

## Open Field Burning in the Willamette Valley

### Background and history

[The Oregon Department of Agriculture \(ODA\) Smoke Management Program](#) regulates the burning of up to 15,000 acres of certain grass seed fields in limited areas of the Willamette Valley each summer. Another 2,000 acres of field burning can be authorized by DEQ as [emergency burning](#), but only as a remedy to address major disease outbreaks or insect infestations. Other restrictions apply to general field burning if it's conducted near any school, hospital, airport, or under a power transmission line. Except for [emergency field burning](#), all general field burning is regulated by ODA.

Historically, field burning was a widespread practice throughout the Willamette Valley. It was used to dispose of leftover straw and stubble on grass seed fields, and control weeds, insects and plant diseases, which in turn helped maintain grass seed purity and improve yield. As much as 250,000 acres were burned each summer in the mid-1980s.

A 1988 accident on Interstate 5 involving multiple cars and causing seven fatalities was attributed to decreased visibility caused by field burning smoke. This led to a major reduction in burning over the next ten years to about 65,000 acres. In 2009, field burning was again reduced to the current level of 15,000 acres. This burning is limited to the northeastern portion of the Willamette Valley, mostly in Marion County, and allowed only for specific types of perennial grasses, or fields on highly erodible steep lands. There is also very limited burning of stacked or piled straw, and propane flaming of fields where most of the residue has been removed. Both stack and propane burning will no longer be allowed after 2012.

### Health effects

Field burning produces smoke that contains several pollutants that can cause health problems, depending on the level and duration of exposure. One of the primary pollutants of concern is [fine particulate matter](#), which can be inhaled deep into the lungs. The elderly, children, and people with pre-existing respiratory conditions are at greatest risk from this smoke.

While efforts are made to conduct burning under optimum smoke dispersal conditions, some field burning smoke impacts do occur. These impacts rarely cause air quality to exceed the federal fine particulate health standard. This is because the impacts are typically of relatively short duration, and occur during summer months, when particulate air pollution levels are generally much lower than they are in winter months.

### Smoke management

ODA's Smoke Management Program controls the burning on a daily basis to avoid smoke impacts in populated areas. Burning is authorized only after careful evaluation of weather conditions using the latest meteorological forecasting techniques. DEQ provides smoke monitoring equipment to ODA to track air quality and smoke levels. Growers must strictly follow ODA burning instructions, and failure to do so can result in enforcement action and fines for violations of program rules.

### Alternatives to burning

In addition to smoke management, ODA manages research and development into alternatives. This includes finding ways to maintain high yields without burning, straw removal and marketing, and alternative crops. Many alternatives to field burning are currently practiced in the Willamette Valley. These include crop rotation, chemical applications, straw removal and propane flaming. The baling and selling of grass seed straw has become an important agricultural commodity. The straw is sold all over the world as an animal feed supplement and for other uses.

### Smoke complaints

If smoke impacts occur, ODA has a field burning complaint line available to the public: 503-986-4709. If a caller receives a tape recorded message, the caller will be asked to leave a detailed message describing the smoke problem, and a call-back number. Complaints are compiled weekly and reported to the Governor's Office.



State of Oregon  
Department of  
Environmental  
Quality

### Air Quality Division Airshed Planning Program

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**For more information:**  
ODA Smoke Management  
Program, Salem:  
<http://oregon.gov/ODA/>  
(503) 986-4701

**Alternative formats:**  
Alternative formats (Braille,  
large type) of this document  
can be made available.  
Contact DEQ's Office of  
Communications &  
Outreach, Portland, (503)  
229-5696 (toll-free in OR at  
1-800-452-4011, x5696)