



Impacts of the Pole Creek Fire on Fish, Wildlife and Aquatic Habitat, and on Public Health

The lightning-caused Pole Creek Fire burned more than 26,000 acres in the Deschutes National Forest in 2012, sending thick smoke into Sisters and nearby areas. Like other recent fires on federal forests, it was uncharacteristically severe - the result of fuel buildups due to lack of active management, insect-caused tree death, and a longstanding policy of fire suppression.

The 2013 Legislature called for a report on the fire's impacts. Findings included a period of unhealthy air quality, and forest effects such as destruction of normally fire-resistant stands, loss of sensitive forest and stream habitat, and changes that will benefit some species over time.

Impacts on public health

- While direct injuries from burns and inhalation of hot gases were not noted, **some communities were affected by smoke containing fine particles.**
- **High levels of fine particles in the air** have been associated with increases in heart-related and respiratory-related health problems in people with pre-existing heart and lung disease.
- **Two smoke-related motor vehicle crashes** with no reported injuries occurred during the wildfire.
- There was **no increase in hospitalizations related to heart and respiratory health problems** during or immediately following the wildfire.
- **Deaths from heart-related and respiratory-related causes** occurred during the wildfire, but determining which, if any, of these deaths were attributable to smoke from the event is difficult.



Smoke from the Pole Creek Fire hangs over the Sisters rodeo grounds.

Impacts on fish, wildlife and aquatic habitat

- **Entire forest stands burned** across 40 percent of the fire area, with impacts more moderate on the remainder. This was not an isolated event. Since 1990, 25 large wildfires have occurred in the watershed.
- **Some impacts potentially beneficial.** Increase in open-canopy habitats a benefit to big game species.
- **Others impacts detrimental to fish, wildlife and aquatic habitat.** Loss of interior older forest habitat and connectivity between older habitats; loss of headwater streamside habitats; abrupt changes in forest vegetation composition; potential for earlier snowpack melt with loss of forest canopies and soil cover.
- **Soil damage kills primary food web species.** With these organisms (such as plants) removed, entire food chains that include fish and wildlife species are affected.
- **Streamside vegetation loss increases stream temperatures.** Creates potential for ash flows and flooding over surfaces and in streams, and degradation of water quality with increased surface erosion.
- **Wildlife habitat loss.** Full destruction of forest canopy in areas that historically have experienced fire at much lower intensity.

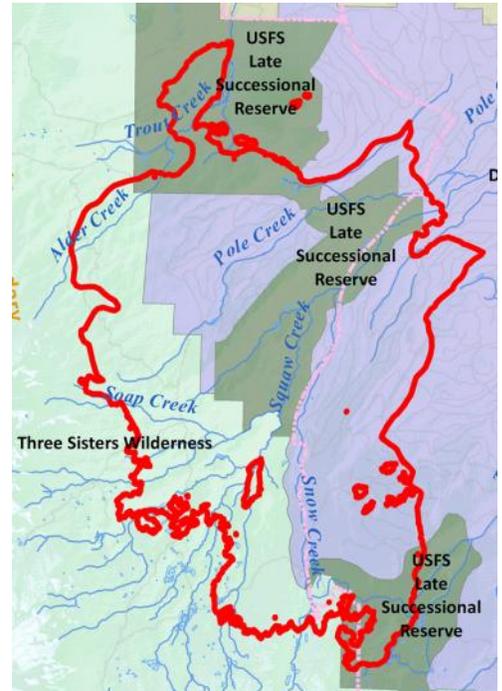
Impacts of the Pole Creek Fire, cont.

OHA recommendations

- Encourage local communities to utilize the “Oregon Wildfire Response Protocol for Severe Smoke Episodes,” available online: www.deq.state.or.us/aq/burning/docs/WFresponse.pdf.
- Encourage Oregon hospitals to implement Oregon ESSENCE (an electronic system for early notification of community-based epidemics) to improve timely reporting of emergency department data and allow for better coordination of health service delivery during any emergency response.

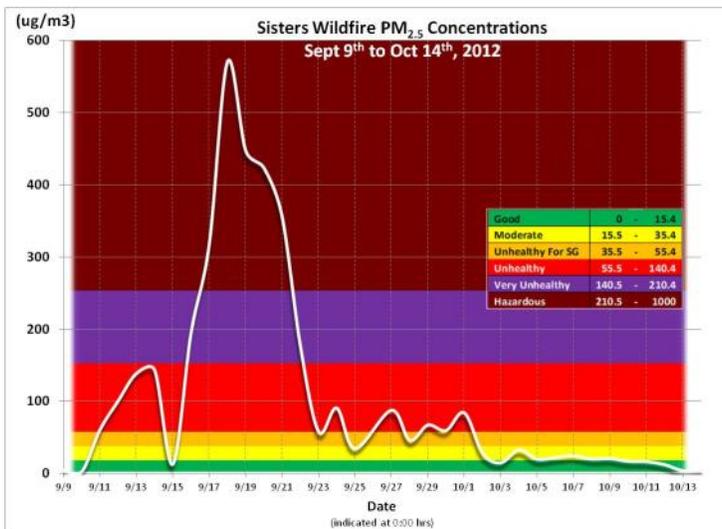
ODF recommendations

- Support increased active management on federal forests. Continue with action steps identified by the Board of Forestry, and restoration work funded in the 2013-2015 state budget.
- Encourage implementation of the National Cohesive Wildland Fire Management Strategy. Now being piloted in the Blue Mountains of Northeast Oregon, the strategy seeks to restore ecosystem health and wildfire resilience, help communities adapt to wildfire, and continue to support safe, effective firefighting response.
- Develop policies that allow timely post-fire recovery and restoration. The risk of fire reoccurrence and fire severity increases substantially if salvage and other fuel reduction actions do not occur promptly. Failure to address this issue ultimately transfers fire risk to adjacent landowners.
- Continue with steps taken in 2013 to improve communication and coordination among fire agencies and landowners, as identified in the Department of Forestry review of 2012’s large multi-jurisdiction fires.



The Pole Creek Fire occurred on federal lands, with the community of Sisters just six miles to the northeast. In addition to human health impacts, the fire severely burned important older forest-wildlife habitats.

Sisters experienced six days of severely degraded air quality during the Pole Creek Fire, when the 24-hour average for levels of fine particulate matter (PM_{2.5}) remained in the “Very Unhealthy to Hazardous” range.



Dense smoke entered Sisters and other communities during the fire's peak.

Full report online:
Oregon Health Authority, <http://healthoregon.org>
Oregon Dept. of Forestry, www.oregon.gov/odf