

## Genesee Fire Rescue Rapid Assessment Compared to Household Survey Responses

Genesee Fire Rescue conducted parcel-level rapid wildfire risk assessments and administered a household survey in 2021. The rapid assessment provides the professional’s risk rating for each parcel, and the household survey provides, among other things, respondent’s self-assessed risk for their own parcel. Pairing these data is the heart of the WiRē Approach because it allows us to analyze the risk gap between how professionals rate wildfire risk and how survey respondents (i.e., homeowners) perceive their risk.

Overall, there are 1,340 properties for which we have a rapid assessment and 581 of those for which we have a “paired rapid assessment”—that is, a rapid assessment for which we also have a paired household survey. Within this document, we present the following:

- 1) A comparison of A) Professional risk ratings for the subset of properties for which we have a paired rapid assessment compared to B) paired household survey respondent’s self-assessed risk ratings (Section 1).
- 2) A three-way comparison of A) professional risk ratings for all properties for which we have a rapid assessment, B) professional risk ratings for the subset of properties for which we have paired rapid assessments, and C) household survey respondents’ self-assessed risk ratings (Section 2).

Section 1 and Section 2 are organized by overall risk rating, followed by the attribute-level risk ratings, which are organized by categories of access, background conditions, defensible space, and home ignition potential.

*\*This project was funded by USDA Forest Service, Washington Office Fire and Aviation Management.*

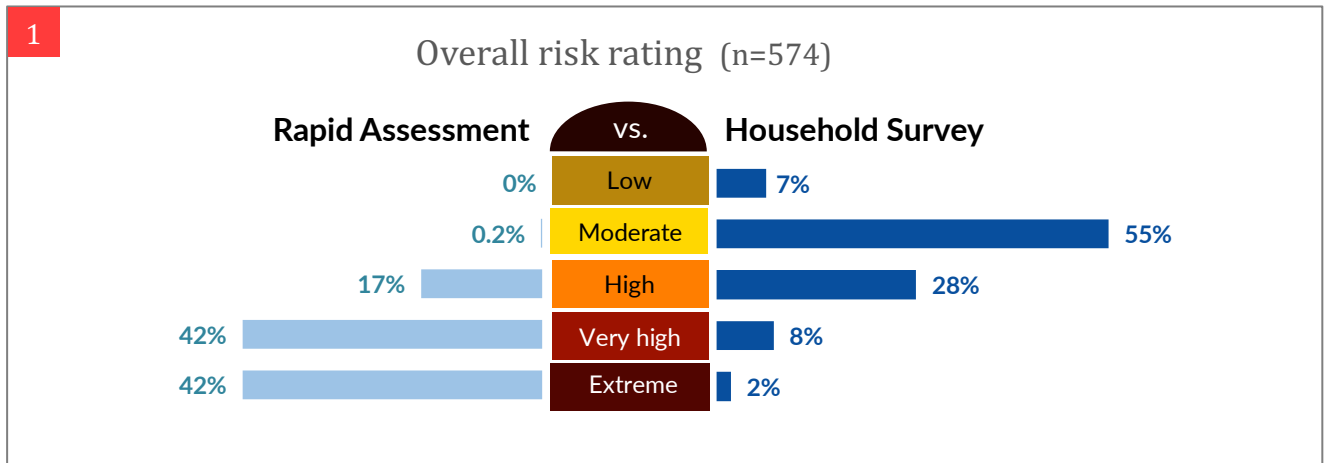
*\*All data received and processed as of January 31, 2022*

*\*Document prepared March 4, 2022*

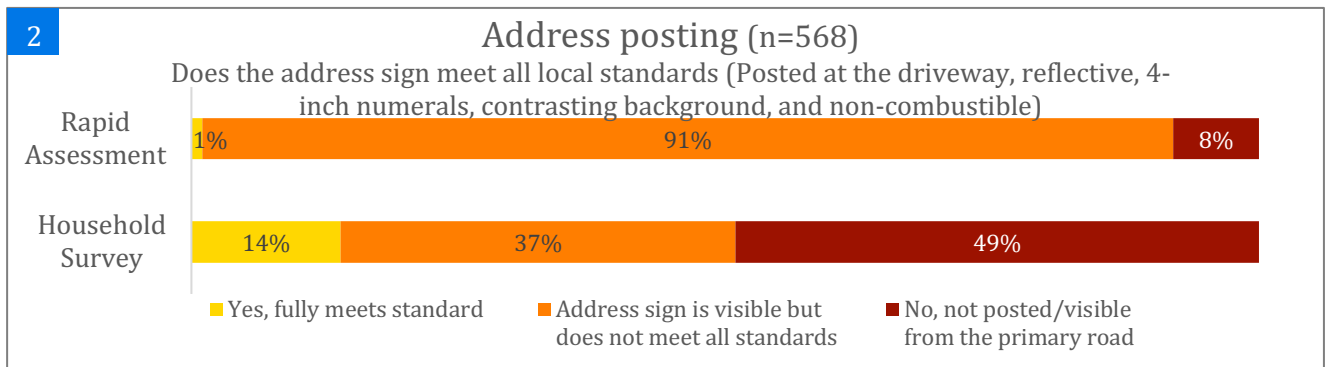
# 1. Comparison of paired WiRē Rapid Assessment vs. Household Survey

