



SOUTHERN GROUP OF STATE FORESTERS

BRIEFING PAPER

Proposed EPA Ozone Standards Revision – Potential Impacts on Prescribed Fire

Issue

According to EPA emissions from industrial facilities, electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NO_x and VOC. However emissions from open burning contain ozone precursors; volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). VOCs and NO_x react in the presence of sunlight to produce ozone.

According to EPA maps all states in the South have one or more area(s) currently classified as non-attainment for ozone. Strengthening the ozone standards will likely add additional areas which will require new state implementation plans (SIPs). In some cases SIPs already restrict some open burning during the summer months since ozone is primarily a summer time problem, however in some case SIPs allow burning for silvicultural or wildlife management reasons. **Whether the new state SIPs for non-attainment areas will require additional restrictions on prescribed burning will likely depend on to what extent the state air quality agencies believe prescribed burning contributes to the ozone problem in a particular non-attainment area.**

Recommendations

It is recommended that state forestry agencies engage their state air quality agencies as they make recommendations to EPA on non-attainment areas (early 2011) and begin to develop their SIPs (late 2013).

Possible Talking Points

- SIPs must be implemented in a manner that allows state forestry organizations to implement fuel management techniques, such as prescribed fire, in an environmentally appropriate manner, yet consistent with land management needs.
- Unnatural build ups of wildland fuels are likely to burn at some point in time. The issue is whether the fuels will burn in a wildfire or a prescribed fire.

- It is significantly better to manage smoke from prescribed fires when burning can be done under favorable atmospheric conditions and smoke can be directed away from population centers, rather than risk the serious consequences associated with wildfires, including the human health impacts from uncontrolled wildfire smoke.
- As compared to stationary sources of ozone, prescribed fire is an intermittent source of ozone precursors that can be scheduled for times when meteorological and fuel conditions will result in minimizing ozone precursor emissions and impacts.
- Prescribed burns have numerous ecological benefits one of which is burning under controlled conditions allows for retaining organic soil cover, thus keeping watersheds protective of water runoff rather than polluting streams.
- Consider setting goals in SIPs for tree canopy cover. Although trees are emitters of VOCs they also reduce ozone with the net effect being a reduction of ozone.

Additional Background Information

The Clean Air Act requires EPA to set National Ambient Air Quality Standards (NAAQS) for [ground-level ozone and five other criteria pollutants](#). The Clean Air Act established two types of national air quality standards for ground-level ozone.

- **Primary standards** set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly.
- **Secondary standards** set limits to protect public welfare, including protection against visibility impairment, damage to animals, crops, vegetation, and buildings.

Breathing air containing ozone can reduce lung function and increase respiratory symptoms, thereby aggravating asthma or other respiratory conditions. Ozone exposure also has been associated with increased susceptibility to respiratory infections, medication use by asthmatics, doctor visits, and emergency department visits and hospital admissions for individuals with respiratory disease. Ozone exposure may also contribute to premature death, especially in people with heart and lung disease. High ozone levels can also harm sensitive vegetation and ecosystems.

On January 6, 2010, the EPA proposed to strengthen the national ambient air quality standards (NAAQS) for ground-level ozone. The proposed strengthening of the ozone standard is being based on over 1,700 scientific studies. The primary standard is designed to protect public health and the proposal is to decrease the 8-hour average from 0.075 parts per million (ppm) to a level within the range of 0.060-0.070 ppm. The EPA is also proposing to establish a different

secondary standard to protect sensitive vegetation and ecosystems. The EPA is proposing to set the level of the secondary NAAQS within the range of 7-15 ppm-hours.

Process

The public comment period closed 3/22/2010.

The final Rule is expected around the end of October; note that this is a delay from the originally published date of August 31, 2010. Once the final rule is approved EPA proposes to use the accelerated schedule outlined below.

The accelerated EPA schedule would be:

- o **By January 2011:** State air quality agencies make recommendations for areas to be designated attainment, nonattainment or unclassifiable.
- o **By July 2011:** EPA makes final area designations.
- o **August 2011** Designations become effective.
- o **December 2013:** State Implementation Plans, outlining how states will reduce pollution to meet the standards are developed by the state air quality agencies and are due to EPA.
- o **2014 to 2031:** States are required to meet the primary standard, with deadlines depending on the severity of the problem.

Additional information on the development of new ozone standards is available at: <http://www.epa.gov/air/ozonepollution/standards.html>