



Highlights of [GAO-04-705](#), a report to congressional requesters

Why GAO Did This Study

Decades of fire suppression, as well as changing land management practices, have caused vegetation to accumulate and become altered on federal lands. Concerns about the effects of wildland fires have increased efforts to reduce fuels on federal lands. These efforts also have environmental effects. The requesters asked GAO to (1) describe effects from fires on the environment, (2) assess the information gathered by the Forest Service and Bureau of Land Management (BLM) on such effects, and (3) assess the agencies' approaches to environmental risks associated with reducing fuels.

What GAO Recommends

This report recommends that the Secretaries of Agriculture and the Interior (1) develop a plan to implement the agencies' monitoring framework, (2) develop guidance that formalizes the assessment of landscape-level risks to ecosystems, and (3) clarify existing guidance, working with the Council on Environmental Quality (CEQ), to assess the risks of environmental effects from reducing fuels.

Commenting on the draft report, Agriculture and Interior agreed that more data are needed and prioritization of fuels work can be improved, but had concerns about developing guidance on a risk-based approach. CEQ commented that its guidance is not intended to address risk analysis.

www.gao.gov/cgi-bin/getrpt?GAO-04-705.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Barry T. Hill at (202) 512-9775 or hillbt@gao.gov.

WILDLAND FIRES

Forest Service and BLM Need Better Information and a Systematic Approach for Assessing the Risks of Environmental Effects

What GAO Found

Wildland fires can have dramatic effects on environmental resources and ecosystems, including production of large amounts of smoke, loss of trees, and erosion of soil into streams and lakes. However, fires can also benefit resources by recycling soil nutrients, renewing vegetation growth, and adding gravel to streams, which improves spawning habitat for fish. The 20 wildland fires that we surveyed burned over 158,000 acres of federal land and had complex, wide-ranging, and sometimes contradictory, effects on both individual resources, such as trees and streams, and ecosystems. For example, the short-term effects of the Missionary Ridge fire in Colorado that burned almost 50,000 acres of trees and other vegetation included increased debris and sediment that affected water quality in some areas. However, in other areas, officials said even dramatic changes to streams would not be detrimental in the long term.

The Forest Service and BLM gather specific information on the environmental effects of individual wildland fires, such as soil erosion. The agencies do not, however, gather comprehensive data on the severity of wildland fire effects on broad landscapes and ecosystems—that is, large areas that may involve one or more fires. The agencies recently developed a monitoring framework to gather severity data for fires, but they have not yet implemented it. These data are needed to monitor the progress of the agencies' actions to restore and maintain resilient fire-adapted ecosystems, a goal of the National Fire Plan.

The National Fire Plan directs the Forest Service and BLM to target their fuel reduction activities with the purpose of lowering the risk of environmental effects from wildland fires in areas that face the greatest losses. However, the agencies do not systematically assess the risks across landscapes that fires pose to different environmental resources or ecosystems or the risks of taking no action on fuel reduction projects. At the landscape level, the Forest Service and BLM do not have a formal framework for systematically assessing the risk of fire to resources and ecosystems, although some of the forests and BLM field offices have developed risk assessments on their own or in collaboration with regional, state, or local efforts. At the project level, while the agencies recognize the need to better analyze the risk of acting to reduce fuels versus not doing so, neither fire planning guidance nor National Environmental Policy Act guidance specify how to do this. Opportunities exist to clarify how the agencies should analyze the effects of not taking action to reduce fuels. The agencies can clarify interim guidance to implement the Healthy Forests Restoration Act, and the agencies can, in conjunction with CEQ, further develop the lessons learned from a CEQ demonstration program carried out in 2003. Without a risk-based approach, these agencies cannot target their fuel reduction projects across landscapes or make fully informed decisions about which effects and project alternatives are more desirable.