



WILDFIRE

Washington DNR Wildfire Hazard & Risk Mapping

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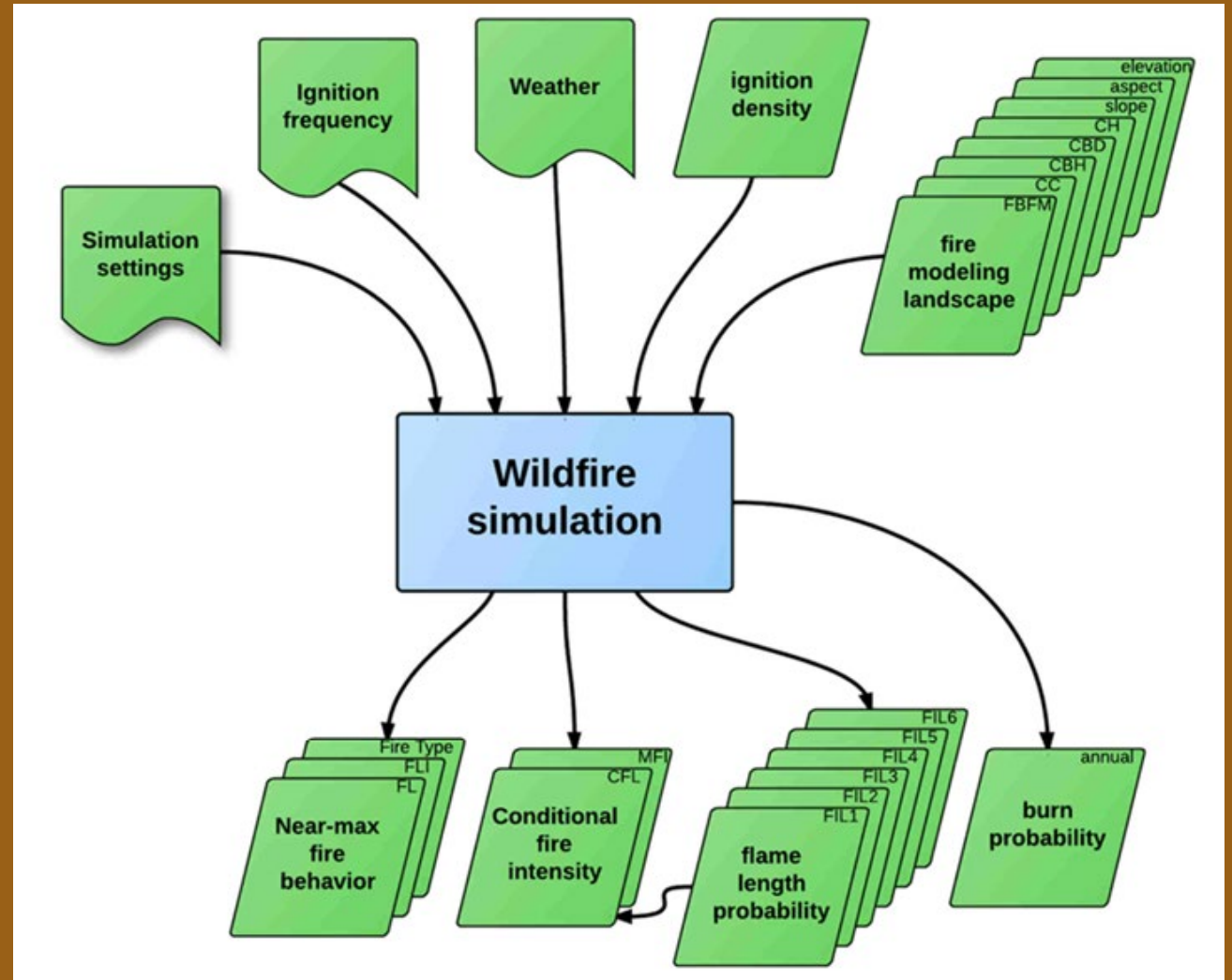


WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

dnr.wa.gov

Agenda

- **SB6120 Directives**
- **Methodology**
- **Next Steps**



SB6120 Directs DNR to:

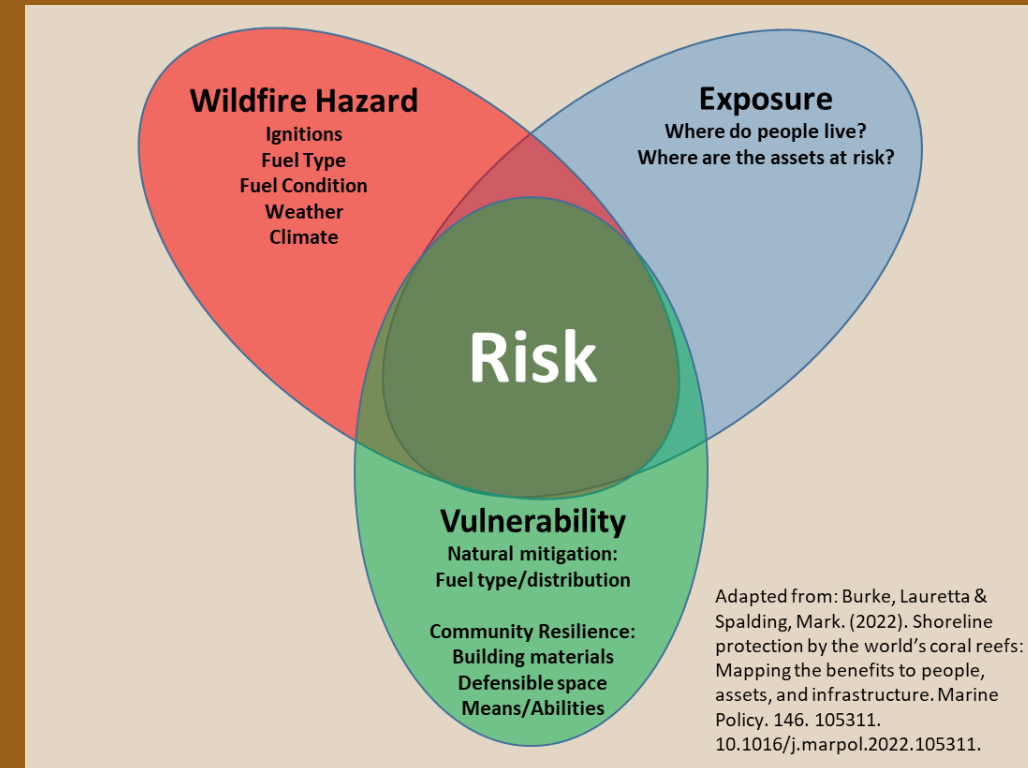
1. Establish a statewide wildfire hazard map
 - Provide the hazard map on the department's website and designate areas as low, moderate, high, and very high wildfire hazard
2. Establish a base-level wildfire risk map for each county of the state
 - Coordinate with the state fire marshal office to develop criteria for risk mapping
 - Provide the risk map on the department's website and designate vulnerable resources or assets based on their exposure and susceptibility to a wildfire hazard



SB6120 Directs DNR to:

3. Establish a method by which local governments may update the wildfire hazard map and wildfire risk map based on local assessments and approved by the jurisdiction's fire marshal

