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Zesty.ai Testimony to the California Senate

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California, as I'm sure I don't need to tell you, is in a crisis. Wildfires are spreading in increasingly populated areas, and in unpredicted ways. I experienced this myself when I had to evacuate my family from Napa County in 2020. Since we won't be able to stop every wildfire from starting, and we can't always keep homes from burning, a healthy insurance market is necessary to balance risk and enable people to protect their property.

Unfortunately, the current California homeowners insurance market is not healthy because we are using 30 year old tools to understand a recent change in weather phenomenon. New losses and new risks are bringing the insurance industry to the breaking point. And if we only had decades-old tools to fight this crisis, we'd probably lose. Homes would become uninsurable in many places around California, meaning an estimated 1.3 trillion dollars in property would be at risk of losing affordable insurance and with that, mortgage financing as well.

The devastation from the Tubbs Fire from 2017 shows how only incorporating limited regional variables, such as fuel, slope and access as an input into risk models fails to accurately predict where wildfires will occur. Here we have highlighted an area of predicted wildfire risk from the California Department of Insurance and CalFire. Some homes that burned were situated inside this area, but most were not. More than 5000 properties burned, totalling in excess of 9 billion dollars in losses, in areas previously thought safe. This left insurers to foot the enormous bill of unexpected losses.

But today, we have new tools to understand risk, thanks to significant advancements in technology. Satellite and or aerial imagery is available for the whole state in high resolution. Data about property attributes, local weather, and building permits is more accessible than ever. And with this data, we are able to build cutting-edge computer models to create an understanding of the risk based on real losses - not overly simplistic assumptions or simulations.

Our models are able to understand the risk because we have gathered pre and post wildfire loss data from nearly one thousand five-hundred historical wildfire events - mostly in California. This is the largest wildfire loss database in the industry, and we complement this data with real fire science from institutions like Cal-Fire and the Insurance Institute of Business and Home Safety, to make informed predictions of what will make properties more or less susceptible to loss.

By incorporating science-backed details like overhanging vegetation, vegetation in multiple defensible zones, roof material, neighborhood density, slope of a parcel, ease of suppression, our model determines wildfire risk absent of the bias and inequities introduced by human analysts or inspectors – just real fires, real damage, and observable property features.

We built the model to assess risk across two dimensions. First, **frequency** describes the probability of an address falling within a wildfire perimeter. Second, **severity** describes the expected damage to a property that falls within a wildfire perimeter. These scores are measured on a scale from one to ten, and they translate into an annualized probability. We process these scores for every home in America and our systems deliver the fully transparent results in less than a second.

As anyone familiar with this industry can see, we have greatly increased the sensitivity of our risk measurements above those found in previous methods. We have identified that 88% of the properties in California are low risk. The remaining high-risk properties can now be looked at much more closely, to really understand their exposure.

Let's zoom in on a high risk area. Here we have a home in the Hollywood hills, the location of the 2018 Woolsey fire, where many insurers would be reluctant to cover properties today. But with our Z-FIRE™ wildfire risk model, we produce an analysis that is responsive to the effects of community and property mitigation efforts. Our model can see that this property has amazing defensible space, modern code-compliant building materials, and is seated on flat land. So even though the property exists in a zone that is at high risk of wildfire, our model can enumerate to insurers the reasons why this home is insurable.

California has a very structured regulatory rate approval process to protect insurance consumers. Our Z-FIRE model has been included in several approved and pending rate and underwriting filings with the California Department of Insurance. Z-FIRE complies with these regulations by basing its analysis on historical loss data inclusive of the impacts of risk mitigation, and does so without human bias or error because it applies the same risk assessment to every home and business. Further, because our solution is

automated, we're able to update its inputs multiple times per year and be responsive to recent property- and community-specific mitigation efforts that would be likely to reduce future losses.

Some insurers are leaving California because they cannot account for the new risks of wildfire. Others have partnered with Zesty.ai and been able to expand in California using our model. One of our partners, Farmers Insurance, has committed to writing up to 30,000 additional properties that would not otherwise have been written before.

As I mentioned in my opening statement, we are in an insurance crisis. It is critical that we do everything possible to target our risk reduction efforts to high-risk regions. This requires using new tools for analysis and recognizing the effective actions that home- and business owners can take on their own. Our state leaders should do all they can to encourage, promote and help fund mitigation actions, and insurers should do their part by using innovative technology that recognizes property details known to reduce the risk of loss, and incorporating these details into their underwriting and rating plans. That technology is available right now.

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