

# ASCENT Project 001(A) Wildfire Risk Assessment for a Supply Chain System

## Washington State University

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Cost Share Partner(s): Academic Year Salary



## Objective:

This study develops an integrated probabilistic wildfire risk assessment framework for a supply chain system that provides rigorous probabilistic descriptions of wildfire likelihood, growth, and consequences and accounts for cascading effects in estimating system-wide risks.

## Project Benefits:

Wildfire risk to a supply chain system (especially involving feedstocks vulnerable to wildfire) and potential disruptions to its performance have been understudied. This study provides a quantitative methodology for assessing post-wildfire supply chain performance.

## Research Approach:

The framework consists of three modules: the first module estimates site-specific large wildfire occurrence rates by combining historical fire records with weather data and generates the stochastic catalog of wildfire; the second module is to simulate the growths of all fires in the stochastic catalog based on weather conditions, topography, and fuel properties; the third module is to examine the interaction between supply chain system components and wildfire; and the last module assesses post-wildfire system-wide performance.

## Major Accomplishments (to date):

1. One journal paper has been accepted and will be published in IJDRR.
2. One conference paper has been published in the Proceedings of ICASP14.

## Future Work / Schedule:

This study will be extended to develop a more comprehensive wildfire risk assessment framework that considers various effects on different parts of the supply chain system.