In this section, we compare professional risk ratings and household survey respondents' self-assessments for parcels' overall risk rating and the 13 risk attributes included in the rapid assessment. These comparisons are presented as graphs, where the first bar shows the professional risk rating, and the second bar presents the household survey respondents' self-assessment. For each individual risk attribute, our comparisons only include the data from parcels for which we have both rapid assessment and household survey data for that particular attribute, and thus the number of records (signified by "n=") varies by attribute and is reported for each.

## 1.1 Overall risk rating



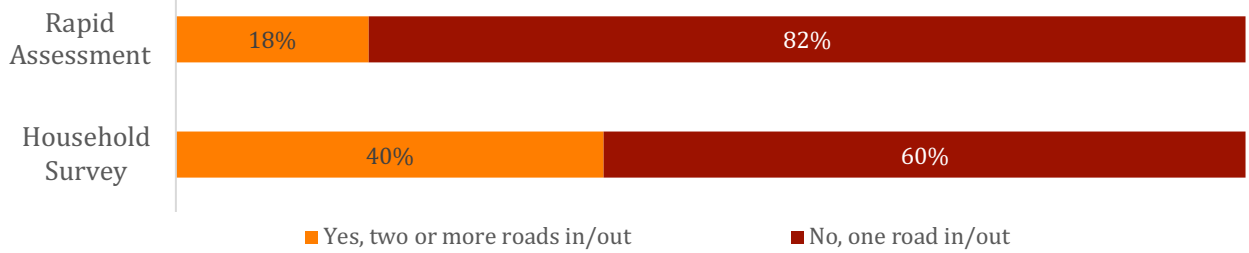
## 1.2 Access



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### Ingress/Egress (n=570)

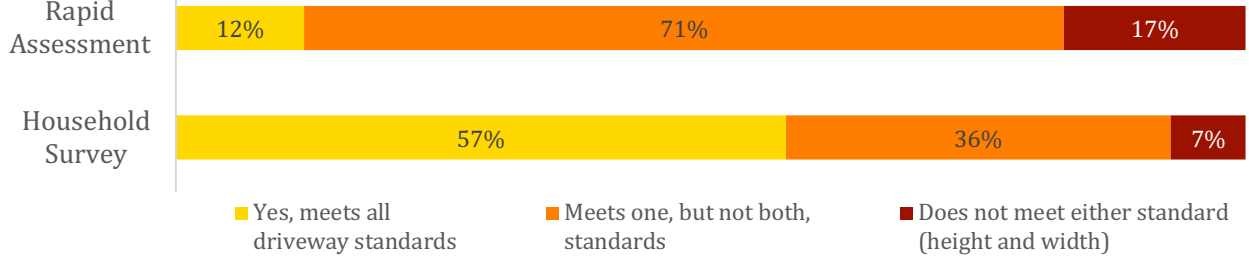
If the road to access the home was blocked due to a wildfire, is there another road to get out of the community?



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### Driveway clearance (n=518)

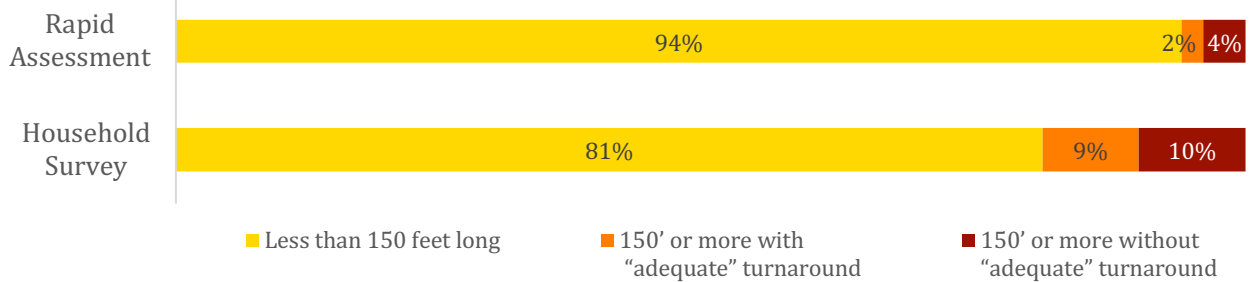
Does the driveway meet the horizontal and vertical clearance standards: height at least 13.5' and width at least 20'?



