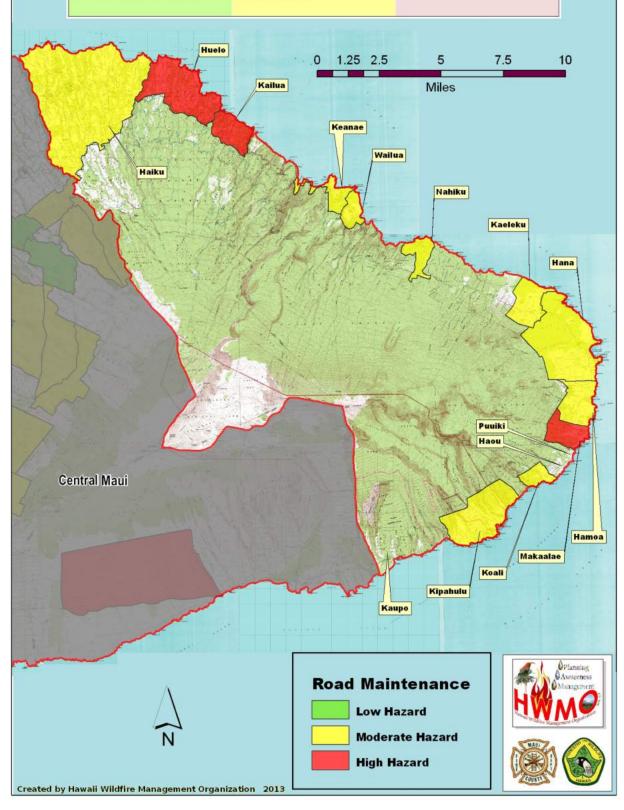
Wide loop roads that are maintained, paved or solid surface with shoulders.

### MODERATE HAZARD

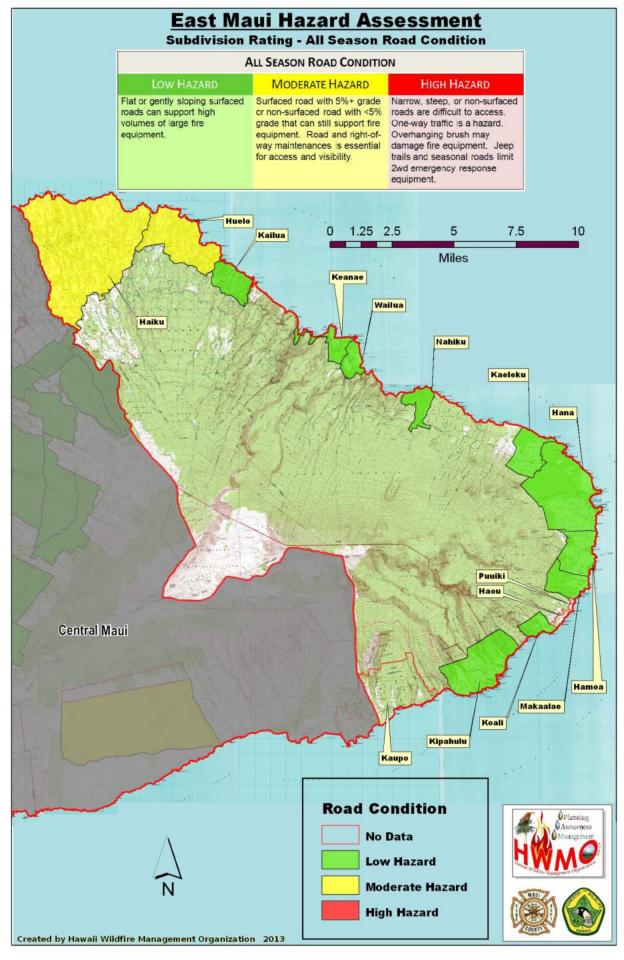
Roads maintained. Some narrow two lane roads with no shoulders.

### HIGH HAZARD

Narrow and or single lane, minimally maintained, no shoulders.



### East Maui Hazard Assessment Subdivision Rating - Road Width **ROAD WIDTH** MODERATE HAZARD HIGH HAZARD 24'+ wide. 20'-24' wide. Less than 20 feet wide. Wide roads with drivable Medium width roads with Narrow roads coupled with shoulders and good visibility drivable shoulders and good poor visibility limit evacuation allow two-way traffic. Streets visibility, support evacuation and emergency response. Traffic problems will occur. in the downtown area are the and emergency response time. widest streets in town. Interior Entrapment is likely. streets are smaller and are easily blocked by parked vehicles. 1.25 2.5 5 7.5 10 Huelo Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo **Road Width** Planning No Data **Low Hazard Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

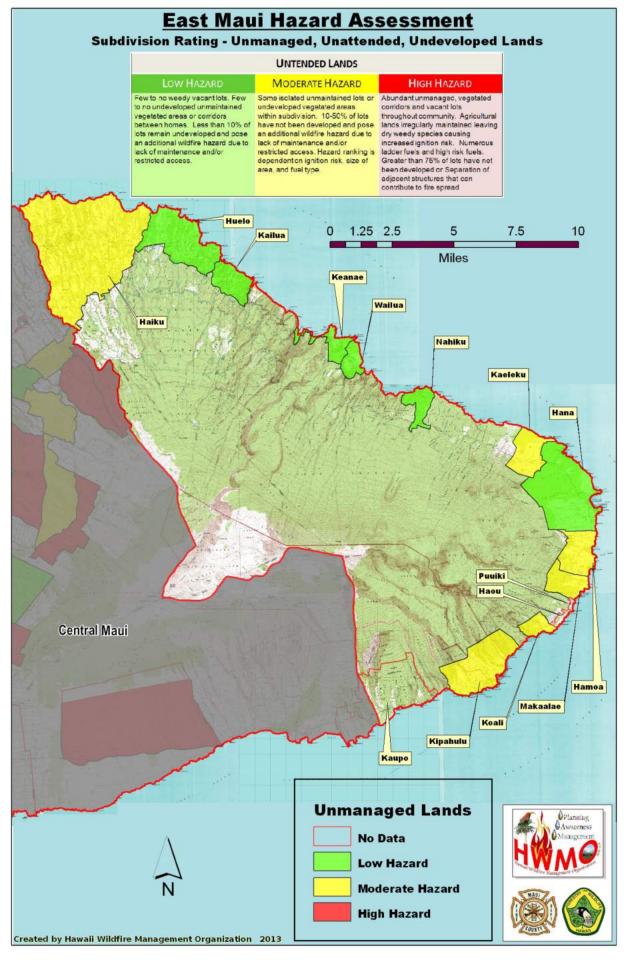


### **East Maui Hazard Assessment Subdivision Rating - Fire Service Access** FIRE SERVICE ACCESS LOW HAZARD MODERATE HAZARD HIGH HAZARD Adequate turnaround <300' with no turnaround. 300'+ with no turnaround. Short or dead-end streets space is available for large Long dead-end streets will fire equipment. will become crowded with become crowded with homeowner's vehicles. vehicles. Two-way visibility is an issue. Huelo 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo **Fire Service Access** No Data Low Hazard **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

