State of Oregon
Department of Environmental Quality Memorandum

Date: Dec. 18, 2014

To: Environmental Quality Commission

From: Dick Pedersen, Director

Subject: Agenda item E, Informational item: Air quality permitting program updates and proposed rule revisions
Jan. 7-8, 2015, EQC meeting

Why this is important

DEQ plans to bring a set of proposed rule revisions for commission approval in April 2015. The changes would significantly update the agency's air quality permitting program. This informational presentation will provide the commission an opportunity to ask questions about the rule revisions and other updates prior to the request for adoption in 2015.

Background

After years of rulemakings and updates, DEQ proposes to clarify, update and reorganize Oregon's air quality rules as a matter of good government. Previous improvements to these programs began with EQC's adoption of revisions to point source air management rules in 2001 and air quality permit program streamlining and updates in 2007. The existing rules contain multiple definitions for the same term, missing details, obsolete or outdated rules and rules that do not align with federal rules adopted by the U.S. Environmental Protection Agency, which cause confusion.

In addition to the general updates, DEQ plans to

- Propose revisions to the particulate matter emission standards
- Update the permitting requirements for emergency generators and small natural gas or oil-fired equipment
- Establish two new state air quality area designations, "sustainment" and "reattainment," to help areas avoid and more quickly end a federal nonattainment designation
- Designate the community of Lakeview as a sustainment area
- Revise the New Source Review preconstruction program requirements
- Update its public hearing provisions to reflect modern technology and best practices
- Correct an inadvertent prohibition on the sale of certain biomass products due to a change in federal definitions
- Remove annual reporting requirements for small gasoline-dispensing facilities.

Updating particulate matter emission standards

Like many other states, Oregon adopted statewide particulate matter standards in 1970 as part of Oregon's initial State Implementation Plan. DEQ relies on two types of general standards to control emissions from permitted sources of particulate matter such as dust or smoke. One type of standard sets concentration-based emission limits as mass per unit volume of exhaust gas. A second type of standard, referred to as a visible emissions standard, limits the maximum visual density, or opacity, of a plume.

Since 1970, health researchers have concluded that exposure to particulate pollution is more harmful than previously indicated. As a result, EPA lowered the ambient air quality standard for particulates from 260 micrograms per cubic meter; it established separate standards, including a coarse particulates standard at 150 micrograms per cubic meter and a fine particulates standard at 35 micrograms per cubic meter.

EPA designates areas that violate air quality standards as nonattainment areas and designates all other areas as attainment or unclassified areas. With EPA's adoption of the fine particulate ambient air quality standard in 2011, Klamath Falls and Oakridge are now designated as nonattainment areas for fine particulate. Lakeview also violates the standard, but was not designated nonattainment because its data was not available at the time EPA designated Klamath Falls and Oakridge. Numerous other areas in Oregon are only slightly below the standard. More stringent state particulate matter standards may help prevent additional violations of the federal fine particulate standard in the future, especially if EPA continues to lower the standard.

Oregon's initial State Implementation Plan included less protective emission standards for businesses that were in operation in 1970; these are known as grandfathered businesses. A pre-1970 unit has a limit of 0.2 grain/dry standard cubic foot (gr/dscf) and 40 percent opacity. A post-1970 unit has a limit of 0.1 gr/dscf and 20 percent opacity. Emissions from grandfathered businesses subject to the particulate matter standards do not adequately protect air quality.
In addition, emissions from these businesses can create barriers to economic development in the community. If a single business consumes the majority of an airshed's acceptable pollution levels, other businesses may not be able to expand and new businesses may not be able to come into the area. Work on the Klamath Falls fine particulate attainment plan showed when the background particulate matter concentration is added to a business's impacts, the impacts from a single grandfathered business could consume a significant portion of the available airshed. DEQ found similar results when analyzing

emissions from a grandfathered business near Lakeview.

Emergency generators and small natural gas or oil-fired equipment

EPA recently adopted National Emission Standards for Hazardous Air Pollutants for stationary reciprocating internal combustion engines. EPA's adoption added requirements for emergency generators currently exempt from permitting in Oregon because DEQ lists them as categorically insignificant activities. In addition, the growing need for large amounts of backup power from emergency generators at data centers has shown that emissions from emergency generators can be significant.

DEQ also determined that small fuel burning equipment, currently listed as categorically insignificant because each unit has low emissions, could have significant aggregate emissions if a business has multiple units. For example, DEQ identified one business that has eight small boilers that together have significant potential emissions of approximately 12 tons per year of nitrogen oxides. The proposal would remove emergency generators and small natural gas or oil-fired equipment above certain size thresholds from the list of categorically insignificant activities and add these activities to existing permits.

Sustainment and reattainment

EPA designates areas that violate air quality standards as "nonattainment" areas and designates all other areas as "attainment" or "unclassified" areas. Oregon law designates former nonattainment areas that EPA reclassified to attainment as "maintenance" areas to ensure those areas avoid future violations.

DEQ intends to establish two new Oregon air quality area designations, "sustainment" and "reattainment," to help areas avoid and more quickly end a federal nonattainment designation. If EQC approves these proposed rules, DEQ and the commission would be able to designate specific areas of the state as "sustainment" or "reattainment" based on a local air quality analysis and public comment. To designate a specific area as "sustainment" or "reattainment" would require public notice and a rule change. These designations would provide communities and businesses with additional tools and incentives to improve air quality in advance of any nonattainment designation.

Related, air quality in Lakeview currently does not meet the ambient air quality standards for fine particulates. However, EPA has not yet designated Lakeview a nonattainment area because Lakeview was not exceeding the standard at the time EPA made its designations throughout the United States. Oregon did not have the required three years of monitoring data to determine if the area was violating the federal standards. DEQ intends to propose that Lakeview be designated a sustainment area.

Specifics on this issue are included in attachment A.

New Source Review preconstruction program updates

DEQ plans to propose changes to the New Source Review program to improve air quality in all areas of the state, especially those that are close to or exceed ambient air quality standards. New Source Review is a federally required preconstruction program that ensures new or modified facilities install the latest control technologies and do not have adverse impacts on ambient air quality standards. The intent of the Prevention of Significant Deterioration portion of the New Source Review program is to prevent degradation of air quality in areas that meet federal air quality standards. The intent of the nonattainment New Source Review program is to improve the air quality in designated nonattainment areas that violate air quality standards. DEQ's proposal would also establish New Source Review requirements for the proposed new sustainment and reattainment area designations described in the category above.

On June 23, 2014, the U.S. Supreme Court determined that the Clean Air Act neither compels nor permits EPA to adopt rules requiring a facility to obtain a Title V or Prevention of Significant Deterioration permit on the sole basis of its potential greenhouse gas emissions. Oregon's rules were not affected by the Supreme Court's decision and remain in effect, requiring facilities to submit applications that are not required by the now-invalid federal greenhouse gas permitting rules. The Court did not completely invalidate EPA's authority to require permitting for greenhouse gases; it determined that EPA reasonably interpreted the Clean Air Act to require facilities to comply with Prevention of Significant Deterioration permitting requirements for greenhouse gases if they were required to apply for a Prevention of Significant Deterioration permit based on emissions of other regulated pollutants.

More information about this program and the planned revisions is included as attachment B.

Update public hearing provisions

The existing rules are very prescriptive regarding how DEQ holds public hearings and meetings for air quality permits. These rules, first adopted by Oregon in 1974, do not allow for technological advances like Internet-based virtual meetings in lieu of statewide travel. Having staff travel to local hearings and meetings around the state can be resource intensive and wasteful if no one attends to present comments or gather information. DEQ plans to propose revisions to allow more flexibility in how the agency holds its hearings and gets input from Oregonians.