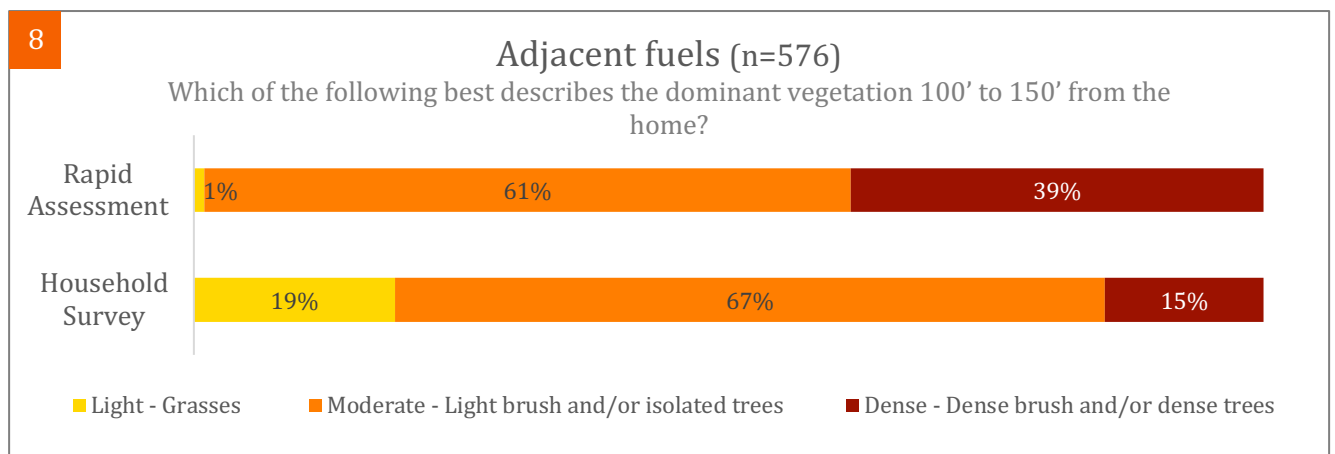
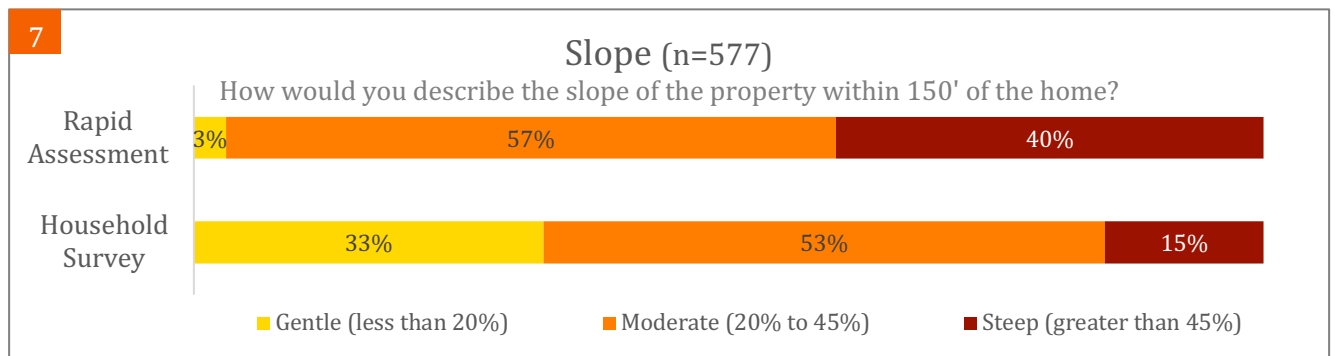
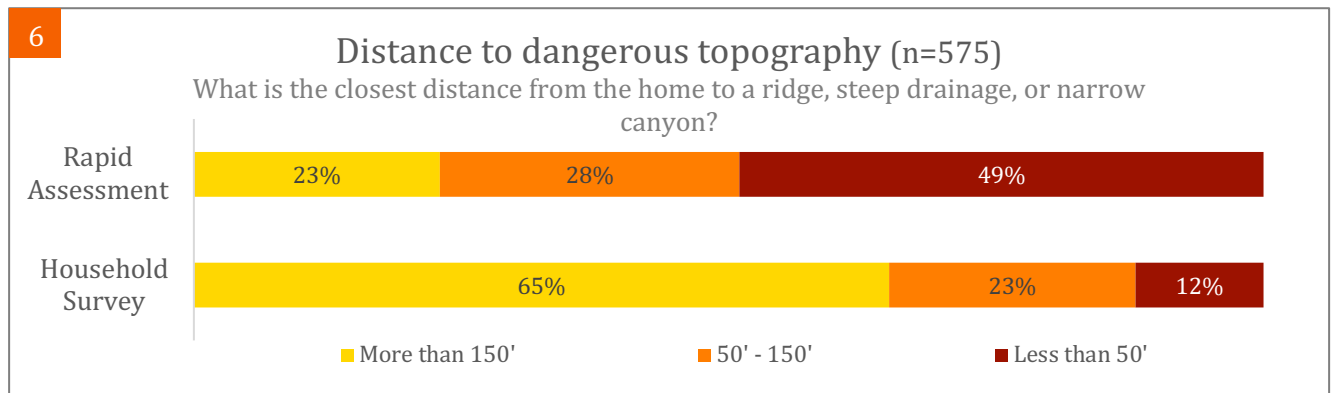
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### Driveway length (n=543)