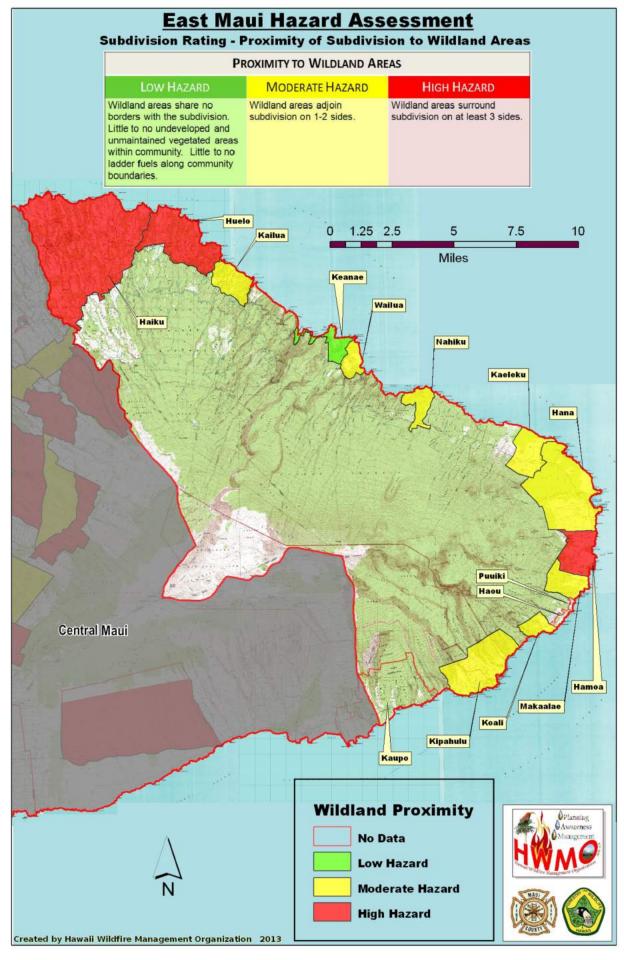
### **East Maui Hazard Assessment Subdivision Rating - Street Signs** STREET SIGNS Low Hazard MODERATE HAZARD HIGH HAZARD Present. Most are at least Present and reflectorized Not present. 4' in size and are with some exceptions. reflectorized. Huelo 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo **Street Signs** No Data Low Hazard **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

### **East Maui Hazard Assessment Subdivision Rating - Structure Density** STRUCTURE DENSITY LOW HAZARD MODERATE HAZARD **HIGH HAZARD** Low structure density and low Density and ignition probability Dense structures with high ignition probability. are both moderate, or one is ignition probability. high but is balanced by the other being low. Huelo 1.25 2.5 5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo **Structure Density** No Data Low Hazard **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

### **East Maui Hazard Assessment Subdivision Rating - Home Setbacks** HOME SETBACKS Low Hazard MODERATE HAZARD HIGH HAZARD Majority (50%+) of homes are <10% of homes have 10-50% of homes have set back from property lines defensible setbacks from defensible setbacks from and slopes by at least 30 feet. property lines and sloped property lines. Buildings located close to dangerous topographic features such as the tops of slopes. Huelo 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo **Home Setbacks** Planning No Data Low Hazard **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013



### **East Maui Hazard Assessment** Subdivision Rating - Private Landowner Firewise Landscaping & Defensible Space PRIVATE LANDOWNER FIREWISE LANDSCAPING/ DEFENSIBLE SPACE LOW HAZARD MODERATE HAZARD HIGH HAZARD 70% of homes have improved 30-70% homes have improved <30% of homes have defensible survivable space around property, survivable space around property space, hardened home features, or reduced ignition risk, hardened and well-maintained landscapes. Firewise landscaping homes, and no ladder fuels. Huelo 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo **Landowner Actions** Planning No Data Low Hazard **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