Heat Smart program changes

Small commercial biomass boilers with heat output less than one million Btu per hour cannot be sold in Oregon. DEQ's existing rules exempt small biomass boilers from the Heat Smart program if they are subject to National Emission Standards for Hazardous Air Pollutants. The Heat Smart Program is intended to ensure that commercial and residential wood stoves and other wood heating devices meet certification standards. The certification standards were not designed to apply to biomass boilers. However, EPA recently exempted small biomass boilers from the National Emission Standards for Hazardous Air Pollutants. EPA's exemption subjected these devices to Oregon's Heat Smart rules unintentionally. DEQ intends to propose revisions to correct this inadvertent prohibition.

Small gasoline-dispensing facilities

DEQ intends to propose repealing the annual reporting requirement for small gasoline dispensing facilities after finding the reports unnecessary to ensure compliance with emission standards for preventing leaks and spills. Removing the annual reporting requirement will ease unnecessary administrative burden for these small businesses.

A gasoline dispensing facility with a monthly throughput of fewer than 10,000 gallons of gasoline is considered a small facility and is currently required to:

- Meet work practice standards,
- Have a submerged fill tube installed on any tank at the facility that has a capacity of 250 gallons or more,
- Submit to DEQ a one-time initial notification and later a notification of compliance status, if subject to the submerged fill tube requirement, and
- Submit annual reports of throughput.

Next steps

DEQ staff will bring the final proposed rule revisions and program updates for commission action at the April 2015 regular meeting.

Attachments

A. Lakeview sustainment area supplemental information
B. New Source Review/Prevention of Significant Deterioration program supplemental information

Approved:

Division: _____
Lydia Emer, Operations administrator

Section: _____
Leah Feldon, Air Quality Program Operations manager

Report prepared by Jill Inahara
Senior environmental engineer

Lakeview Sustainment Area Supplemental Information

Oregon Department of Environmental Quality
811 SW 6th Avenue
Portland OR 97204

Contact: Jill Inahara

DEQ provides supplemental information about the Lakeview Sustainment Area proposal in the following sections:

A. DEQ's discussion document "Lakeview Sustainment Area"

B. Town of Lakeview and Lake County letter requesting sustainment area designation

Lakeview Sustainment Area

Oregon Department of Environmental Quality
811 SW 6th Avenue
Portland OR 97204

Contact: Jill Inahara

Introduction

DEQ proposes that EQC designate the Lakeview area as a sustainment area under OAR 340-204-0300 of the rules proposed for adoption in this package.

A proposal to designate a sustainment area must include the following elements:

> (a) Monitoring data showing that an area is exceeding or has the potential to exceed an ambient air quality standard;
> (b) A description of the affected area based on the monitoring data;
> (c) A discussion and identification of the priority sources contributing to the exceedance or potential exceedance of the ambient air quality standard; and
> (d) A discussion of the reasons for the proposed designation.

These elements are discussed and identified below:

What is a sustainment area?

Sustainment areas are proposed as areas that have ambient monitoring data indicating that the area is not meeting the ambient air quality standards or is very close to not meeting the AAQS, but the area has not been formally designated as a nonattainment area by EPA. DEQ is proposing the creation of the sustainment area designation to help prevent such an area from becoming formally designated as a nonattainment area. It should be noted that a sustainment area designation does not supersede or replace the federal area designation; rather, a sustainment area designation is overlaid on the federal area designation to provide permitting flexibility for intermediate sized industrial sources.

The areas where a sustainment area concept is most useful are areas where the primary air quality problem is due to emission sources other than industry, such as woodstoves. EPA and DEQ rules currently focus on industrial source restrictions to get an area back into attainment, which may not address the cause of the problem. DEQ wants to focus on the cause of the air quality problem rather than impose unnecessary restrictions on industry if industry is not causing or contributing significantly to the problem.

Often there is a lag time between when DEQ's monitoring data indicates an area is violating the AAQS to when EPA formally designates that area as nonattainment. During these lag times, industrial development in the area is largely impossible because new or expanding industrial sources cannot meet the rules for the attainment area, the current area designation. Communities in this situation would like more flexibility to attract new industry. Further, in DEQ's view, new industry can help to improve air quality by helping to replace older woodstoves as part of an emission offset program. In these cases, a sustainment area designation would be appropriate because it gives the community and DEQ the ability to start working on the problem rather than wait for EPA's formal nonattainment designation.

The permitting requirements for a sustainment area include some nonattainment area requirements without the elaborate State Implementation Plan related attainment/maintenance plan process. This partially removes the lag-time barrier to industrial development and allows a community to pursue economic development without the stigma of the federal nonattainment designation. The rules are also designed to provide incentives for new or modified industrial sources to reduce emissions in the same airshed by purchasing emission offsets from the sources that are considered to be significantly contributing to the air quality problems in the area, such as woodstoves. This would help protect public health by lowering the concentrations of emissions in neighborhoods where the air quality problem is caused by high woodstove emissions on inversion days in the winter.

On the surface it may seem that the amount of emissions from an industrial stack would equal the woodstove emissions, and that the overall emission impact would not change. However, the industrial stacks are taller with higher velocity for better emission dispersion. Industry emissions are also fairly constant year-round, not occurring just in the winter heating timeframe. In addition, industrial sources are often located away from residential neighborhoods where population density is higher and where ambient air quality monitors are located.

How does Lakeview qualify?

Air quality in Lakeview has exceeded the $PM_{2.5}$ standard but the area has not been formally designated nonattainment because there was insufficient data at the time EPA made $PM_{2.5}$ nonattainment area designations. Any intermediate size to large industry wishing to expand or establish in Lakeview is restricted from doing so because of the impossibility of meeting the modeling requirements as stated above. A sustainment area designation would provide a way for intermediate sized companies to establish or expand their operations while helping solve the real air quality problems. It will still be difficult for large companies to obtain permits because DEQ must continue to implement the more restrictive regulations that apply to the underlying federal area designation for these companies. Designating Lakeview as a sustainment area would provide flexibility for the community to pursue both economic development and improvements to air quality.

Background

What is PM?

Particulate matter (PM) is the general term used for a mixture of solid particles and liquid droplets found in the air. EPA characterizes PM into two size fractions: PM_{10} – coarse particulate matter 10 microns and smaller, and $PM_{2.5}$ – fine particulate matter 2.5 microns and smaller. Fine particulate matter ($PM_{2.5}$) in the atmosphere is composed of a complex mixture of particles: sulfate, nitrate, and ammonium; particle-bound water; elemental carbon; organic carbon representing a variety of organic compounds; and crustal material.

$PM_{2.5}$ can accumulate in the respiratory system and is associated with numerous health effects. These health effects are linked to premature death, especially related to heart disease; cardiovascular effects, such as heart attacks and strokes; reduced lung development; and chronic respiratory diseases such as asthma. Sensitive groups that are at greatest risk include the elderly, individuals with cardiopulmonary disease such as asthma, and children.

History of PM in Lakeview

Lakeview has a long history of addressing PM issues in the community. In 1987, Lakeview was designated nonattainment for PM_{10}. By the mid-1990s, Lakeview developed a PM_{10} attainment plan to bring the area back into compliance, and the area met the standard by the late 1990s. A maintenance plan was subsequently developed showing how the area would continue to meet the standard. These plans

were so successful that when EPA revised the PM standard in 1997, the community was able to meet the new $PM_{2.5}$ standard due in large part to the existing strategies in the plans.

In 2006, EPA again revised the $PM_{2.5}$ standard, lowering the 24-hour standard from 65 ug/m^3 to 35 ug/m^3. The 24-hour standard for $PM_{2.5}$ is met whenever the three year average of the annual 98th percentile of values at monitoring sites is less than or equal to 35 µg/m^3. While Lakeview has violated the standard at times, the area was not designated nonattainment for the 24-hour $PM_{2.5}$ AAQS, because there was insufficient monitoring information available at the time of designations.

