



## **Sugar Cane Burning on Maui**

**Prepared by the Department of Health,  
Clean Air Branch  
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### **Sugar Cane Burning**

The practice of agricultural burning is widely used in Hawaii as well as other states such as California, Florida and Louisiana. Sugar cane and pineapple fields have been burned in the past on all Hawaiian Islands for many years. Burning the sugar cane fields is a part of the harvesting process. It removes excess leaves and reduces the volume of material that must be transported and processed by the mill, where the sugar production process begins.

### **Community Perspectives**

Cane burning creates smoke, ash and air pollutants. The Hawaii State Department of Health recognizes that many in the community have raised concerns about the safety and health effects from the smoke and other pollutants. Some have advocated that agricultural burning be banned in Hawaii. Others see cane burning as an inconvenient trade-off for the opportunity to live in wide open, undeveloped green spaces.

### **The Department of Health's Role**

The Department of Health's role is to regulate and monitor air quality in Hawaii. This extends to regulatory oversight of sugar cane operations. The Clean Branch is responsible for ensuring companies comply with all applicable laws. This includes:

- Reviews and approves air and agricultural burning permits
- Evaluates and enforces state and federal air standards
- Conducts inspections, and investigates reported incidents related to outdoor air quality, and
- Ensures companies comply with state and federal emission standards to minimize air pollution

### **Agricultural Burning**

An open, outdoor fire or "open burning" is generally prohibited except for activities such as cooking, fire training, and agricultural burning with a valid permit. The Department of Health regulates agricultural burning activities through the Agricultural Burning Permit (AGP) program. To burn green waste generated from agricultural operations, businesses must obtain a permit.

The AGP must comply with permit conditions which include:

- Notification requirements

- Specific locations where burning will take place
- Times when the burning may occur
- Limitations of what materials can be burned
- Measures to minimize visible smoke impacts to schools, highways, airports, and other sensitive areas

Agricultural burning may be further restricted by government agencies in times of drought, fire hazards or a "No-Burn Period."

### **No-Burn Periods**

Under Hawaii law, a "no-burn" period is declared when meteorological conditions result in widespread visible haze in any district or any island and these meteorological conditions will continue or deteriorate.

### **National Ambient Air Quality Standards**

The federal Clean Air Act established the National Ambient Air Quality Standards (NAAQS) for a number of air pollutants. The U.S. Environmental Protection Agency (EPA) set and updates these standards on a regular basis. These standards represent thresholds at or below which no adverse public health impacts are expected.

The NAAQS have two categories of standards:

- Primary standards are limits, with a margin of safety, to protect public health, including the health of sensitive populations such as children, the elderly, and people with respiratory disease.
- Secondary standards are limits to protect public welfare, including protection against visibility impairment, damage to animals, crops, vegetation, and buildings.

Particulate Matter with an aerodynamic diameter of 2.5 microns or less (PM2.5) is the relevant pollutant measured for smoke.

### **Ambient Air Quality Monitoring**

Air monitoring is the most objective means for measuring levels of air pollutants. The Department of Health has been monitoring air quality in eight different locations on Maui from 1971 to the present. No violations of the NAAQS were found to occur.

The Department of Health operates three ambient air quality monitoring stations on Maui; the Kihei station is located downwind of sugar fields, the Paia station, and the recently added Kahului station. The primary purpose of these stations is to monitor cane burning. The air quality in Maui continues to meet the National Ambient Air Quality Standards. Monitoring data from all the monitoring stations statewide can be viewed at: <http://health.hawaii.gov/cab/hawaii-ambient-air-quality-data/>

### **Public Complaints and Ongoing Improvements**

The Department of Health is committed to maintain Hawaii's air quality and welcomes feedback from the community. The Department's Maui inspector investigates cane burning complaints. To file a complaint for submit a photo, click for [instructions](#).

We continue to monitor agricultural burning activities and work to minimize smoke impacts to the public. Based on feedback from the community, the Clean Air Branch has:

- Installed two additional PM2.5 monitoring stations in Paia and Kahului for a total of three monitoring stations.
- Issued the 2015 agricultural burn permit with additional requirements which provide more clarity and enforceability.
- Met with community representatives on Maui to hear their concerns on cane burning.