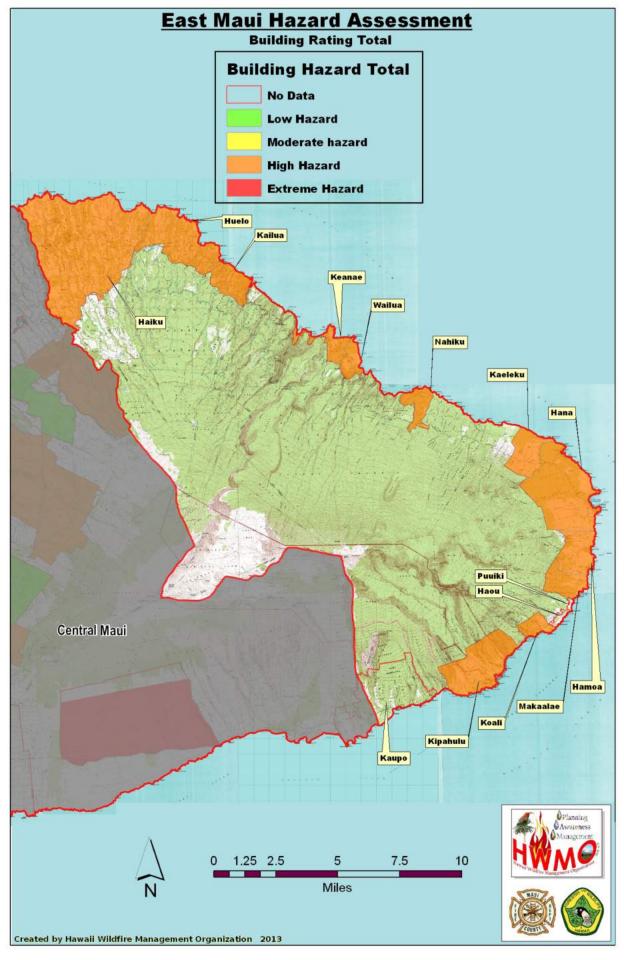


## **Building Rating**

### HWMO Wildfire Hazard Assessment Key

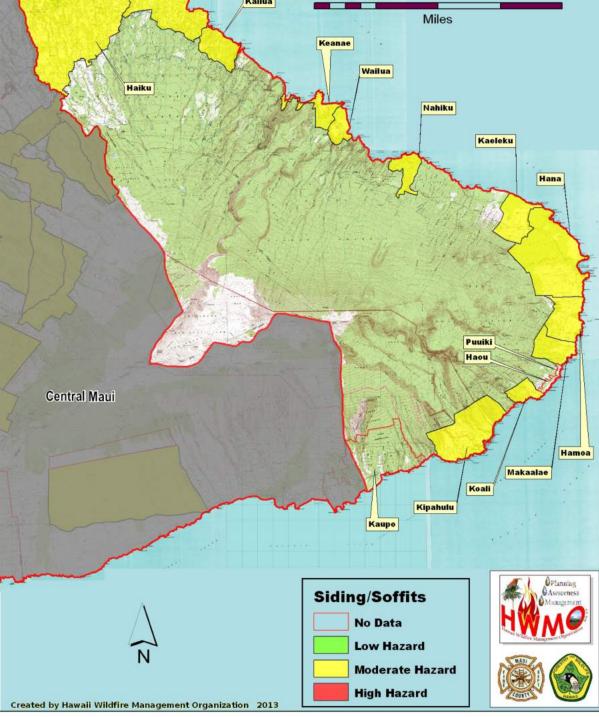
### **Building Hazard Rating**

Rating Element	Low (1)	Moderate (2)	High (3)
Roofing Assembly	Greater than 75% of homes have Class A roofs (metal, asphalt, or fiberglass roofing material).	50-75% have Class A roofing.	Less than 50% of homes have Class A roofing.
Siding/ Soffits	Greater than 75% of homes have fire resistant siding and soffits.	50-75% of homes have fire resistant siding and soffits.	Less than 50% of homes have fire resistant siding and soffits.
Under-skirting around decks, lanais, post-and- pier structures.	Greater than 75% of homes have the equivalent of fine non-combustible mesh screening to protect underneath from flying embers and ignition	50-75% of homes have the equivalent of fine non-combustible mesh screening	Less than 50% of homes have the equivalent of fine non- combustible mesh screening
Utilities Placement- Gas and Electric	All underground or none.	One underground, one above ground.	Both above ground.
Structural Ignitability	Greater than 75% or houses are spaced with cleared boundaries. Flammables and combustible materials stored according to firesafe principles.	50-75% of homes store combustibles properly.	Less than 50% of homes store combustibles properly. Houses close to each other.



### **East Maui Hazard Assessment Building Rating - Roofing Assembly** ROOFING ASSEMBLY LOW HAZARD MODERATE HAZARD HIGH HAZARD Greater than 75% of homes 50-75% have Class A roofing. Less than 50% of homes have have Class A roofs (metal, Class A roofing. asphalt, or fiberglass roofing material). Huelo 0 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo Planning **Roofing Assembly** No Data Low Hazard **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

### **East Maui Hazard Assessment Building Rating - Siding/Soffits** SIDING AND SOFFITS LOW HAZARD MODERATE HAZARD HIGH HAZARD Greater than 75% of homes Less than 50% of homes have 50-75% of homes have fire have fire resistant siding and fire resistant siding and soffits. resistant siding and soffits. soffits. Huelo 0 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku



### **East Maui Hazard Assessment Building Rating - Under-Skirting Around Decks, Ianais, Post & Pier Structures UNDERSKIRTING AROUND DECKS/ POST-AND-PIER STRUCTURES** Low Hazard MODERATE HAZARD HIGH HAZARD Greater than 75% of homes Less than 50% of homes have 50-75% of homes have the have the equivalent of fine equivalent of fine nonthe equivalent of fine noncombustible mesh screening. non-combustible mesh combustible mesh screening. screening to protect underneath from flying embers and ignition. Huelo 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo **Underskirting** No Data Low Hazard **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

**Building Rating - Utilities Placement; Gas & Electric** 

### **UTILITIES PLACEMENT- GAS AND ELECTRIC**

LOW HAZARD

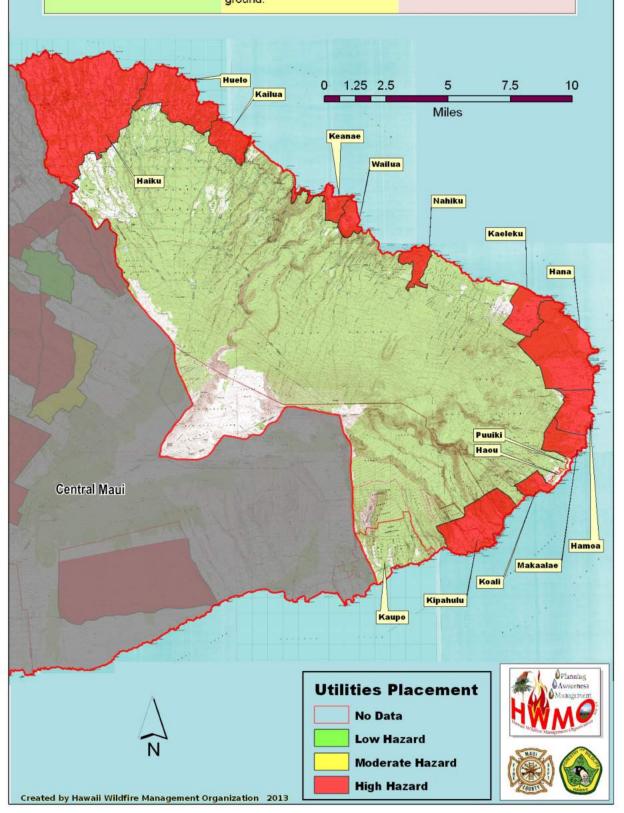
MODERATE HAZARD

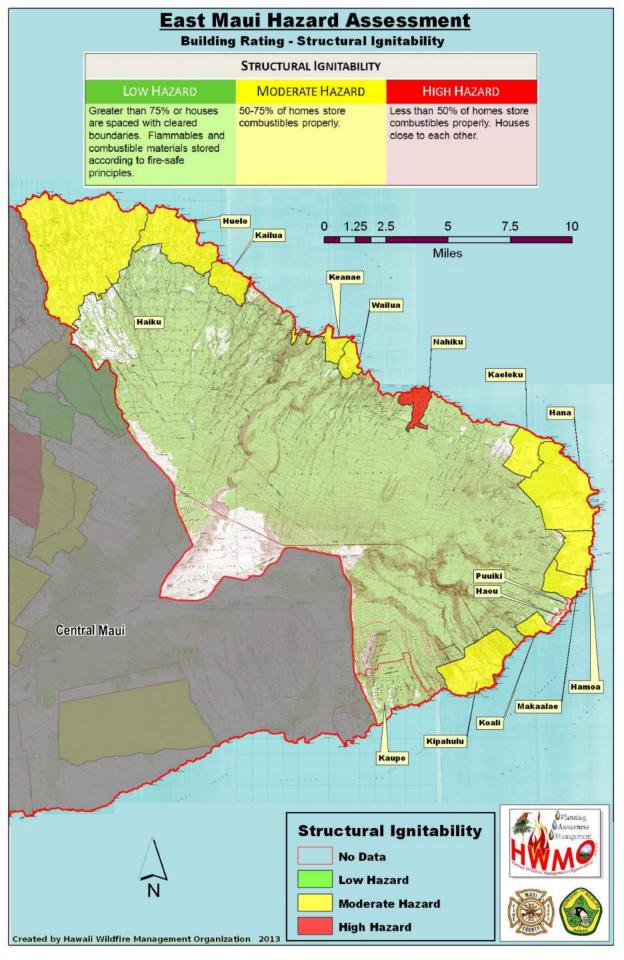
HIGH HAZARD

All underground or none.

One underground, one above ground.

Both above ground.