4. Publicly display the criteria and analysis utilized in assessing the wildfire hazard and risk

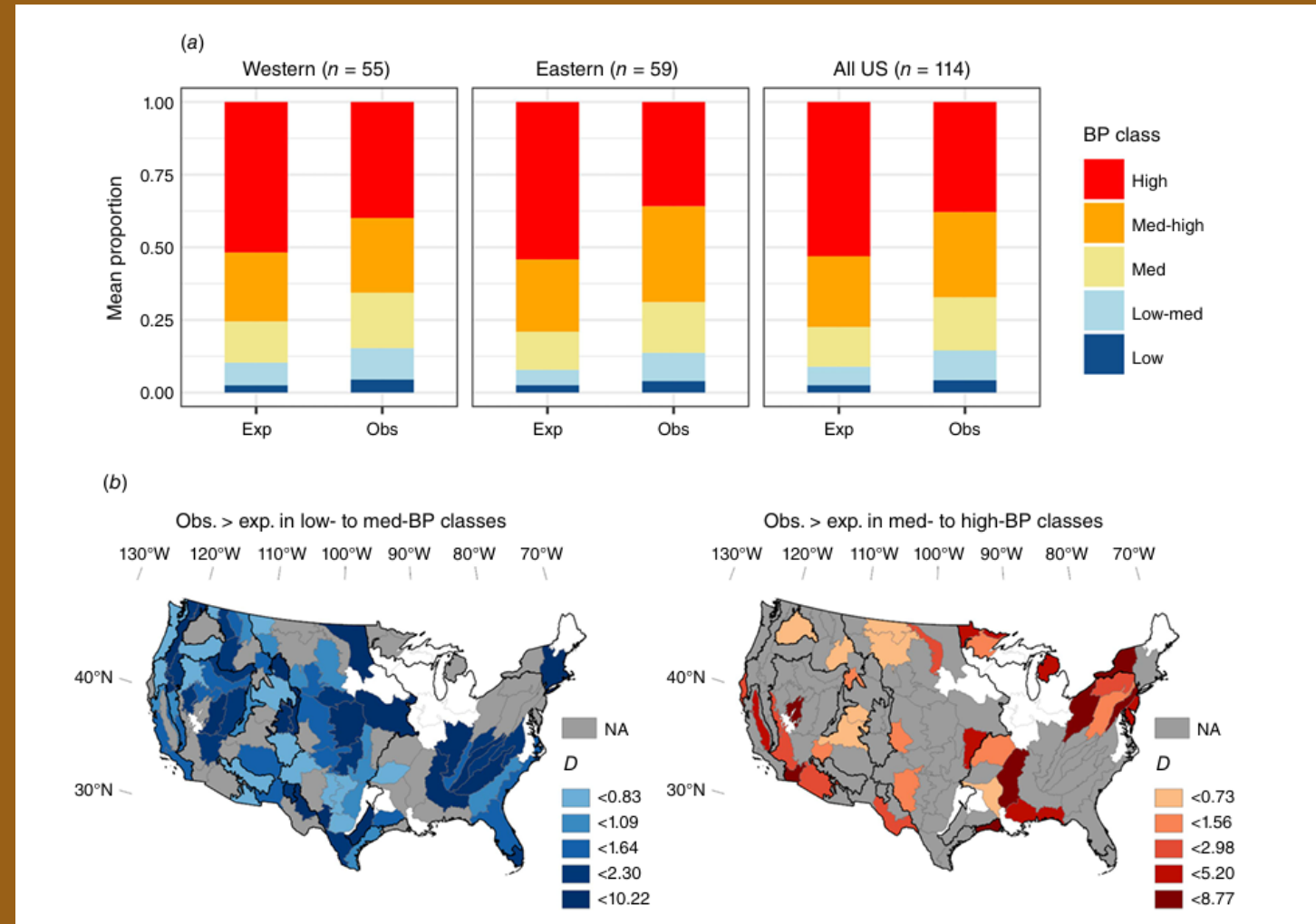


Tools

FSim Large-Fire Simulator

FSim Key Points

- Developed by the USFS and in use since 2011
- Source model for national 270m wildfire hazard map and 2018/2023 PNW QWRA
- Required input datasets readily accessible
- DNR has access to the executable files and can run the model locally at higher resolutions

