





Oregon Community Risk Assessment Fire Tool (OrCRAFT)

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OrCRAFT Introduction

Overview:



These tools were developed, according to NFPA 1300 standards, to provide emergency planners with a cutting-edge, easy to use resource to help identify, evaluate, and mitigate fire risks in the built environment. By leveraging data and advanced analytics, OrCRAFT provides valuable insights into potential fire hazards in local communities throughout Oregon. The primary goals of the OrCRAFT tools are to:

- Reduce fire incidents.
- Protect lives and property.
- Enable proactive planning and prevention.
- Contribute to community resiliency.

Quick Facts:

- Over 43,000 building fire incidents examined.
- Over 30 variables included.
- Data from different data sources used:
 - NFIRS
 - US Census data
 - US ACS data
 - US CDC SVI data
 - US HIFLD data
 - OSU SVI data
 - Oregon CR2K data
 - Oregon DOGAMI

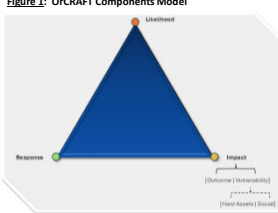
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OrCRAFT Methodology

- Fire incidents and GIS data were used to build models to help determine the predictive probability (likelihood) of building fires occurring.
- The impact of the fires is calculated by OrCRAFT based on the vulnerability and community assets selected, as well as historic and predictive fire casualty data.
- Fire incident location data, GIS information (fire stations), and driving distance is used to determine response capabilities.
- OrCRAFT calculates the building fire risk by summing the selected vulnerabilities and other impact factors, multiplied by the empirical building fire likelihood (and optional vegetation burn probability).

Figure 1: OrCRAFT Components Model



$$R = \sum_{k=1}^n (BFLH + WBP) \cdot RRV_k \cdot W_k$$

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OrCRAFT: Fire Risk Likelihood

1. What is the general likelihood of a fire occurring in your community? This includes "regular" structure fires and structure fires started by wildfire.
2. What vulnerable assets are in your community, how susceptible are they, and how valuable are they to your community?
3. Who is the most vulnerable in your community and where does this population live?

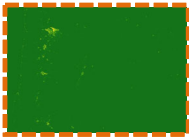


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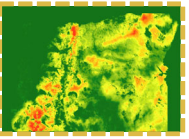
OrCRAFT Spatial Evaluation

Density of recorded building fires

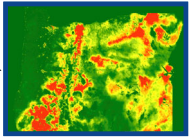


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Vegetation burn probability (optional selection)



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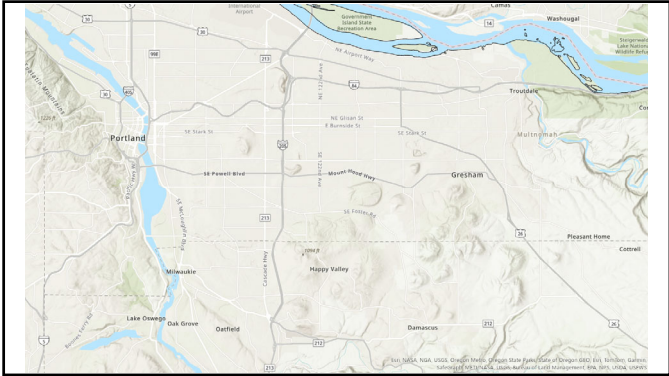


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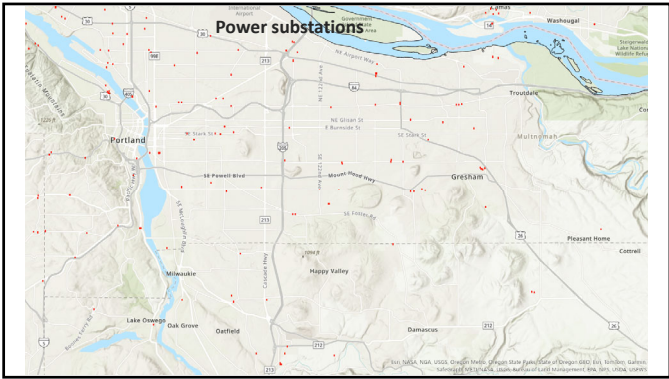
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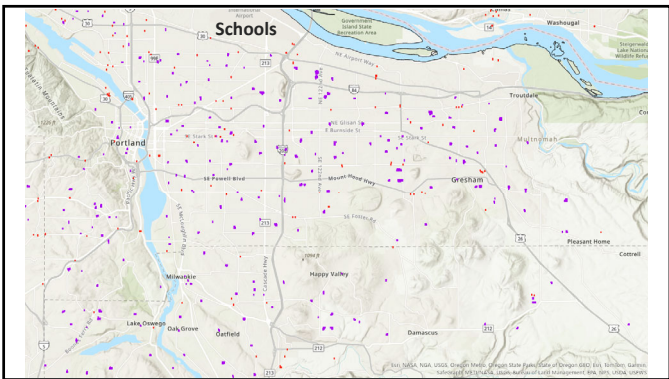
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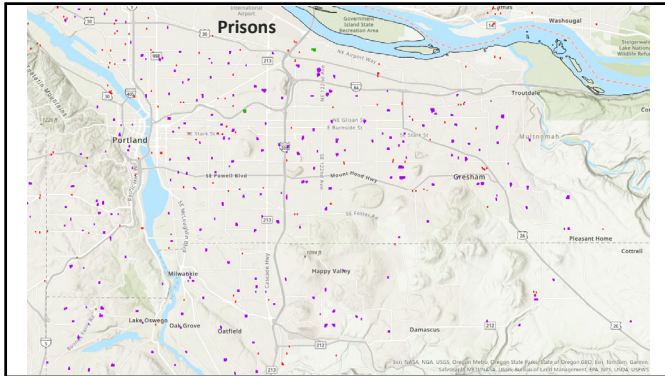
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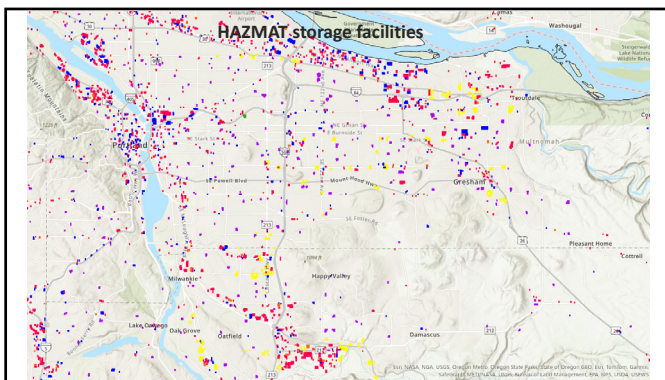
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 **Thoughts and Questions...**




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 **OrCRAFT Beta Testing**
Analyzer and Standard Versions

- Looking for people to test both versions.
- 30 days
- Complete a survey
- Interested? Signup via link or QR code:
 - <https://forms.office.com/g/qPkw099XMY>
- Additional questions:
 - osfm.data@osfm.oregon.gov

Oregon Community Risk
Assessment Fire Tool (OrCRAFT) -
Beta Tester Sign Up



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