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WILDLAND FIRE Primer

This Primer is designed to describe the likely causes and impacts that could occur from Wildland Fire. OCIA will release additional analysis as needed if a wildland fire event were to occur.

The persistent drought coupled with a prolonged hot and dry weather pattern and limited snow pack in the western United States will likely lead to an active wildland fire season in the Pacific Coast States such as California, Oregon and Washington and this condition also extends into the northern Rocky Mountain states of Idaho and Montana.

GROUND FIRE

Burns on or below the forest floor. Peat, duff (decomposing materials), dead moss and lichens, and rotted wood are typical ground fire materials. Ground fires usually burn slowly by smoldering.

SURFACE FIRE

Spreads along the forest floor consuming vegetation, leaf litter, grass and shrubs. These are the most common type of wildland fire.

CROWN FIRE

Burns at the tops or crowns of trees and shrubs and is spread rapidly by wind. The potential for long-range spotting and extreme intensity make these kinds of fires difficult to suppress.

Cause

- **Human Activity:** The National Interagency Fire Center estimates an average of 90 percent of wildland fires in the U.S. were caused by human actions such as unattended campfires, discarded cigarettes, burning debris, or intentional acts of arson.
- **Natural Activity:** The remaining 10 percent of wildland fires are attributable to natural causes such as lightning strikes; drought; spontaneous combustion of accumulated dead matter on forest floors.

Wildland-Urban Interface

- Area where structures are located near or among undeveloped natural areas
- Structures are threatened by wind-blown embers, contact by flames or radiant heat
- Creating defensible space around structures can slow or stop the spread of a fire by removing or treating potential fuel sources
- Home Ignition Zone: creating a defensible space up to 200 feet from a residence

Potential Infrastructure Impacts

- **Transportation Systems Sector:** Physical damage to roadways, rail lines and bridges; closure of airports; air traffic rerouted due to visibility problems caused by smoke and haze.
- **Energy Sector:** Damage to ground distribution systems, lines, poles, substations and transformers; ash causing arcing to propagate across insulators resulting in line outage.
- **Water and Wastewater Systems Sector:** Loss of electric power is the primary risk to water infrastructure from wildland fires creating need for reliable backup power generation capabilities; fires burning adjacent to watersheds may affect water quality.
- **Communications Sector:** Damage to landlines and wireless towers; overwhelmed networks due to spike in demand from first responders and affected residents; wildland fires often occur in remote areas where wireless networks are weakest.
- **Emergency Services Sector:** Damage to roadways or airports can slow response times.

Homeland Security

National Protection and Programs Directorate
Office of Cyber and Infrastructure Analysis (OCIA)