Monitoring

The Lakeview area has one particulate ($PM_{2.5}$) monitoring site with the sampler located on the corner of Center and M Street. DEQ has monitored at this site since 1991 for PM_{10} and since 2007 for $PM_{2.5}$. Lakeview currently meets the revised annual $PM_{2.5}$ standard, but has been close to violating or has violated the 24-hour standard in recent years (Figure 1).

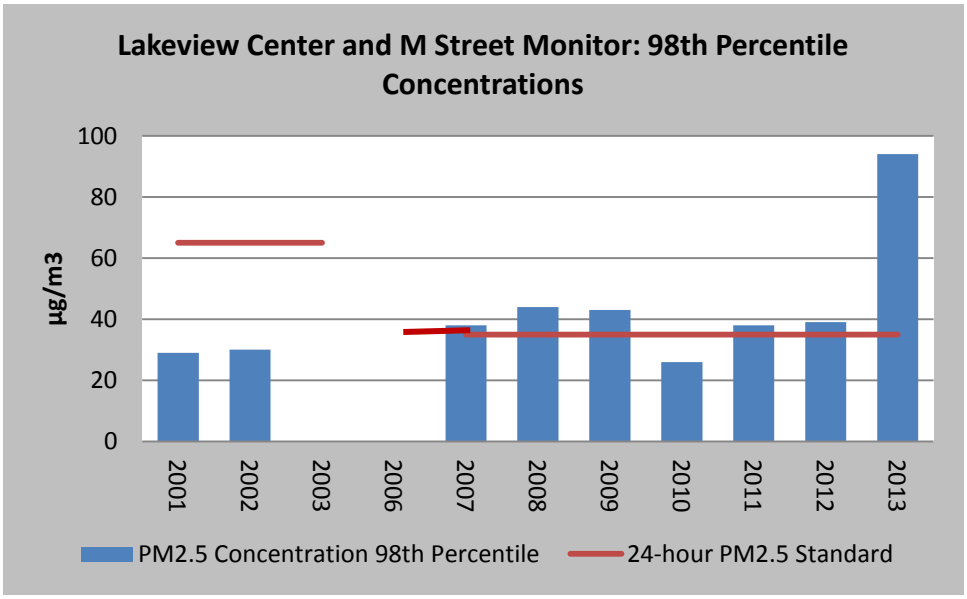

Figure 1: 98th percentile concentrations measured at Center and M Street monitor, Lakeview, Oregon.

Lakeview Geographic Boundary

Lakeview is located in south central Oregon about 96 miles east of Klamath Falls at an elevation of about 4,800 feet. The area is typified by semi-arid climate where annual rainfall is 13 inches. The town of Lakeview serves as an important commercial center for Lake County. The Lakeview urban growth boundary (UGB) is shown in Figure 2.

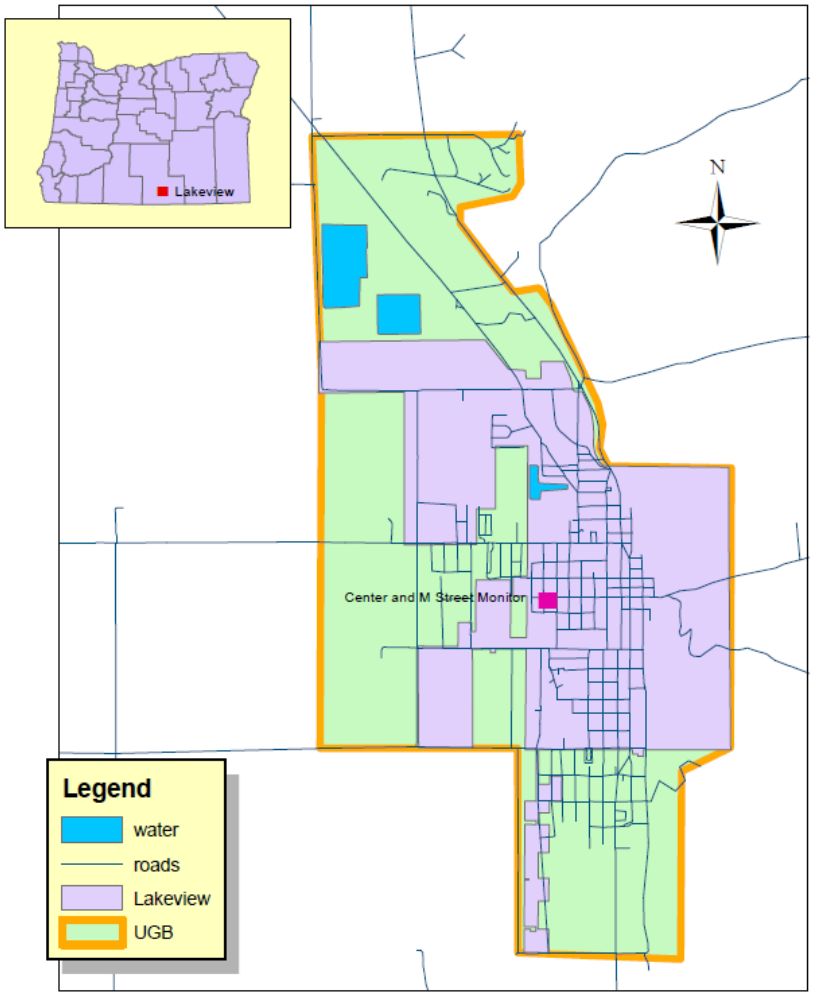

Figure 2*: Lakeview Urban Growth Boundary*

The urban growth boundary consists of the entire town of Lakeview as well as parts of Lake County. Most of the sources that influence air quality are located within the UGB. All existing industrial sources are located within the UGB, and new industrial sources would most likely locate within the UGB.

Lakeview has a current air quality boundary for the PM_{10} maintenance area, which consists of the Lakeview UGB. DEQ and Lakeview propose that the Lakeview UGB also be the geographic boundary of the proposed PM2.5 sustainment area.

Emission Inventory

An emission inventory consists of emission estimates from all sources that emit $PM_{2.5}$ in an area. Emissions inventory data is essential for identification of the sources contributing to air quality problems, as well as the development of emission reduction strategies.

The emission inventory began with an assessment of $PM_{2.5}$ emission sources in Lakeview. Emission sources are summarized into four major categories: point sources (i.e., industrial facilities); on-road mobile sources (i.e., car and truck exhaust, road dust); non-road mobile sources (e.g., construction equipment, recreational off road vehicles, lawn and garden equipment); and area sources (e.g., fugitive dust sources, outdoor burning, woodstoves). $PM_{2.5}$ emissions are estimated using information from industrial permits, population, housing, employment information, and estimates of motor vehicle travel in the area.

For the Lakeview area, the $PM_{2.5}$ EI year is 2011. This year was selected because it is a year for which DEQ completed the National Emission Inventory (NEI) for Lake County. In some cases where current data wasn't available, DEQ used 2008 data. The Lake County inventory was scaled to obtain an estimate of $PM_{2.5}$ emissions within Lakeview's UGB.

Source Category Distribution of Emission Inventory

The following sources represent the main $PM_{2.5}$ emission sources in Lakeview:

Residential Wood Combustion

Residential wood combustion is a common way to heat homes in Oregon. To estimate emissions from wood burning, DEQ used the estimated Lake County and SE Oregon residential wood heating surveys and scaled it to the Lakeview area based on 2010 census population and number of households.

Mobile and Nonroad Sources

Road dust and tailpipe emissions of $PM_{2.5}$ from motor vehicles were calculated by applying emission factors from the Lake County 2011 NEI for EPA and scaling the estimate to Lakeview's UGB and the Goose Lake Basin based on 2010 census population and number of households. Emissions from rail, aircraft, construction and other nonroad sources are estimated using EPA's NEI for Lake County and scaling the emissions based on area served.