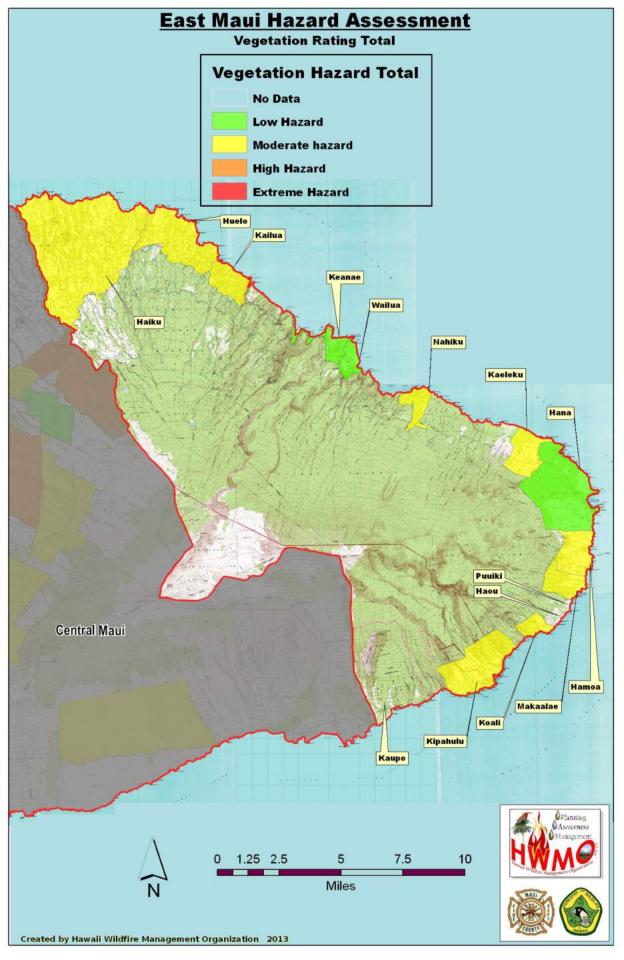


Vegetation Rating

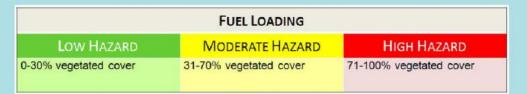
### HWMO Wildfire Hazard Assessment Key

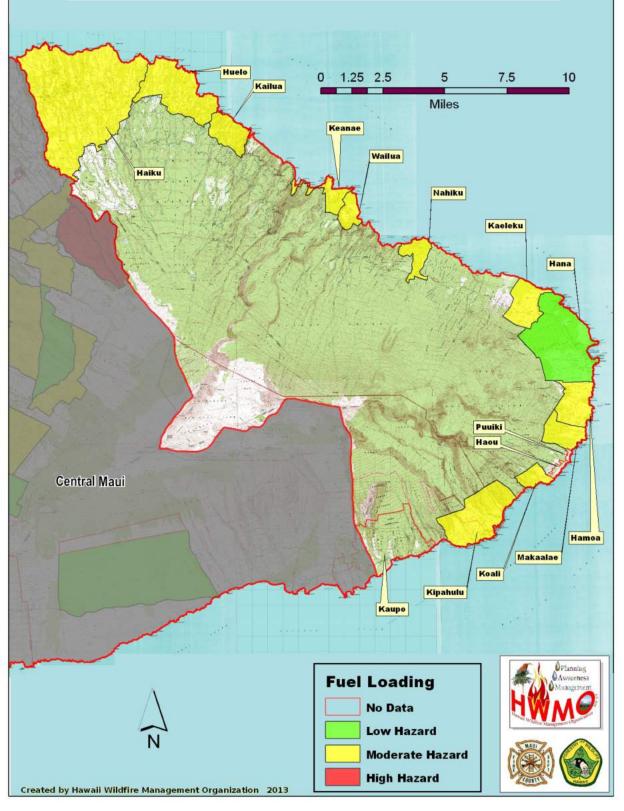
Vegetation Hazard Rating			
Rating Element	Low (1)	Moderate (2)	High (3)
Proximity of flammable fuels around subdivision	Greater than 100'	40-100'	Less than 40'
Type of predominant vegetation within 300' of homes	Grasses less than 6 inches in height. Light leaf litter.	Grasses 6–12 inches in height. Grasses 6-12" tall. Light brush and small trees. Patchy fuels.	Dense grass, brush, timber, and/or hardwoods. Moderate to heavy dead and downed vegetation. Fuels greater than 12 feet tall. Heavy vegetation.
Fuel loading	0-30% cover	31-70% cover	71-100% cover
Fuel structure and arrangement	Non-contiguous or patchwork arrangement. Little to no ladder fuels.		Uninterrupted vegetation, pervasive ladder fuels.
Defensible Space/ Fuels reduction around homes &	Vegetation is treated 100 feet or more from structures.	31-100 ft of vegetation treatment from structures.	Less than 30 ft of vegetation treatment from structures.

structures

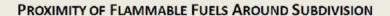


Vegetation Rating - Proximity of Flammable Fuels Around Subdivision





Vegetation Rating - Vegetation Within 300' of Homes



LOW HAZARD

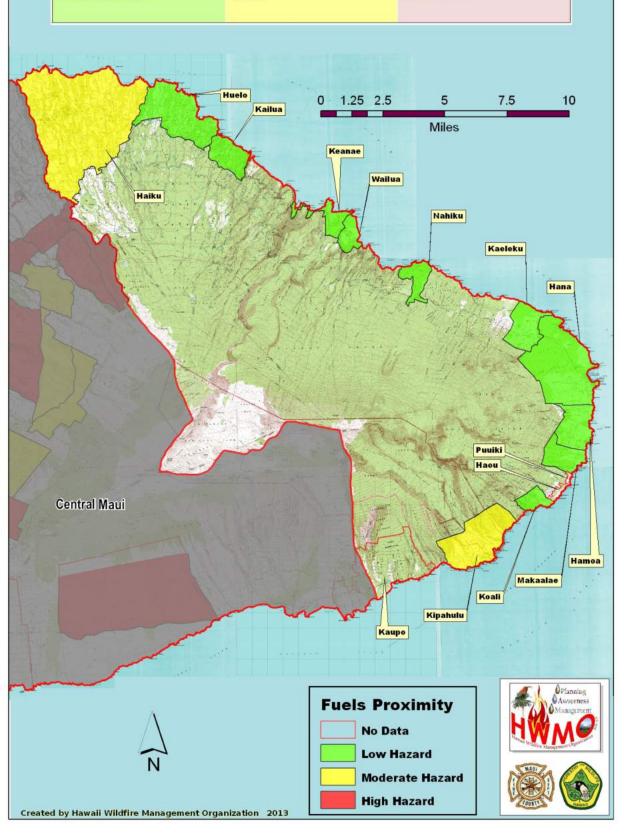
MODERATE HAZARD

HIGH HAZARD

Greater than 100'

40-100'

Less than 40'



### **East Maui Hazard Assessment Vegetation Rating - Fuel Loading** VEGETATION TYPE WITHIN 300' OF HOMES LOW HAZARD MODERATE HAZARD HIGH HAZARD Grasses 6-12 inches in height. Grasses less than 6 inches in Dense grass, brush, timber, and/or hardwoods. Moderate height. Light leaf litter. Light brush and small trees. Patchy fuels. to heavy dead and downed vegetation. Fuels greater than 12 feet tall. Heavy vegetation. Huelo 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo Planning **Vegetation Type** No Data Low Hazard **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