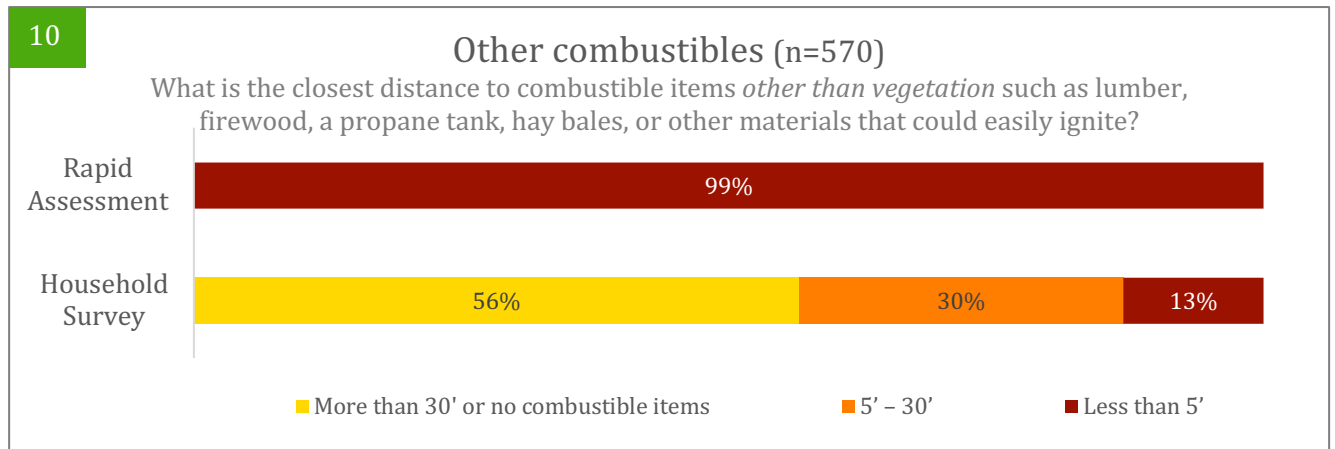
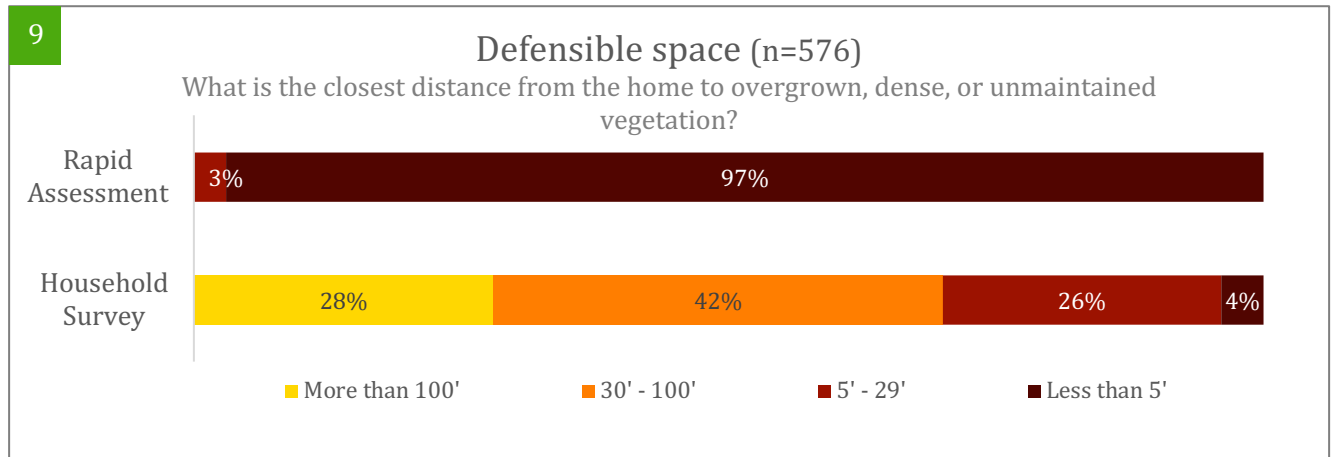
What best describes the driveway?



