

Wildfires Threaten Forests: Major Contributor of Greenhouse Gas

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Forests have the potential to aid in the fight against global warming, but wildfire is a major contributor to atmospheric carbon. Legal gridlock has resulted in federal forest management policies that have turned some of our federal forests into significant contributors of atmospheric carbon.

For example, the 2002 Biscuit Fire in southwestern Oregon (almost entirely on the federal Kalmiopsis Wilderness) released about a fourth as much carbon into the atmosphere as was emitted statewide that year by the burning of fossil fuels.¹

“Fires contribute more to carbon levels in the atmosphere than any other cause,” notes Scientific American magazine.

Not only do wildfires pump greenhouse gases directly into the atmosphere, they also kill millions of trees, reducing for a time the ability of the forest to absorb carbon and produce oxygen.

In 2007, U.S. wildfires burned nine million acres²—an area larger than Massachusetts, Connecticut and Rhode Island combined. Those fires dumped more than 300 million tons of CO₂ into the atmosphere³—equal to more than 54 million cars.⁴

The Fire Threat

- ▶ **Decades of fire suppression**, combined with low harvest levels and inadequate thinning, has created unnaturally dense forests on federal lands that are hazardous to the environment and public safety.⁵ In some areas, 500 or more trees per acre now stand where fewer than 70 trees stood historically. Underbrush and dead trees choke the forest floor and fuel wildfire.⁶
- ▶ **Today’s dense forests create “tinderbox” conditions** that exacerbate wildfire behavior. In fact, six of the 10 most intense fire seasons (measured in acres burned) have occurred since 1999, and the last four fire seasons (2004-2007) have burned more than eight million total acres⁷—the most since modern record-keeping began in 1960.



“Wildfire contributes to increasing atmospheric CO₂ concentration, therefore intensifying the greenhouse gas effect. The problem isn’t global warming causing fires, the real problem is these fires contributing to the greenhouse gas emissions that cause global warming.”

Tom Bonnicksen
California forest and wildlife expert
San Francisco Chronicle,
October 25, 2007



¹ Forests, Carbon and Climate Change — OFRI.

² National Interagency Fire Center, Wildland fire statistics, 2007 from http://www.nifc.gov/fire_info/fire_stats.htm.

³ Wiedinmyer, C., and J. Neff, 2007, Estimates of CO₂ from fires in the United States: implications for carbon management, Carbon Balance and Management, 2(10).

⁴ Bonnicksen, Thomas M., Protecting Communities and Saving Forests: Solving the Wildfire Crisis Through Restoration Forestry, The Forest Foundation, 2007.

⁵ <http://www.epa.gov/solar/energy-resources/calculator.html>.

⁶ U.S. Forest Service, California Region; Mike Landram, Regional Silviculturist.

⁷ U.S. Forest Service FIA California Data 2001-2005; U.S. Forest Service Westcore Tables for National Forests of California, Gross Growth/Mortality and Net Growth by Forest, California Region, 2008.

Preventing Wildfire and Making Forests “Fire Safe”

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What You Can Do:

Home Protection—Support policies that require homeowners to provide 100 feet of defensible space from all buildings and structures or to the property line in the rural/urban interface.

Forest Protection—Support policies that promote health and fire resiliency in our private and public forests, including brush removal, thinning and harvest practices that encourage healthy trees.

Aggressive Initial Attack Response—Support adequate fire suppression/readiness funding and fire response policies, in conjunction with forest protection measures mentioned above, to contain fires during initial attack actions to help limit the number, size, cost and detrimental environmental effects of large fires.

Ensure recognition and acceptance of fire as a forest management tool under appropriate conditions—Support the continued use of fire in a prescribed plan to reduce fuels and maintain treated forests in a fire-safe condition. While prescribed burning results in some emissions, they substantially reduce the risk of emissions associated with uncharacteristically large wildfires.

preventing wildfires



Forests need proper management to be safe, healthy and productive

- ▶ **Thinning** overly dense forests to restore their health and fire resiliency can have a significant positive effect on climate change.