**Vegetation Rating - Fuel Structure & Arrangement** 

### FUEL STRUCTURE AND ARRANGEMENT

### LOW HAZARD

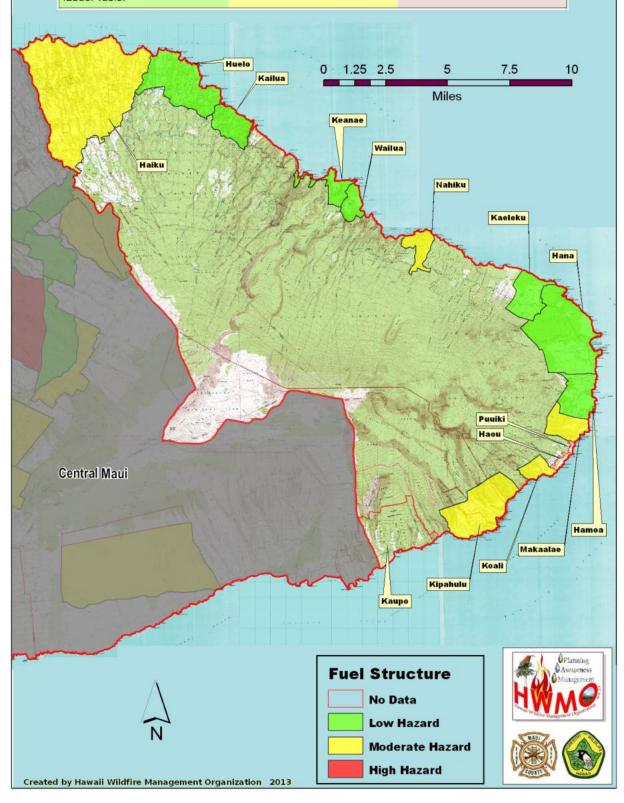
Non-contiguous or patchwork arrangement. Little to no ladder fuels.

### MODERATE HAZARD

Some areas of contiguous vegetation. Few ladder fuels.

### HIGH HAZARD

Uninterrupted vegetation, pervasive ladder fuels.



Vegetation Rating - Defensible Space: Fuels Reduction Around Homes & Structures

### **DEFENSIBLE SPACE- FUELS REDUCTION AROUND HOMES**

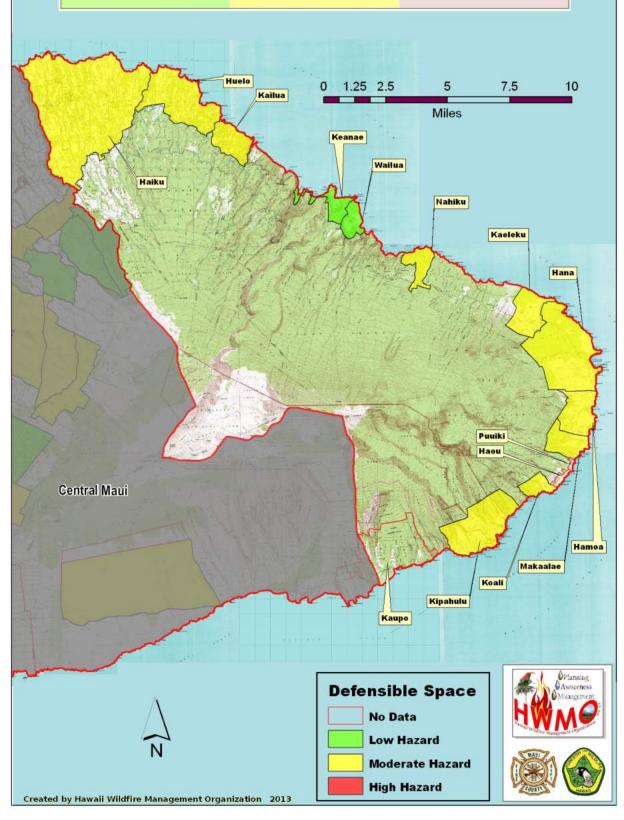
MODERATE HAZARD

### Low Hazard

Vegetation is treated 100 feet 31-100 ft. of vegetation or more from structures. 31-100 ft. of vegetation treatment from structures.

### **HIGH HAZARD**

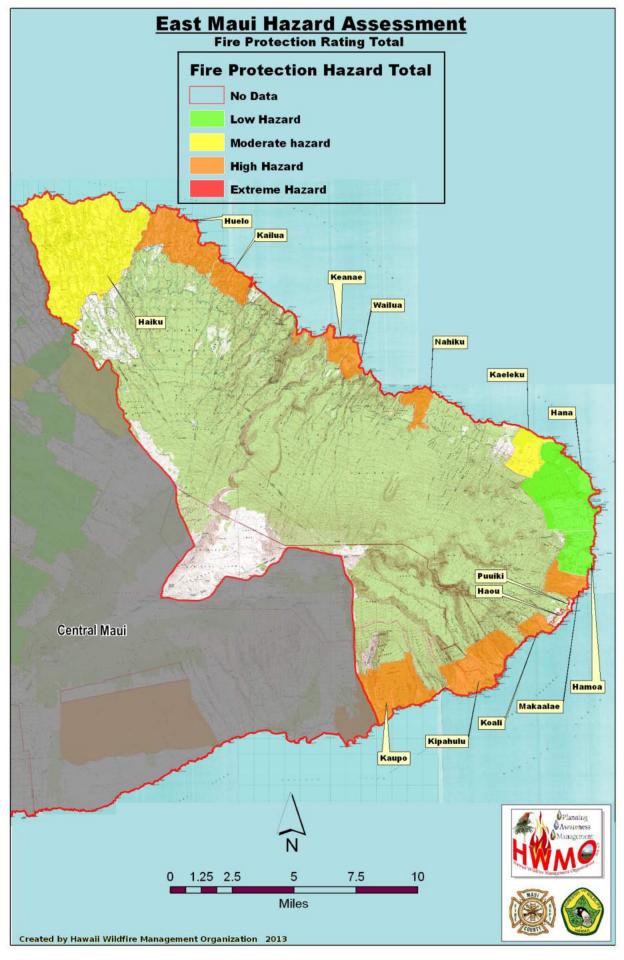
Less than 30 ft. of vegetation treatment from structures.