Industrial Point Sources

DEQ maintains data on industrial point source emissions for all sources emitting 10 or more tons of criteria pollutants per year. Emissions information is compiled from each source's operating permit issued by DEQ. All permitted point sources within the Lakeview UGB are included in the emissions inventory.

Emission estimates are developed for both annual and daily $PM_{2.5}$ emissions. Annual emissions are reported as tons per year (tpy), whereas typical season and design day emissions are reported as pounds per day (lbs/day). For 2011, the design day emissions were emissions during the wood heating season that occurred on days when the highest monitored concentrations were measured. For Lakeview, the typical season and design days occur in winter (November through February) when the daily $PM_{2.5}$ standard is most frequently exceeded.

The design day emissions for area, on-road, non-road and industrial sources are shown in Table 1 and Figure 3 for the total UGB.

	Design Day (lbs/day)
Residential Wood Combustion	704
Prescribed Burning and Wildfire	0
All Other Area Sources[1]	39
On-Road	2
Nonroad Vehicles & Equipment	3
Permitted Industrial Sources	182
Total, All Sources, lbs/day	930

Table 1: 2011 Design Day $PM_{2.5}$ Emissions for the Lakeview Analysis Area.

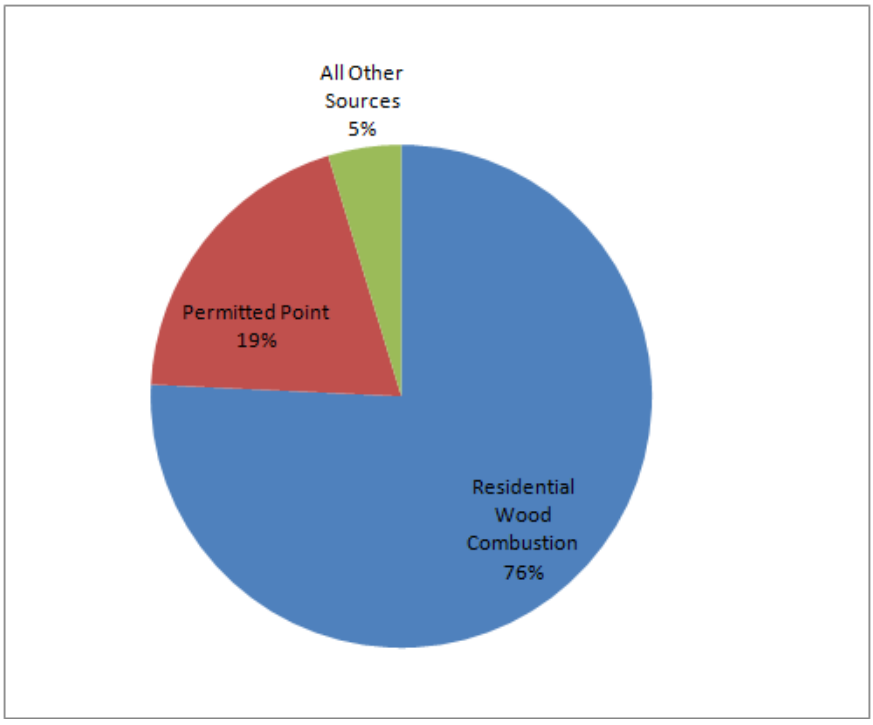

Figure 3: PM2.5 Emissions by Source Category as a Percentage (Design Day)

Most of the design day $PM_{2.5}$ emissions are from residential wood combustion. However, to get an estimate of what sources are directly influencing the monitor, DEQ looked into effective emissions. Effective emissions are defined as those emission rates that correlate with measured concentrations at the monitor. In considering the effective emissions, residential wood combustion contributes roughly 90% of the $PM_{2.5}$ concentration at the monitor, and industrial emissions contribute roughly 1% of the $PM_{2.5}$ concentration at the monitor. Residential wood heating is the primary source of $PM_{2.5}$ air pollution in the

[1] Including wood heating used for commercial or business spaces requiring heat.

Lakeview area, and efforts to reduce $PM_{2.5}$ pollution should focus on this source category. DEQ therefore proposes to designate woodstoves as the priority sources in the proposed Lakeview sustainment area.

PM Advance Program

In 2013, EPA announced the development of a voluntary program that communities could participate in to reduce emissions of PM. This program, called PM Advance, was modeled after EPA's existing Ozone Advance program. Under the program, any area that has not officially been designated nonattainment can voluntarily sign up to participate in PM Advance, develop a plan showing how the area will reduce emissions in 5 years, and potentially avoid a nonattainment designation in the future. Development of the plan is based on community involvement and input to identify and implement emission reduction strategies. These strategies can be changed or modified as needed to accomplish the objective of meeting the $PM_{2.5}$ standard.

Lakeview's PM Advance Plan

DEQ, in coordination with the Town of Lakeview and Lake County formed an advisory committee to develop a plan to achieve emission reductions by 2019. From June 2013 through June 2014, the advisory committee has been meeting to discuss issues, identify the sources of PM in Lakeview, and to brainstorm and recommend strategies that the community would implement over the next five years. The committee plans to put forward a suite of options to implement over the next few years. This may include enhanced education and outreach, continued implementation of the voluntary woodstove curtailment call, current and future woodstove changeouts, an agreement with the USFS to not burn on poor air quality days, and the potential expansion of open burning restrictions to incorporate the UGB (current law only applies to the town). The town also hopes to pursue future strategies including additional woodstove changeouts, long-term efforts to find alternate sources of heat other than wood (such as geothermal or natural gas), and additional town and county ordinances to restrict use of woodstoves. Sustainment area rules will help the community change out uncertified woodstoves, the primary source of emissions that cause the exceedances of the $PM_{2.5}$ standard.

A sustainment area designation for Lakeview will improve the PM Advance plan by allowing and encouraging new or expanding industrial sources to purchase woodstove emission offsets to become established or expand in Lakeview. These reductions in woodstove emissions will reduce overall ambient conditions during critical wintertime days and contribute to better overall air quality in Lakeview.

Conclusion

DEQ proposes to designate the Lakeview area as a sustainment area for PM2.5, under OAR 340-204-0030, with woodstoves the priority sources.

Monitoring data has been presented showing that the Lakeview area is exceeding or has the potential to exceed the $PM_{2.5}$ ambient air quality standard.

A description of the affected area based on the monitoring data has been presented. The boundary of the proposed Lakeview sustainment area is the Lakeview urban growth boundary.

A discussion and identification of the priority sources contributing to the exceedance or potential exceedance of the ambient air quality standard has been presented. DEQ has determined that woodstoves are the main contributors to $PM_{2.5}$ air quality problems. Therefore, DEQ proposes to designate woodstoves as the priority sources in the Lakeview sustainment area.

In summary, designating Lakeview as a sustainment area will allow Lakeview to pursue intermediate-size industrial economic development. It will encourage new or expanding industry to obtain emission offsets from woodstove changeouts and thereby help address the main contributors to Lakeview's air quality problems. In addition, a sustainment designation along with Lakeview's PM Advance efforts will help to bring Lakeview into compliance with the $PM_{2.5}$ AAQS.

Environmental Quality Commission

Through the Air Quality Program, Attn: Jill Inahara
811 SW 6th Ave
Portland, OR 97204-1390

Dear Chair Blosser and the Environmental Quality Commission,

The Town of Lakeview (Lake County) requests the Environmental Quality Commission designate Lakeview as a sustainment area. On July 25, 2013, the Oregon DEQ described potential proposed rules that would provide a community like Lakeview with more flexibility in the DEQ permitting process called the sustainment area rules. These rules would allow the Lakeview area to be classified as a sustainment area. In order for the Lakeview area to be considered a sustainment area, it would need to meet four proposed criteria. We believe Lakeview meets these criteria and have provided the following information for the Environmental Quality Commission to consider.