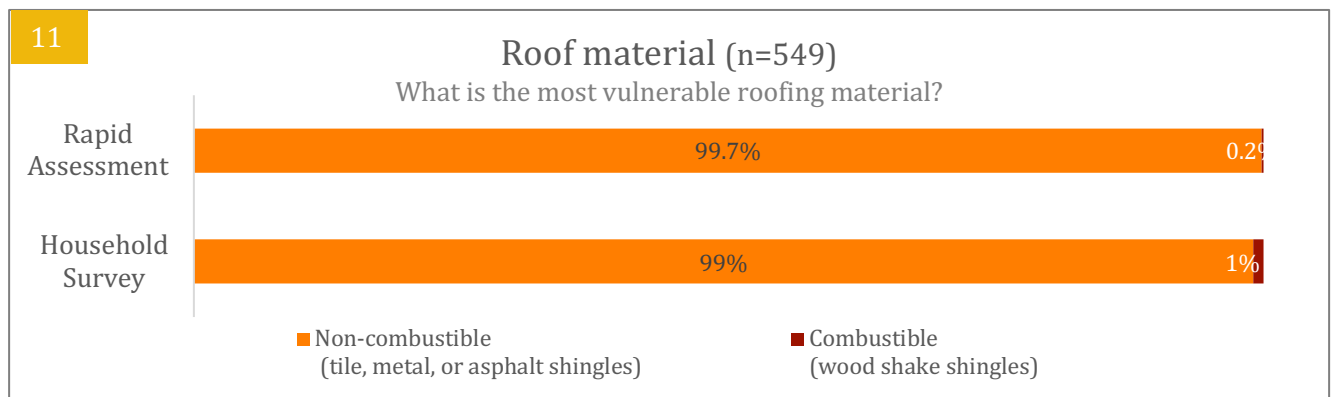
## 1.3 Background conditions



## 1.4 Defensible space



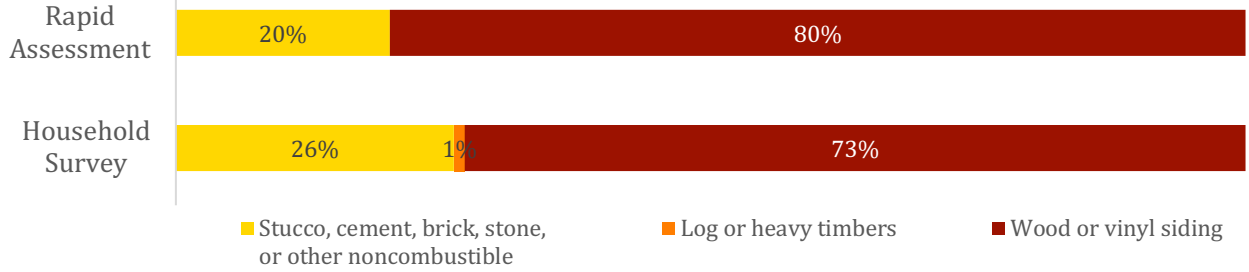
## 1.5 Home ignition potential



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### Siding material (n=575)