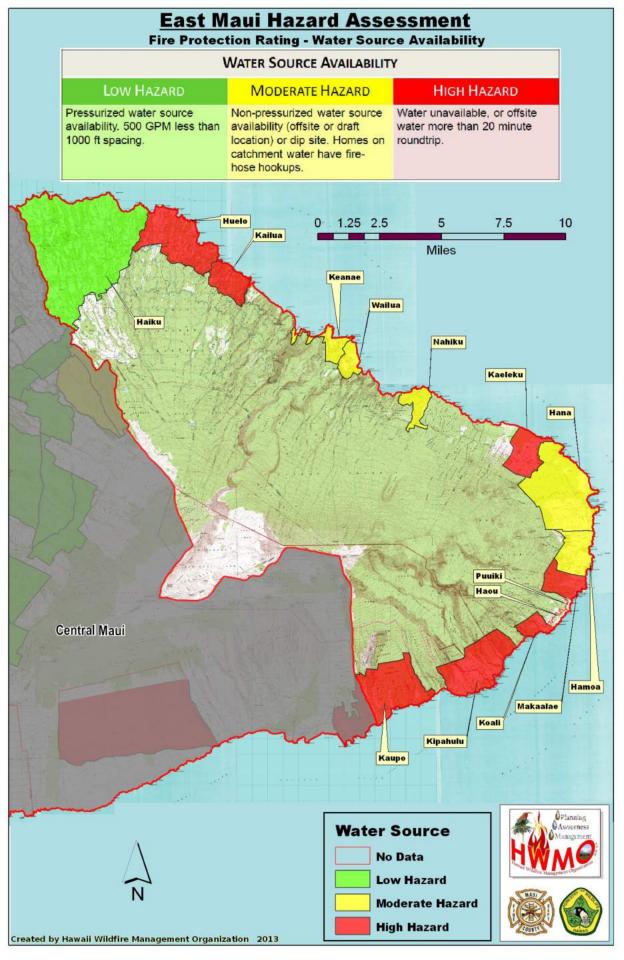


Fire Protection Rating

### HWMO Wildfire Hazard Assessment Key

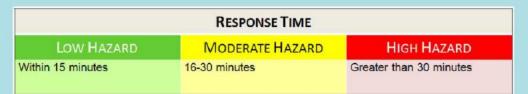
Fire Protection Hazard			
Rating Element	Low (1)	Moderate (2)	High (3)
Water source availability	Pressurized water source availability. 500 GPM less than 1000 ft spacing.	Non-pressurized water source availability (offsite or draft location) or dipsite. Homes on catchment water have fire-hose hookups.	Water unavailable, or offsite water more than 20 minute roundtrip
Response time	Within 15 minutes	16-30 minutes	Greater than 30 minutes
Proximity to fire station	Less than 5 miles	6-10 miles	More than 10 miles
Fire department structural training and expertise	Large fully paid fire department with personnel that meet NFPA or NWCG training requirements and have adequate equipment.	Mixed fire department. Some paid and some volunteer personnel. Limited experience, training, and equipment to fight fire.	Small, all volunteer fire department. Limited training, experience, and budget with regular turnover of personnel. Do not meet NFPA or NWCG standards.
Wildland firefighting capability of initial response agency	Sufficient personnel, equipment, and wildland firefighting capability and experience. Good supply of structural and wildland fire apparatus and misc specialty equipment	Limited personnel, and or equipment but with some wildland firefighting expertise and training. Smaller supply of fire apparatus in fairly good repair with some specialty equipment.	Fire department non-existent or untrained/unequipped to fight wildland fire. Minimum amount of fire apparatus, which is old and in need of repair. None or little specialty equipment.
Interagency Cooperation	Mutual aid agreements and resources available to deploy.	Mutual aid agreements but limited resource availability.	No mutual aid agreements.
Local emergency operations group or other similar	Active EOG or CERT. Evacuation plan in place.	Limited participation in EOG or similar. Have some form of evacuation process.	EOG or CERT team, etc. organized and active, prepared for evacuation processes
Community planning practices and ordinances	County/local laws, zoning ordinances, and codes require use of fire safe residential and subdivision designs. Fire department actively participates in planning process and enforces ordinances. Residents are compliant.	Have voluntary ordinances for fire safe practices. Local officials have an understanding of appropriate wildfire mitigation strategies. Fire department has limited input to fire safe planning and development efforts and limited enforcement. Residents are mostly compliant.	No local codes, laws, or ordinances requiring fire safe building or practices. Community standards for fire safe development and protection are marginal or non-existent. Little to no effort has been made in assessing and applying measures to reduce wildfire impact. Ordinances are not enforced and/or residents are not compliant.
Community fire- safe efforts and programs already in place	Organized and active groups provide educational materials and programs throughout the community.	Limited provision of or interest in educational efforts. Fire Department or local group does some limited prevention and public education.	No interest or participation in educational programs. No prevention education by local fire department.

