

# Why are some forest fires so intense?

Fire is an ongoing, natural change agent in Idaho's forest ecosystems. Historically, low-intensity fires burned small areas of the ponderosa pine and dry mixed-conifer



forests of southern Idaho every 5 – 40 years. In the wetter regions of northern Idaho, fires came every 100 - 450 years, but were larger and often burned entire forest stands. A century of fire suppression interrupting natural fire cycles without a

matching level of fuels reduction has resulted in massive fuel build-up and fires that are larger and more intense.

## Forests At Risk

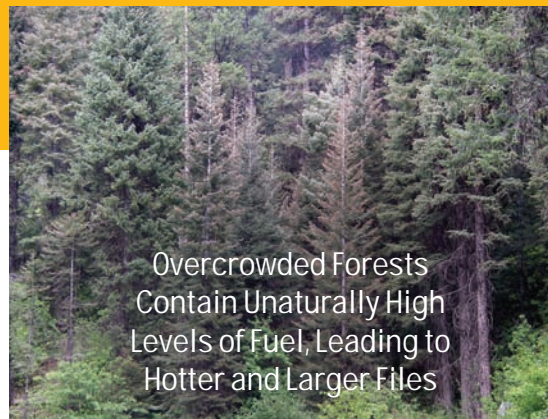
A large percent of Idaho's forests are at dangerously high risk of severe fire because of dense forests overcrowded with stressed, dying and dead trees.



These "at-risk" forests burn more intensely and are more likely to destroy existing wildlife habitat, threaten homes and watersheds, damage soils, and emit large amounts of carbon dioxide and other pollutants.

## Fuel Ladders

In overcrowded forests, fire jumps quickly from the ground to tree tops. Shrubs, small trees, snags and downed logs, low branches and harvest debris can all act as fuel ladders during a wildfire. When ground fire ignites understory trees, flames climb to the crowns of big trees and spread through the canopy. Crown fires can burn hotter and are more hazardous for firefighters to fight.



Overcrowded Forests Contain Unnaturally High Levels of Fuel, Leading to Hotter and Larger Fires

## Carbon Emissions

By capturing, storing and cycling carbon, forests play a key role in the global carbon cycle. During a wildfire, carbon goes into the atmosphere as carbon dioxide and impacts the air we breathe.



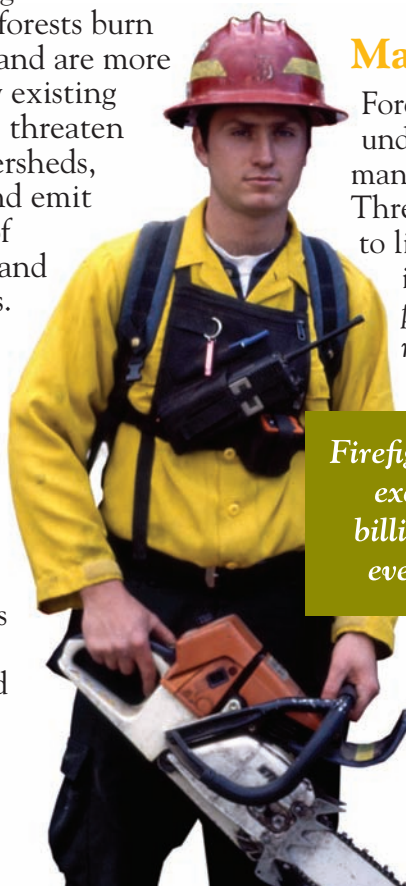
CO2 emissions from Idaho wildfires.

## Managing For Fire Resiliency

Forest managers are using our understanding of fire's historic role to manage forests sustainably for the future. Three common management tools used to limit the severity of wildfire and help improve fire resiliency include *thinning*, *prescribed burning after thinning* and *mechanical treatments such as logging*.

Reducing fuel loads by thinning trees and harvesting timber help make forests more resilient to wildfires.

Firefighting costs exceed one billion dollars every year!



Learn more at [www.idahoforests.org](http://www.idahoforests.org)