1) Monitoring data

Recent monitoring data indicates the Lakeview area is at risk of violating the PM2.5 daily standard of 35 ug/m3. A summary of the monitoring data for 2006-2012 is provided below. The rolling three year average of the 98th %ile shows Lakeview just at the standard.

2) Sustainment area boundary

Based on discussions with DEQ, we would recommend the boundary for the sustainment area be the urban growth boundary. The UGB includes all potential areas where an industrial source could be located considering current zoning restrictions that could affect the Lakeview airshed. This would be consistent with the current PM10 maintenance area boundary. We did discuss expanding the area to a larger boundary but decided not to create a larger boundary because the existing zoning requirements would not allow large industry to locate outside the urban growth boundary as an outright use. Additionally, any sources that might locate outside the urban growth boundary would likely not have a significant impact of particulate matter at the monitor.

3) Priority Sources

DEQ has identified woodstoves as the priority source of emissions in the area. Based on DEQ's current evaluation of PM2.5 emission impacts it suggests that 75% of problem comes from woodstoves. The monitoring information also shows that exceedances of the standard occur during the wintertime, which is when woodstove use is predominant. In addition, the nephelometer data shows a diurnal pattern that is consistent with woodstove use.

4) Reasons for Sustainment

Declaring the area as a sustainment area would be beneficial because it supports much needed economic development in the area while improving air quality at the same time. Being classified a sustainment area also serves as a useful tool regarding the area's participation in the PM Advance program. The sustainment area rules could be included as a potential strategy in the PM Advance plan.

Based on the elements discussed above, we would like the Environmental Quality Commission to consider designating the Lakeview area as a sustainment area.

Sincerely,

Mike Patrick,
Mayor, Town of Lakeview

Sandra Wenzel,
Council Member, Town of Lakeview

Sharon Faulkner,
Council Member, Town of Lakeview

Michael Hughes,
Council Member, Town of Lakeviw

Mike Warren,
Council Member, Town of Lakeview

Brad Winters,
Lake County Commissioner

Ken Kenstner
Lake County Commissioner

Dan Shoun,
Lake County Commissioner

Air Quality Rule Changes and Updates Rulemaking
New Source Review Program Supplemental Discussion

State of Oregon Department of Environmental Quality

Introduction

DEQ proposes mostly minor changes to the rules that implement the New Source Review[1] (NSR) program in Oregon, but the proposed rules also include a few significant changes. The minor changes include reorganizing the rules so that elements of the program are grouped together, as well as providing clarification for some of the provisions. The two significant changes include: 1) replacing the current definition of a major source in nonattainment areas with the federal definition (this change would also apply to maintenance areas); and 2) revising the procedures for demonstrating "net air quality benefit" when offsets are required for NSR actions in nonattainment and maintenance areas.

In addition to the changes identified above, DEQ proposes establishing two new designations for the air quality in a localized area. Currently, there are three designations used in the Oregon rules. *Attainment or unclassified areas* are areas where the air quality is below, or is presumed to be below, the Ambient Air Quality Standards (AAQS). *Nonattainment areas* are areas where the air quality does not meet the NAAQS and have been formally designated nonattainment by EPA. Once designated as nonattainment, an area remains designated as nonattainment until DEQ requests and EPA approves that the area be redesignated as an attainment area. The redesignation includes the development and implementation of a maintenance plan to ensure that the area will not become a nonattainment area again. Hence, DEQ rules refer to redesignated areas as *maintenance areas.*

The new area designations proposed by DEQ are "*Sustainment*" and "*Reattainment*" areas. Sustainment areas would be areas that have ambient monitoring data indicating that an area is not meeting the NAAQS or is very close to not meeting the NAAQS, but the area has not been formally designated as a nonattainment area by EPA. Reattainment areas would be areas that are currently designated as nonattainment areas, but there is sufficient ambient monitoring data indicating that the area is meeting the NAAQS. For sustainment areas, DEQ is proposing NSR rules that will help to prevent an area from becoming formally designated as a nonattainment area[2]. For reattainment areas, DEQ is proposing rules that will serve as a bridge between nonattainment and maintenance area NSR rules. For both areas, the proposed NSR rules are designed to provide incentives for new or modified sources to obtain offsets from "priority" sources (sources that are considered to be significantly contributing to the air quality problems in

[1] As used in this discussion document, "NSR" is an umbrella term for the prevention of significant deterioration (PSD), non-attainment, and maintenance area programs. PSD applies to sources locating in areas that are in attainment with the NAAQS or otherwise not classified. Nonattainment NSR applies to sources locating in areas that are designated as nonattainment for the nonattainment pollutant only. Maintenance NSR applies to sources locating in maintenance areas for the maintenance pollutant only. Maintenance areas are areas of the state that were previously designated as nonattainment for a pollutant and have been redesignated to attainment. Designations and redesignations are actions that must be reviewed and approved by Oregon's Environmental Quality Commission and EPA.

[2] Intended as a tool for EPA's PM Advance Program

the area). However, federal major sources (major sources, as defined by EPA) would still have to comply, at a minimum, with the NSR rules specified for the area as it is designated by EPA.

Background

DEQ's NSR program was approved by EPA in the early 1980's. This program regulates construction and modification of larger or major sources in the state. It is a unique program that utilizes Plant Site Emissions Limits and Baseline Emission Rates for regulating source emissions, as well as determining when new and modified sources are subject to NSR. Initially, sources that were operating during the baseline period of 1977 or 1978 were granted a PSEL equal to the actual emissions during the baseline period (i.e., the baseline emission rate). If the source's emissions remained at or below the baseline emission rate or did not increase by more than a significant emission rate above the baseline emission rate, the source would not be subject to NSR.

If a source requested an increase in their PSEL by more than a significant emission rate above the baseline emission rate, the source would be subject to NSR. If the increase did not involve a "major modification", the source was required to conduct an air quality impact analysis in attainment or unclassified areas or obtain offsets and demonstrate a "net air quality benefit" in nonattainment areas[3]. If the increase involved a "major modification" in an attainment or unclassified area and the source was a federal major source[4], the source was required to install Best Available Control Technology. If the increase involved a "major modification" in a nonattainment area and the source was a major source[5], the source was required to install the Lowest Achievable Emission Rate control technology. A major modification was defined as physical changes or changes in the method of operation at a source that result in accumulated emission increases equal to or more than a significant emission rate since the baseline period.

[3] Current rules include a hybrid approach for Maintenance Areas.

[4] A federal major source is a source that has the potential to emit 100 tons or more per year of an NSR regulated pollutant if the source is within one of 28 source categories listed in the rules or 250 tons or more per year of an NSR regulated pollutant if the source is not within one of the 28 source categories listed in the rules.

[5] A major source is a source that has the potential to emit an NSR regulated pollutant at or above the significant emission rate for the pollutant. The significant emission rates for each NSR regulated pollutant are defined in the rules. For example, the significant emission rate for particulate matter (PM) is 25 tons per year and for sulfur dioxide (SO_2), the significant emission rate is 40 tons per year.

The following examples illustrate how the program works[6]:

Example 1: PSD triggered after a series of changes at a facility over a 15 year period.
Triggering pollutant: Particulate matter (significant emission rate = 25 tons/yr)

Year	PSEL	Reason for change	Requirement(s)	Comments
1980	80	----	None	Initial PSEL = baseline emission rate (BER)
1985	90	Add equipment with capacity to emit 10 tons	None	PSEL increase above BER (10 tpy) <SER
1990	100	Add equipment with capacity to emit 10 tons	None	PSEL increase above BER (20 tpy) <SER
1995	110	Modify equipment that increases capacity to emit by 10 tons	PSD: AQ analysis and BACT for equipment added in 1985 and 1990 and equipment modified in 1995	PSEL greater than BER by more than the SER, federal major source threshold = 100 tons/yr, accumulated increase due to physical modifications (30 tpy) >SER (i.e., "major modification")

[6] PM and SO_2 are used in these examples because they were the only two pollutants regulated under the NSR program when it was first approved in the early 1980's.

