



Smoke Management



Where There's Fire, There's Smoke

The use of fire on our public lands is a management tool used in restoring natural ecosystems. But of course where there's fire, there's smoke. Smoke from wildland fires often travels long distances, potentially

affecting people's health and the economy of a region. Mitigating the impacts of smoke from these fires is one of the issues land managers face.



Policies Regulating Smoke Management

Federal fire management agencies are required to follow regulations that address potential environmental impacts from wildland fire, including smoke. The foundation of air quality regulation in the United States is the Clean Air Act.

Clean Air Act (Public Law 95-95)

- ◆ The Clean Air Act gives the Environmental Protection Agency the task of setting limits on how much of various pollutants can be in the air. States develop specific programs for implementing the goals of the Clean Air Act.
- ◆ Three air quality classes were established by the Clean Air Act. Class I areas are subject to the tightest restrictions on how much additional pollution can be added to the air that may affect both visibility and public health.

Health Effects of Wildland Fire Smoke

In general, particulate matter from smoke is the major pollutant of concern to humans.

- ◆ Particulate matter is a general term for a mixture of solid particles and liquid droplets found in the air. Particulate matter from smoke tends to be very small and may constitute a public health risk in high concentrations.
- ◆ Particulate matter in smoke can cause eye and respiratory irritation and can exacerbate more serious conditions such as asthma and bronchitis. Airborne particles can also cause persistent cough, wheezing and physical discomfort in breathing.
- ◆ Not everyone who is exposed to smoke will have health problems. Most healthy adults recover quickly from smoke exposure and will not suffer long-term consequences. Certain sensitive populations, including individuals with respiratory problems, cardiovascular disease, the elderly and children, may experience more severe symptoms.
- ◆ The long term risk from air pollutants from wildfire smoke is very low.

Economic Effects of Wildland Fire Smoke

Smoke from wildland fires can have economic impacts (both positive and negative) on local businesses and individuals.

Negative Impacts

- ◆ Loss of tourism revenue
- ◆ Impaired visibility
- ◆ Short-term aesthetics
- ◆ Health care costs
- ◆ Temporary road and trail closures

Positive Impacts

- ◆ Increased revenue from fire management operations
- ◆ Increased visitor revenue from ecosystem restoration
- ◆ Improved fire safety for local residents
- ◆ Reduced risk of catastrophic wildfires



Smoke Management in National Parks

During fire season, meteorologists issue daily smoke forecasts to help land managers plan strategies and make decisions about fire activity, wildland fire use and smoke management.

The timing of prescribed burns can reduce the amount of smoke by:

- ◆ Burning when fuels are dry.
- ◆ Burning early in the day so smoke will have a chance to clear before nightfall.
- ◆ Burning under favorable wind conditions.
- ◆ Coordinating with other fire management agencies that may be burning in the area.