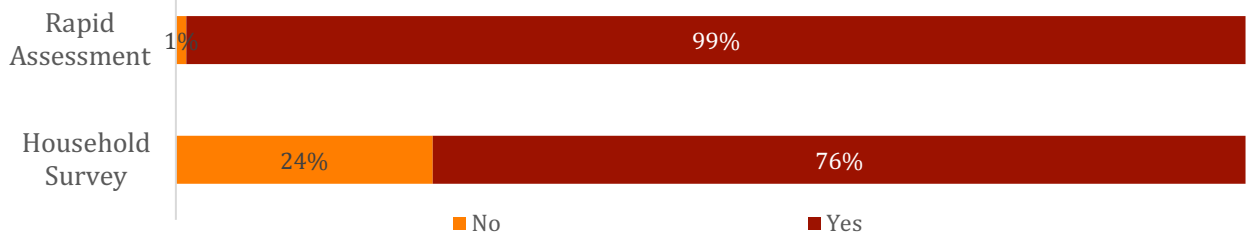
What is the most vulnerable siding material?



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### Combustible attachments (n=576)

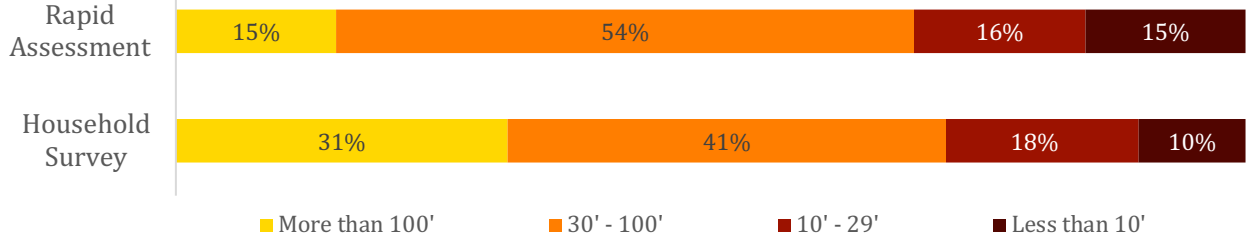
Does the home have a combustible balcony, deck, porch, or fence attached to the structure?



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### Proximity to adjacent homes (n=576)

What is the closest distance to a neighboring home?



## 2. Comparison of all Rapid Assessments vs. paired Rapid Assessment and Household Survey

In this section, we provide a three-way comparison of A) professional risk ratings for all properties for which we have a rapid assessment, B) professional risk ratings for the subset of properties for which we have paired risk assessments and household surveys, and C) household survey respondent's self-assessed risk ratings.

### 2.1 Overall risk rating

<b>Overall risk rating:</b>			
RA: Based on the sum of the 13 attribute scores. Homeowner's self-assessment response to: What do you think is your property's current overall wildfire risk rating?			
<b>Response categories</b>	<b>All RAs in study area (N=1,340)</b>	<b>Subset of RAs for parcels that returned a household survey (N=574)</b>	<b>Self-assessment from household surveys (N=574)</b>
Low	0%	0%	7%
Moderate	0%	0%	55%
High	14%	17%	28%
Very high	37%	41%	8%
Extreme	48%	42%	2%

### 2.2 Access

<b>Risk attribute: Address Posting</b>			
Does the address sign meet all local standards (Posted at the driveway, reflective, 4-inch numerals, contrasting background, and non-combustible)			
<b>Response categories</b>	<b>All RAs in study area (N=1,340)</b>	<b>Subset of RAs for parcels that returned a household survey (N=568)</b>	<b>Self-assessment from household surveys (N=568)</b>
Yes, fully meets standard	1%	1%	14%
Address sign is visible, but <b>does not meet all standards</b>	92%	91%	37%
No, not posted/visible from the primary road	8% <sup>a</sup>	8% <sup>b</sup>	49%

a. Out of all RAs in study area, 2 were missing/unobserved (<1%) and included in the highest risk category.  
b. Out of the subset of RAs for parcels that returned a household survey, 1 was missing/unobserved (<1%) and included in the highest risk category.

<b>Risk attribute: Ingress/Egress</b>			
If the road to access the home was blocked due to a wildfire, is there another road to get out of the community?			
<b>Response categories</b>	<b>All RAs in study area (N=1,340)</b>	<b>Subset of RAs for parcels that returned a household survey (N=570)</b>	<b>Self-assessment from household surveys (N=570)</b>
Yes, two or more roads in/out	21%	18%	40%
No, one road in/out	79% <sup>a</sup>	82% <sup>b</sup>	60%
a. Out of <i>all RAs in study area</i> , 2 were missing/unobserved (<1%) and included in the highest risk category. b. Out of the <i>subset of RAs for parcels that returned a household survey</i> , 1 was missing/unobserved (<1%) and included in the highest risk category.			