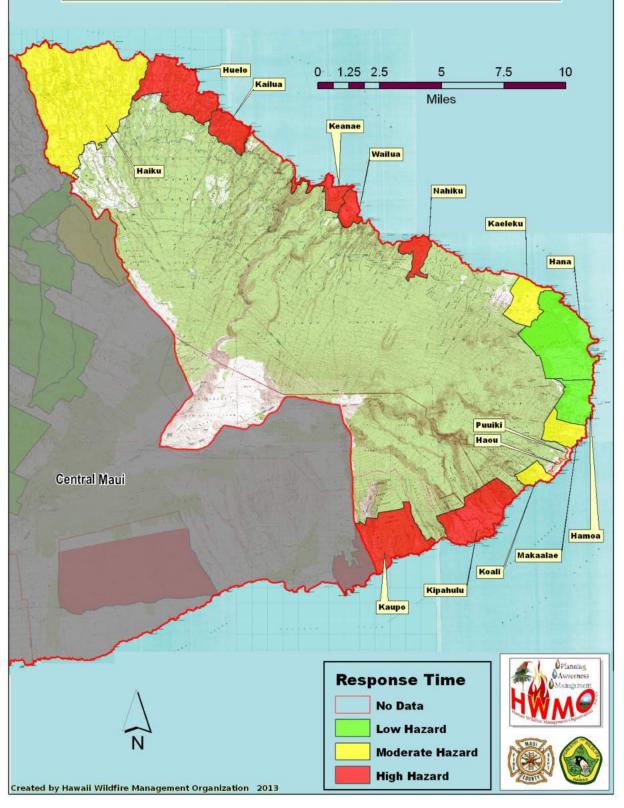




# **East Maui Hazard Assessment**

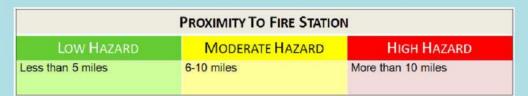
Fire Protection Rating - Response Time

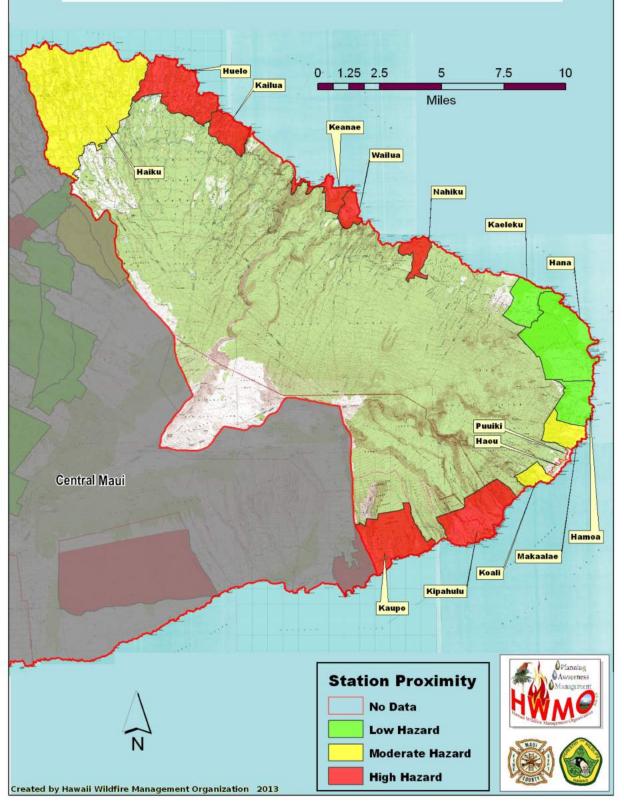




## **East Maui Hazard Assessment**

Fire Protection Rating - Proximity to Fire Station





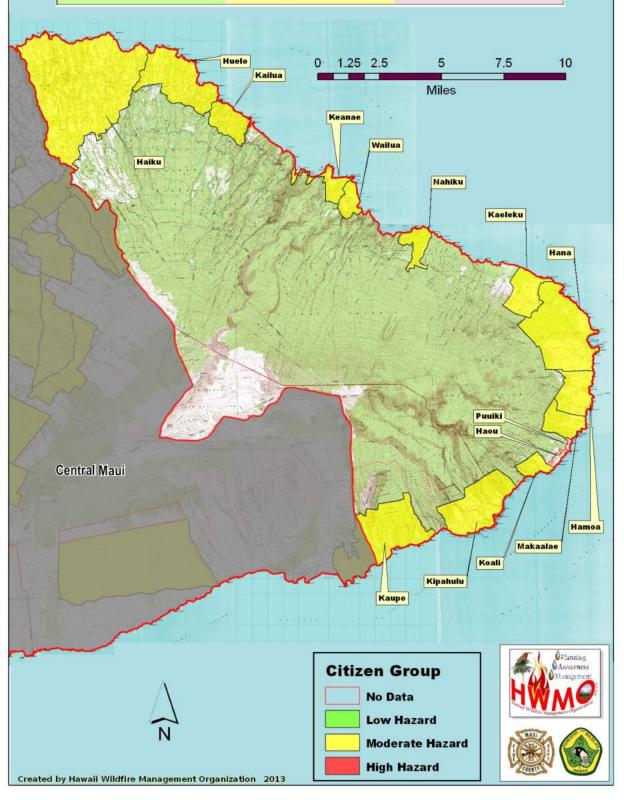
#### **East Maui Hazard Assessment** Fire Protection Rating - Fire Department Structural Training & Expertise FIRE DEPARTMENT STRUCTURAL TRAINING AND EXPERTISE LOW HAZARD MODERATE HAZARD HIGH HAZARD Large fully paid fire department Small, all volunteer fire Mixed fire department. Some with personnel that meet NFPA department. Limited training, paid and some volunteer or NWCG training personnel. Limited experience, and budget with requirements and have experience, training, and regular turnover of personnel. adequate equipment. equipment to fight fire. Do not meet NFPA or NWCG standards. Huelo 1.25 2.5 5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo Planning Structural Training No Data **Low Hazard Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

#### **East Maui Hazard Assessment** Fire Protection Rating - Wildland Firefighting Capacity of Initial Response Agency WILDLAND FIREFIGHTING CAPACITY OF INITIAL RESPONSE AGENCY LOW HAZARD MODERATE HAZARD HIGH HAZARD Fire department non-existent Sufficient personnel, Limited personnel, and or equipment, and wildland equipment but with some or untrained/unequipped to firefighting capability and wildland firefighting expertise fight wildland fire. Minimum experience. Good supply of and training. Smaller supply of amount of fire apparatus, structural and wildland fire fire apparatus in fairly good which is old and in need of repair. None or little specialty apparatus and misc specialty repair with some specialty equipment equipment. equipment. Huelo 1.25 2.5 5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo Planning **Wildland Capacity** No Data Low Hazard **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

# **East Maui Hazard Assessment**

Fire Protection Rating - Local Emergency Operations Group or Citizen Group

# CITIZEN OR LOCAL EMERGENCY OPERATIONS GROUP LOW HAZARD MODERATE HAZARD HIGH HAZARD Active EOG or CERT. Evacuation plan in place. Limited participation in EOG or similar. Have some form of evacuation process. EOG or CERT team, etc. organized and active, prepared for evacuation processes



#### East Maui Hazard Assessment Fire Protection Rating - Community Planning Practices & Ordinances **COMMUNITY PLANNING PRACTICES AND ORDINANCES** LOW HAZARD MODERATE HAZARD HIGH HAZARD Have voluntary ordinances for fire No local codes, laws, or ordinances County/local laws, zoning ordinances, and codes require use safe practices. Local officials have requiring fire safe building or of fire safe residential and practices. Community standards for an understanding of appropriate wildfire mitigation strategies. Fire subdivision designs. Fire fire safe development and department has limited input to fire protection are marginal or nondepartment actively participates in planning process and enforces safe planning and development existent. Little to no effort has been ordinances. Residents are efforts and limited enforcement. made in assessing and applying compliant. Residents are mostly compliant. measures to reduce wildfire impact. Ordinances are not enforced and/or residents are not compliant. Huelo Kailua Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo Planning **Community Planning** No Data 7.5 1.25 2.5 10 **Low Hazard** Miles **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

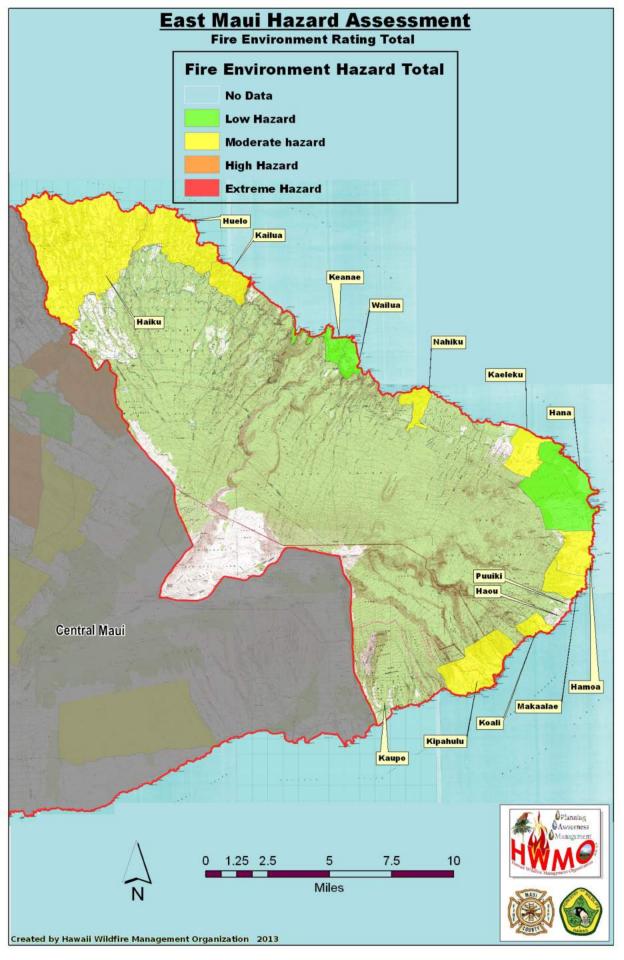
#### **East Maui Hazard Assessment** Fire Protection Rating - Community Fire Safe Efforts & Programs Already In Place COMMUNITY FIRE SAFE EFFORTS AND PROGRAMS IN PLACE Low Hazard MODERATE HAZARD **HIGH HAZARD** Organized and active groups Limited provision of or interest No interest or participation in provide educational materials in educational efforts. Fire educational programs. No and programs throughout the Department or local group prevention education by local does some limited prevention fire department. community. and public education. Huelo 5 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo **Community Programs** No Data Low Hazard **Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