Example 2: PSD triggered when PSEL increased to utilize capacity of equipment added in previous permit actions (no physical change at time of increasing PSEL). Triggering pollutant: Particulate matter (significant emission rate = 25 tons/yr)

Year	PSEL	Reason for change	Requirement(s)	Comments
1980	80	----	None	Initial PSEL = baseline emission rate (BER)
1985	90	Add equipment with capacity to emit 15 tons, but only requested increase in PSEL enough to operate at anticipated need.	None	PSEL increase above BER (10 tpy) <SER
1990	90	Add equipment with capacity to emit 15 tons per year, remove equipment that existed in baseline period (internal netting)	None	PSEL increase above BER (10 tpy) <SER
1995	110	Increase PSEL to utilize capacity of equipment added in 1985 and 1990 without a current physical change	PSD: AQ analysis and BACT for equipment added in 1985 and 1990	PSEL increase above BER (30 tpy) >SER, federal major source threshold = 100 tons/yr, accumulated increases due to physical modifications (30 tpy) >SER (i.e., "major modification")

Example 3: BACT is not required as a result of utilizing existing capacity
Pollutant: Sulfur dioxide (significant emission rate = 40 tons/yr)
Two small boilers capable of burning natural gas or oil

Year	PSEL	Reason for change	Requirement(s)	Comments
1980	80	----	None	Initial PSEL = baseline emission rate (BER) when mostly natural gas was burned in the boilers
1985	300	Utilize existing capacity, no physical change, just burn oil more hours per year	AQ analysis	PSEL increase above BER (220 tpy) >SER, but no physical changes so BACT was not required.

Example 4: PSD triggered due to modification even though PSEL decreases.
Triggering pollutant: Sulfur dioxide (significant emission rate = 40 tons/yr)
Two small boilers capable of burning natural gas or oil

Year	PSEL	Reason for change	Requirement(s)	Comments
1980	80	----	None	Initial PSEL = baseline emission rate (BER)
1985	300	Utilize existing capacity, no physical change, just burn oil more hours per year	AQ analysis	PSEL increase above BER (220 tpy) >SER, but no physical changes so BACT was not required
1990	250	Modify equipment (new burners, increased burner capacity, but more efficient combustion reduces fuel use)	PSD: AQ analysis and BACT	PSEL >BER (170 tpy) by more than SER and capacity of new burners (250 tpy) >SER (i.e., "major modification")

Example 5: PSD never triggered because capacity to emit decreases below baseline emission rate even though there were physical changes.
Pollutant: Particulate matter (significant emission rate = 25 tons/yr)

Year	PSEL	Reason for change	Requirement(s)	Comments
1980	300	----	None	Initial PSEL = baseline emission rate (BER)
1985	300	Replace equipment with lower emitting equipment	None	PSEL = BER, internal netting
1990	300	Add pollution control equipment to existing units and add another unit	None	PSEL = BER, over-control and internal netting
2000	300	Add one piece of equipment to replace two pieces of equipment	None	PSEL = BER, internal netting
2005	200	Previous changes have reduced the capacity to emit	Establish 100 tons of unassigned emissions that will be reduced to the SER if not used within 5 years	PSEL<BER, "unassigned emissions" codified in rules in 2001

Netting Basis

The original NSR program did not have a provision for adjusting a baseline emission rate, or for establishing what would effectively be a "baseline" emission rate if a source went through NSR after the baseline period. In addition, the rules allowed a source to maintain a PSEL equal to the baseline emission rate even if the source no longer had the capacity to emit at the level it had in the baseline period. In the first case, a source could be subject to NSR every time there was a one ton increase in the PSEL even though the source had recently gone through NSR. In the second case, the source could avoid going through NSR even if there were significant changes at the facility that could impact air quality.

In the late 1990's, DEQ developed through guidance the concept of a "netting basis" as a way to adjust or establish a "baseline" once a source goes through NSR. This concept was codified in the rules in 2001 and specified the types of regulatory actions that could establish or change the netting basis and how it was to be calculated. Included was a provision for addressing sources that had PSELs well above their capacity to emit by classifying the unneeded PSEL as unassigned emissions. If not used within a 5 year period, the unassigned emissions greater than the significant emission rate for the pollutant would be removed from the PSEL and netting basis.

DEQ also clarified in the 2001 rule changes that the Prevention of Significant Deterioration provisions of the NSR program only applied to "federal major sources" (i.e., sources with the potential to emit a criteria pollutant greater than 100 tons per year for 28 listed source categories and 250 tons per year for all other sources). Prior to 2001, a source with PTE between the significant emission rate and the federal major source level was subject to "state" PSD, which required an air quality impact analysis but did not require BACT. The rule changes in 2001 did not affect the stringency of the program because sources with PTE between the SER and federal major source levels were still required to conduct an air quality impact analysis.

In this rulemaking, DEQ is providing clarification for the definition of a "major modification" to be consistent with the rule changes made in 2001 when the concept of the "netting basis" was codified. Prior to 2001, the definition of major modification referred to the "baseline period" for determining emission increases due to physical changes and changes in the method of operation. In 2001, the definition was revised by referring to either the baseline period or "the last new source review" action for the source. The intent was that future increases would be compared to the most recent netting basis established for the source. DEQ proposes removing reference to the baseline period or most recent NSR action to use instead the most recent netting basis for determining increases due to physical changes or changes in the method of operation.

This change provides clarification, but is also necessary in order to implement the NSR program for fine particulate matter ($PM_{2.5}$), which became a regulated pollutant in 2011. $PM_{2.5}$ is a fraction of total particulate matter (PM) and course particulate matter (PM_{10}), which both have baseline periods of 1977/1978, so DEQ did not established a separate baseline period for $PM_{2.5}$. However, due to the number of years between the baseline period and when $PM_{2.5}$ became a regulated pollutant, and the likelihood that most sources are configured differently now than in the baseline period, DEQ did not believe it was appropriate to establish a baseline emission rate

for $PM_{2.5}$. In most cases, it would be impracticable to obtain the information from 1977/1978 to establish the baseline emission rate. Therefore, the 2011 rules required that a "netting basis" be established for $PM_{2.5}$, but not a baseline emission rate. The rules specified that the initial netting basis for $PM_{2.5}$ is the $PM_{2.5}$ fraction of the PM_{10} netting basis in effect on May 1, 2011. Using this approach, the netting basis for $PM_{2.5}$ reflects the current configuration of the facility, as well as all previous PM_{10} permitting decisions. As a result, moving forward, it is only necessary to compare emissions increases due to future changes at a source to the netting basis and not the baseline period.

The netting basis is established for each NSR pollutant emitted from a source. Some sources have a netting basis of zero because they either did not exist in the baseline period or never went through NSR. For sources that have a netting basis, the netting basis is calculated according to the definition of "netting basis" (current rules) or as proposed in the netting basis section in the PSEL rules (division 222). For PM2.5, the initial netting basis is established relative to the PM_{10} netting basis in effect on May 1, 2011.

Major Source Definition for Nonattainment and Maintenance Areas:

As discussed above, the major source level in nonattainment and maintenance areas is currently defined in DEQ rules as the *Significant Emission Rate* for the nonattainment or maintenance area pollutant. DEQ is proposing to change the major source level to align with the major source level defined in the federal rules, which is 100 tons per year for the nonattainment areas in Oregon[7]. This change allows DEQ to reorganize the NSR rules for minor sources into a program called State NSR, while the NSR rules that apply to major sources will be called "Major NSR". Proposed revisions to the NSR rules for minor sources will provide incentives to address the sources of air pollution in areas with air quality problems, but still maintain the minimum requirements of the federal program for major sources. In addition, as a point of clarification, while DEQ proposes to adjust the applicability threshold for major sources and Major NSR to the level used in the federal rules, the term "major source" will no longer be used in the applicability section of the NSR rules and DEQ is not proposing to change the current definition of major source.