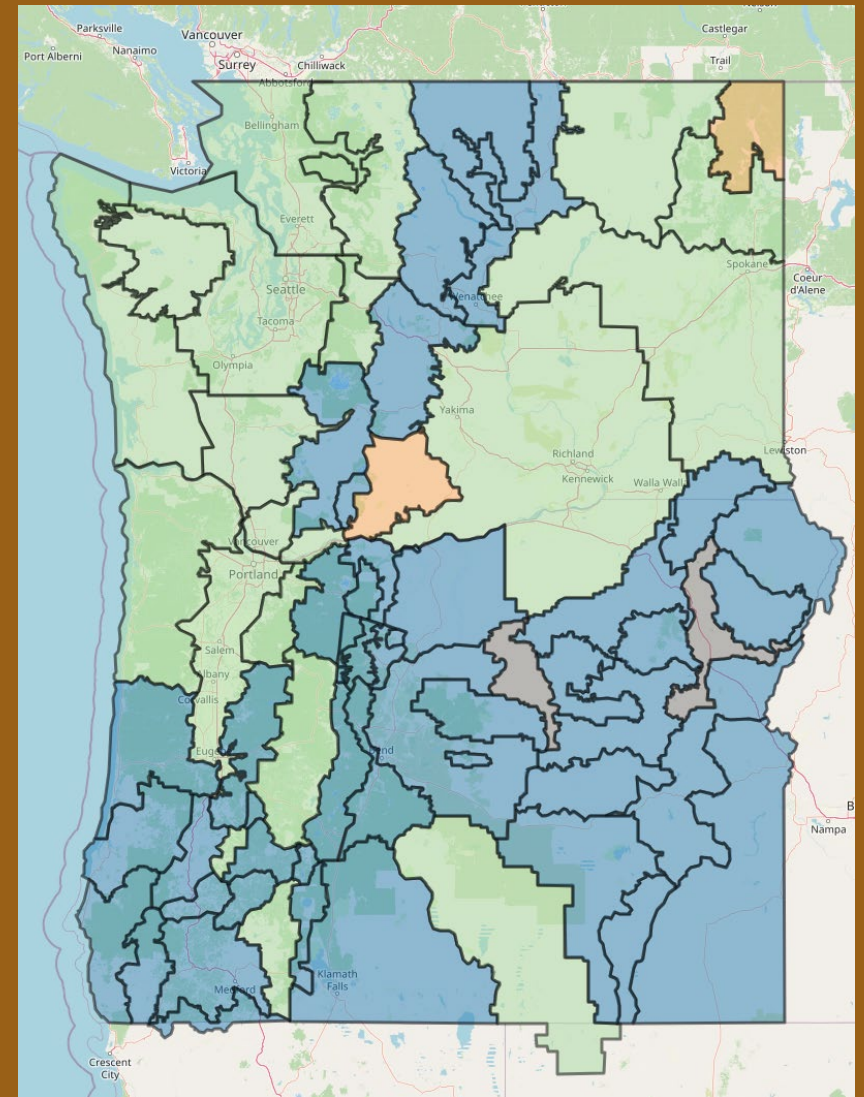


Evaluating a simulation based wildfire burn probability map for the conterminous US (Carlson et al., 2025)



Input Datasets Required

- **Historic Fire Occurrence Data**
 - Where do fires ignite on the landscape?
 - Highly detailed and accurate data is available back to 1992
- **Historic Weather and Fire Danger Data**
 - When fires ignite, what are the weather and fire danger conditions like in each sub-region of the state?
 - Excellent long-term weather and fire danger datasets available
- **Fuelscape**
 - When fires ignite, what is the vegetation and terrain like in each sub-region of the state?
 - Highly detailed and up to date fuelscape layers are readily available



Fire Danger Rating Areas: Good model for subdividing the state into areas of similar climate, topography, and vegetation



Next Steps

Hazard Map

- Divide the state based on sub-regions of similar climate, topography, and vegetation
- Run FSim to simulate 1,000 fire season for each sub-region

Risk Map

- Development relies on the outputs of the Hazard Map
- Awaiting clarification and guidance regarding SB6120 language

GIS/Mapping

- Solidify methodology for local-level assessments and modifications





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