<b>Risk attribute: Driveway clearance</b>			
Does the driveway meet the horizontal and vertical clearance standards: height at least 13.5' and width at least 20'?			
<b>Response categories</b>	<b>All RAs in study area (N=1,340)</b>	<b>Subset of RAs for parcels that returned a household survey (N=518)</b>	<b>Self-assessment from household surveys (N=518)</b>
Yes, meets <b>all</b> driveway standards	11%	12%	57%
<b>Meets one, but not both</b> , standards (height or width)	73%	71%	36%
<b>Does not meet either</b> standard (height and width)	16% <sup>a</sup>	17% <sup>b</sup>	7%
a. Out of <i>all RAs in study area</i> , 12 were missing/unobserved (1%) and included in the highest risk category. b. Out of the <i>subset of RAs for parcels that returned a household survey</i> , 6 were missing/unobserved (1%) and included in the highest risk category.			



<b>Risk attribute: Driveway length</b>			
What best describes the driveway? (“Adequate” refers to enough turnaround to accommodate a Type 3 engine)			
<b>Response categories</b>	<b>All RAs in study area (N=1,340)</b>	<b>Subset of RAs for parcels that returned a household survey (N=543)</b>	<b>Self-assessment from household surveys (N=543)</b>
Less than 150' long	94%	94%	81%
150' or more <b>with</b> “adequate” turnaround	2%	2%	9%
150' or more <b>without</b> “adequate” turnaround	4% <sup>a</sup>	4% <sup>b</sup>	10%
<p>a. Out of all RAs in study area, 22 were missing/unobserved (2%) and included in the highest risk category.</p> <p>b. Out of the subset of RAs for parcels that returned a household survey, 7 were missing/unobserved (1%) and included in the highest risk category.</p>			

## 2.3 Background conditions

<b>Risk attribute: Distance to dangerous topography</b>			
What is the closest distance from the home to a ridge, steep drainage, or narrow canyon?			
<b>Response categories</b>	<b>All RAs in study area (N=1,340)</b>	<b>Subset of RAs for parcels that returned a household survey (N=575)</b>	<b>Self-assessment from household surveys (N=575)</b>
More than 150'	22%	23%	65%
50' - 150'	30%	28%	23%
Less than 50'	48% <sup>a</sup>	49% <sup>b</sup>	12%
<p>a. Out of all RAs in study area, 4 were missing/unobserved (&lt;1%) and included in the highest risk category.</p> <p>b. Out of the subset of RAs for parcels that returned a household survey, 3 were missing/unobserved (1%) and included in the highest risk category.</p>			

**Risk attribute: Slope**

The "slope" or "grade" of a property refers to the steepness of the land. A large property may have steep, moderate, and gentle slopes. How would you describe the slope of the property within 150' of the home?

Response categories	All RAs in study area (N=1,340)	Subset of RAs for parcels that returned a household survey (N=577)	Self-assessment from household surveys (N=577)
Gentle (less than 20%)	3%	3%	33%
Moderate (20% to 45%)	57%	57%	53%
Steep (greater than 45%)	40% <sup>a</sup>	40% <sup>b</sup>	15%

a. Out of *all RAs in study area 6* were missing/unobserved (<1%) and included in the highest risk category.  
b. Out of the *subset of RAs for parcels that returned a household survey*, 1 was missing/unobserved (<1%) and included in the highest risk category.

**Risk attribute: Adjacent Fuels**

Which of the following best describes the dominant vegetation 100' to 150' from the home? This may be outside the property boundary.

Response categories	All RAs in study area (N=1,340)	Subset of RAs for parcels that returned a household survey (N=576)	Self-assessment from household surveys (N=576)
Light - Grasses	1%	1%	19%
Moderate - Light brush and/or isolated trees (e.g., grass with some ponderosa pine, scattered pinon juniper, or other conifer)	64%	61%	67%
Dense - Dense brush and/or dense trees (e.g., continuous ponderosa pine, dense aspen, and/or dense mixed conifer)	35% <sup>a</sup>	39% <sup>b</sup>	15%

a. Out of *all RAs in study area*, 2 were missing/unobserved (<1%) and included in the highest risk category.  
b. Out of the *subset of RAs for parcels that returned a household survey*, 0 were missing/unobserved (0%) and included in the highest risk category.