The federal program for nonattainment areas requires new or modified major sources to obtain at least 1:1[8] offsets for the emission increases associated with the project. DEQ's proposed rules would require 1.2:1[9] offsets, except that the ratio may be reduced to as low as 1:1 if some of the offsets come from the sources that are contributing to the air quality problems in the area. For minor sources, DEQ's proposed rules would require 1:1 offsets, except that the ratio may be reduced to as low as 0.5:1[10] if some or all of the offsets come from the sources that are contributing to the air quality problems in the area. Currently, there are two nonattainment areas in Oregon. Both areas are nonattainment for $PM_{2.5}$. The significant emission rate for $PM_{2.5}$ is 10

[7] EPA and DEQ rules include lower thresholds, depending on the severity of the nonattainment area classification.
[8] EPA establishes higher ratios for ozone precursors, depending on the severity of the ozone non-attainment area. DEQ does not propose any changes to the ozone precursor ratios that are in the current rules.
[9] DEQ's current rules require 1:1 offsets.
[10] EPA rules do not require offsets for minor sources.

tons per year. DEQ has determined through monitoring and modeling that the most significant source of fine particulate emissions that are contributing to the air quality problems in these areas are residential wood heating devices. By increasing the offset ratio to 1.2:1 while allowing a reduction to the offset ratio as described above, the proposed rules provide an incentive for minor sources to obtain offsets from residential wood heating devices. Typically, wood-stoves have very small emissions relative to industrial sources, but due to the plume characteristics (low velocity and low temperature), the smoke from residential wood heating devices has a significant impact in residential areas; especially during periods of air stagnation and inversions.

Federal Major Source Definition

In the current rules, a Federal Major Source is defined as a source with the potential to emit a criteria pollutant greater than 100 tons per year if in one of 28 listed source categories, and 250 tons per year for all other sources. DEQ proposes to change this definition to be area-specific, so that Federal Major Source means:

- A source located in a nonattainment, reattainment, or maintenance area with potential to emit 100 tons per year or more of the regulated pollutant for which the area is designated nonattainment, reattainment or maintenance; or
- A source located in an attainment, unclassified, or sustainment area with the potential to emit a criteria pollutant greater than 100 tons per year if in one of 28 listed source categories, and 250 tons per year for all other sources.

With this change, only sources that meet the definition of Federal Major Source will be subject to Major NSR (although in some circumstances such sources will be subject to State NSR as they are now).

Sustainment and Reattainment Areas

Based upon levels of air pollutants, geographic areas are classified by EPA as attainment or nonattainment areas.

- A geographic area that meets or has pollutant levels below the national ambient air quality standards (NAAQS) is called an attainment area.
- An area that exceeds the NAAQS is designated a nonattainment area.

Each nonattainment area is declared for a specific pollutant. Nonattainment areas for different pollutants may overlap each other or share common boundaries.

All states strive to achieve attainment with state and federal air quality standards for a number of reasons. First and foremost, remaining in compliance helps protect public health, a key element of DEQ's mission. In addition, compliance with ambient air quality standards contributes to economic growth. Nonattainment area status can potentially limit production capabilities of existing industries and preclude siting of new industries that provide job opportunities. Attainment of ambient air quality standards also helps avoid a potential loss of federal highway

funding that can result from nonattainment status. Lastly, it is costly and time-consuming to develop and implement plans to bring areas back into attainment status.

In addition to areas classified as attainment and nonattainment, some areas are described as "maintenance areas." Maintenance areas are those geographic areas that at one time were classified as nonattainment, but are now consistently meeting the NAAQS. Maintenance areas have been re-designated by the EPA from "nonattainment" to "attainment with a maintenance plan"; commonly called "maintenance areas." These areas have demonstrated through monitoring and modeling that they have sufficient controls in place to continue to meet the NAAQS. They also have contingency measures in place that would be implemented should the areas start showing exceedances again.

As mentioned above, DEQ proposes adding two new area designations to the rules: Sustainment and Reattainment Areas. These would be areas designated by the EQC, but not by EPA; as such, these new area designations would not override the EPA designations, but instead would overlay them.

Sustainment areas would be areas that are officially designated as attainment areas by EPA, but ambient monitoring data has demonstrated that the air quality levels are close to or above the ambient air quality standards.

- Sources subject to Major NSR locating in Sustainment areas would be required to satisfy the requirements for attainment or unclassified areas plus some additional requirements for obtaining offsets and demonstrating a net air quality benefit to address the air quality problems in the area.
- Sources subject to State NSR could either demonstrate that they would not cause or contribute to an exceedance of the ambient air quality standards and PSD increments; or, the source may obtain offsets and demonstrate a net air quality benefit. For these sources, the offset ratio would 0.1 to 1 (e.g., 10% offset) that could be reduced to 0.05 to 1 (e.g., 5% offset) if the offsets come from priority sources within the Sustainment area. In addition, the source would be required to demonstrate that the emissions, after subtracting the priority source offsets, would not have impacts greater than the significant impact level in the neighborhood area around the ambient monitor and not exceed 10% of the ambient air quality standards in all other areas of the Sustainment area.

Reattainment areas would be areas that are officially designated as nonattainment areas by EPA, but ambient monitoring data has demonstrated that the air quality levels are below the ambient air quality standards.

- Sources subject to Major NSR within reattainment areas would still have to comply with the rules for nonattainment areas.
- Sources subject to State NSR would have different requirements that are focused on keeping the ambient air quality levels below the ambient standards. Such sources would have to obtain offsets and demonstrate a net air quality benefit, with the focus more on the priority sources that have in the past contributed the most to the air quality problems in the area.

State New Source Review Program (component of overall Minor New Source Review Program)

DEQ is proposing a State NSR program for all sources. This program will cover the following:

- PSEL increases equal to or greater than the SER that do not involve a physical change or change in the method of operation for all sources in the state, both large and small; and
- Construction and modification at sources that have emissions equal to or greater than the SER but less than 100 tons per year.

For sources in the SER to 100 tons per year range, the State NSR program is very similar to the major New Source Review program under which they were previously regulated. For sources that emit less than the SER, the State NSR program is similar to the existing PSEL program.

The State NSR program is part of DEQ's minor new source review program, along with the requirements for Notice of Construction and Approval of Plans (OAR 340-210-0205 through 340-210-0250), PSEL increases that are not subject to Major New Source Review (340-222-0041), and the ACDP permitting program (OAR 340, Division 216). The main reason for developing the State NSR program is to be able to address the sources that are causing the majority of the air quality problem in sustainment and nonattainment areas. DEQ has created a provision for the EQC to identify these sources as "priority" sources. Current PM nonattainment areas are the result of smoke from residential wood burning. Under the federal NSR program for major sources, offsets from residential wood burning are only allowed in Klamath Falls, whereas more flexibility is allowed in permitting minor sources. Therefore, a proposal for the State NSR program allows sources in the SER to 100 tons per year range to get offsets from priority sources defined by the EQC. This will directly address the air quality problem in these areas, helping the area meet the ambient air quality standards more quickly. DEQ is also providing incentives, such as a lower offset ratio, for sources that offset their emissions with emissions from priority sources.

