Information for 11/13 letter to legislators:

**Why are we doing this?**

There are areas in the state where air quality is close to or over the fine particulate matter ambient air quality standard. Work on the Klamath Falls attainment plan showed that impacts from a single business along with the background concentration could be up to 70 percent of the standard. Similar areas with similar sources are also in danger of violating the ambient air quality standard. This is a big risk for public health and economic development. If emissions from a single business can push an area to the brink of violating ambient air quality standards, new businesses may not able to come into the area, limiting economic development.

The proposed changes in the statewide particulate matter standards are proactive measures to help prevent violations of current standards and potentially even more stringent standards in the future. DEQ adopted similar, more stringent rules when areas like Medford and La Grande exceeded the coarse particulate ambient air quality standard and were designated as nonattainment areas by EPA. Adopting more stringent rules before areas exceed ambient air quality standards and become nonattainment areas, will help to avoid the severe nonattainment area restrictions that are required for businesses that want to build or expand in a nonattainment area.

**Health Effects**

PM emissions from the combustion of wood, whether in a residential woodstoves or industrial boilers, are a significant concern for human health. The PM emissions contain very small particles that get lodged in people’s lungs and cause health effects such as:

* Premature death in people with heart and lung disease
* Non-fatal heart attacks
* Increased hospital admissions, emergency room visits and doctor’s visits for respiratory diseases
* Increased hospital admission and ER visits for cardiovascular diseases
* Increased respiratory symptoms such as coughing, wheezing and shortness of breath
* Lung function changes, especially in children and people with lung diseases such as asthma
* Changes in heart rate variability
* Irregular heartbeat

The most susceptible are:

* people with heart or lung diseases
* children and older adults
* people of lower socioeconomic status
* pregnant women

**BENEFITS AND COSTS**

While the Clean Air Act prevents EPA from considering costs in setting or revising National Ambient Air Quality Standards, the Agency does analyze the benefits and costs of implementing standards. To estimate the benefits of meeting a standard, EPA uses peer-reviewed studies of air quality and health and welfare effects, sophisticated air quality models, and peer-reviewed studies of the dollar values of public health improvements. When fully met, the revised 24-hour PM2.5 standards are estimated to yield between $9 billion and $75 billion a year in health and visibility benefits in 2020. This estimate is based on the opinions of outside experts on PM and the risk of premature death, along with other benefits information.

The benefits of meeting the revised 24-hour PM2.5 standards include the value of an estimated reduction in:

* 2,500 premature deaths in people with heart or lung disease.
* 2,600 cases of chronic bronchitis.
* 5,000 nonfatal heart attacks,
* 1,630 hospital admissions for cardiovascular or respiratory symptoms,
* 1,200 emergency room visits for asthma,
* 7,300 cases of acute bronchitis,
* 97,000 cases of upper and lower respiratory symptoms,
* 51,000 cases of aggravated asthma,
* 350,000 days when people miss work or school, and
* 2 million days when people must restrict their activities because of particle pollution related symptoms.

DEQ is considering the following options for the PM grain loading standards:

1. Option A: 0.10 gr/dscf by 2019 for all sources

2. Option B: by 2019

* pre-1970 sources: high efficiency multiclone or 0.15 gr/dscf, whichever is less,
* post-1970 sources: high efficiency multiclone or 0.10 gr/dscf, whichever is less;
* Or install or upgrade multiclones and comply with source specific limits less than 0.15 gr/dscf or 0.10 gr/dscf that are based on high efficiency multiclones.

3. Option C: by 2019

* presumptive emission limit based on generic modeling and protective impacts; or source specific limit based on source specific modeling not to exceed 0.20 for pre-1970 sources and 0.15 for post-1970 sources.
* 5 years to comply with limits, 0.15 and 0.20 apply in the interim.

4. Exemptions: limited use boilers/equipment (<10% capacity factor): 0.25 for pre-1970, 0.15 for post-1970

Two options for pre-1970 opacity:

1. Option A – for all sources: 20% opacity by 2019
2. Option B – 30% opacity with continuous opacity monitoring system by 2016
3. Exemptions:
   1. 12 minutes during any hour (2 six minute periods) not to exceed 40% opacity
   2. 40% opacity during grate cleaning or soot blowing performed in accordance with approved plant
   3. 40% opacity for limited use boilers/equipment (10% capacity factor)

Compliance:

As with the current standards, the standards must be met at all times. Compliance certifications require that the information submitted are true, accurate and complete. Owners or operators must also identify any other material information that must be included in the certification to comply with federal clean air act, which prohibits knowingly making a false certification or omitting material information. Based on conversations with businesses regarding intermittent compliance with grain loading and opacity standards, DEQ is very concerned about the compliance status of these wood fired boilers and therefore believes that a continuous opacity monitoring system (COMS) should be required. High opacity is a good indicator that the boiler is not operating well and can trigger corrective action to prevent noncompliance with the opacity and grain loading standards.