## 2.4 Defensible space

<b>Risk attribute: Defensible Space</b>			
What is the closest distance from the home to overgrown, dense, or unmaintained vegetation?			
<b>Response categories</b>	<b>All RAs in study area (N=1,340)</b>	<b>Subset of RAs for parcels that returned a household survey (N=576)</b>	<b>Self-assessment from household surveys (N=576)</b>
More than 100'	0%	0%	28%
30' - 100'	1%	<1%	42%
5' - 29'	2%	3%	26%
Less than 5'	97% <sup>a</sup>	97% <sup>b</sup>	4%

a. Out of *all RAs in study area*, 42 were missing/unobserved (3%) and included in the highest risk category.  
 b. Out of the *subset of RAs for parcels that returned a household survey*, 18 were missing/unobserved (3%) and included in the highest risk category.

<b>Risk attribute: Other combustibles</b>			
What is the closest distance from the home to combustible items <i>other than vegetation</i> such as lumber, firewood, a propane tank, hay bales, or other materials that could easily ignite?			
<b>Response categories</b>	<b>All RAs in study area (N=1,340)</b>	<b>Subset of RAs for parcels that returned a household survey (N=570)</b>	<b>Self-assessment from household surveys (N=570)</b>
More than 30' or no combustible items	1%	<1%	56%
5' – 30'	0%	<1%	30%
Less than 5'	99% <sup>a</sup>	99% <sup>b</sup>	13%

a. Out of *all RAs in study area*, 199 were missing/unobserved (15%) and included in the highest risk category.  
 b. Out of the *subset of RAs for parcels that returned a household survey*, 81 were missing/unobserved (14%) and included in the highest risk category.

## 2.5 Home ignition potential

<b>Risk attribute: Roof</b>			
What is the most vulnerable roofing material?			
Response categories	All RAs in study area (N=1,340)	Subset of RAs for parcels that returned a household survey (N=549)	Self-assessment from household surveys (N=549)
Non-combustible (tile, metal, or asphalt shingles)	97%	99%	99%
Combustible (wood shake shingles)	3% <sup>a</sup>	1% <sup>b</sup>	1%
<p>a. Out of all RAs in study area, 21 were missing/unobserved (2%) and included in the highest risk category.</p> <p>b. Out of the subset of RAs for parcels that returned a household survey, 1 was missing/unobserved (&lt;1%) and included in the highest risk category.</p>			

<b>Risk attribute: Building Exterior</b>			
What is the most vulnerable siding material?			
Response categories	All RAs in study area (N=1,340)	Subset of RAs for parcels that returned a household survey (N=575)	Self-assessment from household surveys (N=575)
Stucco, cement, brick, stone, or other noncombustible	16%	20%	26%
Log or heavy timbers	1%	<1%	1%
Wood or vinyl siding	82% <sup>a</sup>	80% <sup>b</sup>	73%
<p>a. Out of all RAs in study area, 11 were missing/unobserved (1%) and included in the highest risk category.</p> <p>b. Out of the subset of RAs for parcels that returned a household survey, 4 were missing/unobserved (1%) and included in the highest risk category.</p>			

<b>Risk attribute: Combustible Attachments (e.g., Balcony, Decking, Fencing)</b>			
Does the home a combustible balcony, deck, porch, or fence attached to the structure?			
Response categories	All RAs in study area (N=1,340)	Subset of RAs for parcels that returned a household survey (N=576)	Self-assessment from household surveys (N=576)
No combustible attachments	2%	1%	24%
Combustible attachments present	98% <sup>a</sup>	99% <sup>b</sup>	76%
<p>a. Out of all RAs in study area, 199 were missing/unobserved (15%) and included in the highest risk category.</p> <p>b. Out of the subset of RAs for parcels that returned a household survey, 95 were missing/unobserved (17%) and included in the highest risk category.</p>			

**Risk attribute: Proximity to adjacent homes**

What is the closest distance to a neighboring home?

<b>Response categories</b>	<b>All RAs in study area (N=1,340)</b>	<b>Subset of RAs for parcels that returned a household survey (N=576)</b>	<b>Self-assessment from household surveys (N=576)</b>
More than 100'	14%	15%	31%
30' – 100'	49%	54%	41%
10' – 29'	16%	16%	18%
Less than 10'	21% <sup>a</sup>	15% <sup>b</sup>	10%

a. Out of all RAs in study area, 7 were missing/unobserved (1%) and included in the highest risk category.

b. Out of the subset of RAs for parcels that returned a household survey, 3 were missing/unobserved (1%) and included in the highest risk category.