Fire Environment Rating

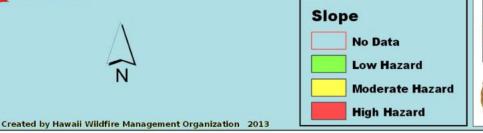
# HWMO Wildfire Hazard Assessment Key

Fire Environment Hazard Rating
\* Note: two elements have unique scoring for better assessment accuracy

Rating Element	Low (1)		Moderate (2)		High (3)	
Slope	Flat to slight slope (10%)		Moderate slopes (10-30%)		Steep slopes (>30%)	
Average rainfall *Score 1-6 instead	High precipitation (Score=1)	(Score=2)	(Score=3)	(Score=4)	(Score=5)	Low precipitation (Score=6)
Prevailing wind speeds and direction *Score 1-4 instead	Wind rarely (less than 10% of time) exceeds 15 mph. Protection from predominant winds.		Wind rarely (less than 10% of time) exceeds 15 mph.		Wind frequently (50% or more of time) exceeds 15 mph or frequent exposure to predominant winds or transitional/converging wind directions.	
Seasonal or periodic high hazard conditions	Area has no major seasonal increase of fire hazard.		Area is occasionally (e.g.,once per decade) exposed to fire prone conditions: drought, lightning storms, desiccated vegetation, and/or strong dry winds		Area is seasonally exposed to unusually severe fire weather, drought conditions, lightning storms, desiccated vegetation, and/or strong dry winds	
Ignition risk	Little to no natural (lightning or lava) ignition risk. No history of arson. Wildland areas absent or distant from public and/or vehicular access.		Some history of wildfire, but not particularly fire prone area due to prevailing lack of fire prone conditions, weather, and vegetation type.		Most historic wildfire events were anthropogenic with easy access to wildland areas via roads or proximity to development OR natural ignition sources such as lightning or lava are prevalent. Fire prone area. High rate of ignitions or history of large scale fires and/or severe wildfire events.	
Topographical features that adversely wildland fire behavior	None.				Major feature such as box canyon, ravines, chutes, saddles, transition zones.	

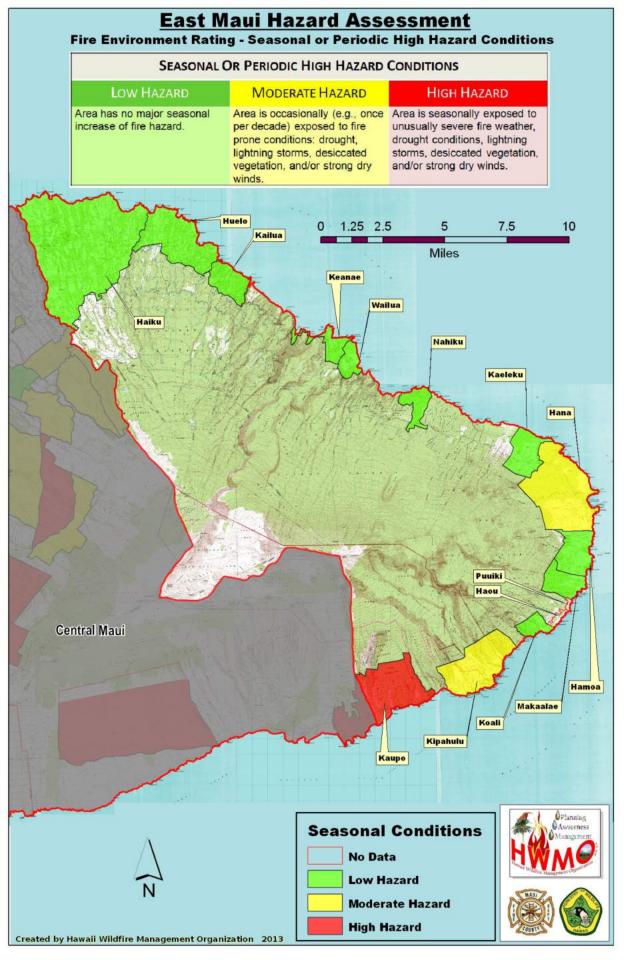


# **East Maui Hazard Assessment** Fire Environment Rating - Slope SLOPE LOW HAZARD MODERATE HAZARD **HIGH HAZARD** Steep slopes (>30%) Moderate slopes (10-30%) Flat to slight slope (10%) Huelo 0 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo



# **East Maui Hazard Assessment** Fire Environment Rating - Average Rainfall **AVERAGE RAINFALL** LOW HAZARD MODERATE HAZARD HIGH HAZARD High Precipitation Moderate Precipitation Low Precipitation Huelo 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo Average rainfall 1 Low Hazard 3 6 High Hazard Created by Hawaii Wildfire Management Organization 2013

## **East Maui Hazard Assessment** Fire Environment Rating - Prevailing Wind Speeds & Direction PREVAILING WIND SPEEDS AND DIRECTION LOW HAZARD MODERATE HAZARD **HIGH HAZARD** Wind rarely (less than 10% of Wind rarely (less than 10% of Wind frequently (50% or more of time) exceeds 15 mph or time) exceeds 15 mph. time) exceeds 15 mph. Protection from predominant frequent exposure to winds. predominant winds or transitional/converging wind directions. Huelo 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo **Prevailing Wind** Planning No Data Low Hazard **Moderate Hazard High Hazard Extreme Hazard** Created by Hawaii Wildfire Management Organization 2013



#### **East Maui Hazard Assessment** Fire Environment Rating - Ignition Risk **IGNITION RISK** LOW HAZARD MODERATE HAZARD HIGH HAZARD Little to no natural (lightning or Some history of wildfire, but not Most historic wildfire events were lava) ignition risk. No history of arson. Wildland areas absent or particularly fire prone area due to anthropogenic with easy access to prevailing lack of fire prone wildland areas via roads or proximity to distant from public and/or conditions, weather, and development OR natural ignition vehicular access. vegetation type. sources such as lightning or lava are prevalent. Fire prone area. High rate of ignitions or history of large scale fires and/or severe wildfire events Huelo 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo Planning **Ignition Risk** No Data **Low Hazard Moderate Hazard High Hazard** Created by Hawaii Wildfire Management Organization 2013

# **East Maui Hazard Assessment** Fire Environment Rating -Topographic Features That Adversely Effect Wildland Fire Behavior **HAZARDOUS TOPOGRAPHICAL FEATURES** Low Hazard MODERATE HAZARD **HIGH HAZARD** Minor features, such as low or None. Major feature such as box occasional hills. canyon, ravines, chutes, saddles, transition zones. Huelo 1.25 2.5 7.5 10 Kailua Miles Keanae Wailua Haiku Nahiku Kaeleku Hana Puuiki Haou Central Maui Hamoa Makaalae Koali Kipahulu Kaupo **Topographic Features** No Data Low Hazard

**Moderate Hazard** 

**High Hazard** 

Created by Hawaii Wildfire Management Organization 2013