The following table shows the differences in permitting requirements for the sources that emit between the SER and 100 tons per year before and after the proposed rule changes:

	Sources that emit between the SER and 100 tons per year in **NONATTAINMENT Areas**	
	Current	Proposed
Source Classification	Major	Minor
Preconstruction Monitoring	not required	not required
Control Technology	LAER *	***BACT*** *
NAQB	Offsets • 1.1:1 for ozone • 1.0:1 for other pollutants ** • Reduce impacts at majority of receptors; and • Impacts less than SIL at all receptors	Offsets • 1.1:1 for ozone • ***1.0:1 for other pollutants, with provision to reduce the ratio if offsets are obtained from priority sources*** ▪ Impacts less than SIL at all receptors ***or*** ▪ ***Impacts less than SIL at an average of receptors around DEQ approved ambient monitoring site and*** ▪ ***Source plus competing sources since area was designated less than 10% of the NAAQS***

* If a major modification is involved

** Offset ratio varies for certain areas such as Medford-Ashland AQMA for PM_{10}, etc.

	Sources that emit between the SER and 100 tons per year in MAINTENANCE Areas	
	Current	Proposed
Source Classification	Major	Minor
Preconstruction Monitoring	**Yes*** **	***No***
Control Technology	BACT *	BACT *
NAQB	Offsets • 1.1:1 for ozone • 1.0:1 for other pollutants ** and NAQB ▪ Reduce impacts at majority of receptors; and ▪ Impacts less than SIL at all receptors Or • Growth allowance Or • Model below maintenance area limits	Offsets • 1.1:1 for ozone • ***1.0:1 for other pollutants, with provision to reduce the ratio if offsets are obtained from priority sources*** ▪ Impacts less than SIL at all receptors ***or*** ▪ ***Impacts less than SIL at an average of receptors around DEQ approved ambient monitoring site and*** ▪ ***Source plus competing sources since area was designated less than 10% of the NAAQS*** Or • Growth allowance Or • Model below maintenance area limits

*** If impacts are greater than the Significant Monitoring Concentration (current exemptions will still apply, as well)

Net Air Quality Benefit

In addition to the offset requirements, DEQ rules currently have very prescriptive requirements for demonstrating the net air quality benefit associated with the offsets. The federal program includes reference to "net air quality benefit" but does not provide specific criteria for demonstrating net air quality benefit. Presumably, the net air quality benefit associated with offsets under the federal program is determined on a case-by-case qualitative rather than quantitative basis. DEQ has reviewed other state programs approved by EPA and found that most programs rely merely on offsets for the demonstration of net air quality benefit.

DEQ's rules currently have two criteria for determining whether offsets provide net air quality benefit; both rely on modeling. The first criterion is that the offsets must reduce the proposed source's impacts at a majority of the receptors within the designated area. The second criteria is that the source's emissions along with the required offsets will result in impacts less than the significant impact level (SIL) at all receptors within the nonattainment area. These two criteria were established in 2001 and were never fully evaluated before they were adopted. As it turns out, DEQ has found that these two criteria are virtually impossible to meet because emissions from different locations do not impact the same receptors. In order to satisfy the criteria, the offsets would have to come from almost the same location as the proposed project.

Since adoption, meeting the requirements of net air quality benefit has not been an issue for sources that triggered NSR/PSD because all of the proposed sources were located in attainment or unclassified areas and did not significantly impact air quality in a designated nonattainment or maintenance area. Therefore, these sources did not have to meet the requirements of net air quality benefit.

In 2009, a source located in a nonattainment area wanted to expand but couldn't meet the second part of the net air quality benefit test because the offsets were from a different part of the nonattainment area. Legislation was passed to redefine net air quality benefit for small scale local energy projects as a result. Recently this rule was applied to a new business in a nonattainment area that was essentially co-located with the existing business that provided the offsets. Because the businesses were co-located, they were able to show that modeled impacts resulted in less than a significant impact level increase at all modeled receptors. If the businesses had not been co-located, this requirement would have been impossible to meet because of meteorological conditions and different topography.

Upon further review of the federal rules, as well as other state programs, DEQ does not believe the nonattainment NSR rules were intended to prevent new sources from being built in nonattainment areas if the source's emissions are offset by emission reductions from other sources within the area. Further, DEQ does not believe that the criteria established in 2001 can be met. On the other hand, DEQ believes that offsets by themselves are not a sufficient demonstration of net air quality benefit. Even though the emissions from a proposed project may be fully offset so that there is no net increase in emissions within the nonattainment area, the impacts of the source's emissions could still adversely affect specific areas within the nonattainment area.

Therefore, DEQ proposes modifying the criteria for demonstrating net air quality benefit as follows:

1. Obtain offsets in accordance with the provisions discussed above, which provide incentives for obtaining offsets from the priority sources; and
2. Conduct modeling that:
    a. Demonstrates that the source's impacts without taking into consideration any offsets are less than the significant impact level at all receptors within the designated area; or

b. Demonstrates that the source's impacts without taking into consideration any offsets are less than the significant impact level at receptors in the neighborhood of the monitoring site used for the designation of the area; and
c. Demonstrates that the source's impacts after subtracting offsets from priority source's plus the impacts from all other emission increases (including contemporaneous offsets) and decreases since the area was designated are less than 10% of NAAQS[11] at all other receptors within the designated area.

DEQ believes that the demonstrations above will ensure that the air quality in a designated area will not get worse as a result of new or modified sources; and, in most cases, will improve the air quality; especially if the proposed source obtains offsets from other priority sources within the designated area.

DEQ is also providing the opportunity to use priority source offsets for major sources in nonattainment and reattainment areas only. In these areas, DEQ has increased the required offset ratio for major sources to 1.2:1 instead of the current 1.0:1. If major sources offset some of their emissions increase with priority source emissions, then the ratio may be reduced to no less than 1.0:1. Since the minimum requirement of 1.0:1 offsets is still the same as the federal NSR program, offsetting with priority source emissions should be approvable by EPA.

New Violation of NAAQS

OAR 340-202-0050(2) provides general authority for DEQ to prohibit construction of a new or modified source if the source by itself would cause or contribute to a violation of a NAAQS. DEQ has added this requirement to the NSR rules for each designated area. The proposed rules also include a provision that new and modified sources cannot cause or contribute to a *new* violation of an ambient air quality standard or PSD increment. DEQ interprets this requirement as follows:

> For areas where the background concentration is above the NAAQS: A new or modified source can't cause or contribute to a new violation because the area is already violating the NAAQS. In this case, the rules are intended to improve the air quality in the general area; or, at least, prevent the air quality from getting worse as a result of the proposed new or modified source by requiring offsets and:
>
> - Using SIL to show that the source will not make the air quality worse in the neighborhood around the monitoring site(s).
> - Using 10% of NAAQS[11] to show that a source (plus competing sources) will not make the air quality worse in all other areas of the designated area.

[11] This is analogous to the PSD increment, but using 10% of the NAAQS is more protective than the Class II PSD increments. The PSD increment was established to "prevent significant deterioration" in attainment areas. That same concept is appropriate for any airshed.

For areas with background within an SIL of the standard: The source could cause or contribute to a "new" violation. Federal major sources are required to demonstrate that their impact when added to the background does not cause a violation of the standard. This analysis needs to include the impacts of other sources if they are not included in the background monitoring data. The analysis would also account for offsets (e.g., emission reductions as a result of the project). Minor sources may either satisfy the requirement as specified immediately above for federal major sources or obtain offsets and demonstrate net air quality benefit as required for sources locating in nonattainment areas.

For areas with background more than the SIL below the standard: The source could cause or contribute to a "new" violation if the source's impacts are greater than the SIL. The PSD analysis is required to show that a source will not cause or contribute to a violation of the standard; or for sustainment areas, a source must obtain offsets and:

- Use SIL to show that the source will not make the air quality significantly worse in the neighborhood area around the monitoring site(s).
- Use 10% of NAAQS[11] to show that a source (plus competing sources) will not make the air quality worse in all other areas of the designated area.