#### State of Oregon

Department of Environmental Quality Memorandum

**Date:** December 6-7, 2012

**To:** Environmental Quality Commission

**From:** Dick Pedersen, Director

**Subject:**  Agenda item xx, Rulemaking: Oakridge-Westfir PM2.5 Attainment Plan

December 6-7, 2012, EQC meeting

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| **Why this is important** | This proposed rulemaking adopts an attainment plan that will reduce fine particulate, PM2.5, pollution and protect the health of the residents in the Oakridge-Westfir area. The plan and associated rules are designed to bring this area into compliance with National Ambient Air Quality Standards for PM2.5 by the federal deadline of December 2014. |
| **DEQ recommendation and EQC motion** | DEQ recommends that the Oregon Environmental Quality Commission (1) adopt the proposed rule amendments as presented in Attachment A, (2) approve Oakridge-Westfir PM2.5 Attainment Plan, and (3) direct DEQ to submit the Oakridge-Westfir PM2.5 Attainment Plan to EPA as revisions to Oregon’s Clean Air Act State Implementation Plan. |
| **Background and need for rulemaking** | History of particulate pollution in Oakridge  Local climate and topography make Oakridge prone to wintertime temperature inversions, low wind speeds and poor atmospheric dispersion.During the winter months, Oakridge air quality is often threatened due to high concentrations of smoke from woodstoves settling on the valley floor of the city.  As a result, the city of Oakridge has struggled to meet air quality standards. Oakridge was proposed a PM10 nonattainment area in September 1992 and later was designated on January 20, 1994. The city has not violated the PM10 standard since 1994. Voluntary measures to reduce wood smoke emissions adopted in 1999 continue to reduce measured particulate levels.  In 1997, EPA revised the particulate standard to include finer, more harmful particulate, PM2.5, and established a daily standard of 65 micrograms per cubic meter (μg/m3). The original PM10 strategies included in the attainment plan were so successful in maintaining clean air that Oakridge met the 1997 PM2.5 standard. In 2006, however, EPA modified the daily PM2.5 standard based on the latest health effects data, lowering it to 35 μg/m3. Because high winter air pollution levels violated the daily PM2.5 standard, EPA again designated Oakridge as a nonattainment area in 2009. The area designated as nonattainment for PM2.5 contains Oakridge, the small town of Westfir, and the surrounding area. The federal Clean Air Act requires Oakridge-Westfir to reduce its particulate levels to comply with the PM2.5 standard by December 2014.  The Oakridge PM2.5 Advisory Committee  LRAPA and the City of Oakridge convened the Oakridge Advisory Committee in 2011 to help develop and recommend strategies to bring Oakridge back into attainment with the standard. From July to December 2011, the committee met to consider data, community values, and pollution reduction strategies with the highest chance of success in meeting the PM2.5 standard. The result is a thoroughly evaluated group of primary emission reduction recommendations and contingency measures that would take effect if the December 2014 deadline is not met. These recommendations formed the groundwork for the City of Oakridge to include emission reduction measures in ordinances and for LRAPA and the City of Oakridge to produce an attainment plan for EPA approval.  State Implementation Plan  The attainment plan, developed by LRAPA in accordance with EPA’s guidance, is a comprehensive document that identifies the emission sources of PM2.5 and estimates the current and future year concentrations based on the emission inventory and measurements. The plan contains emission reduction strategies consisting of local ordinances, LRAPA regulations, and non-regulatory elements including incentives and education. If the community fails to reduce particulate emissions by the 2014 deadline, the plan’s contingency measures would take effect automatically and are designed to achieve rapid compliance with the PM2.5 standard. The contingency measures function as a backstop until such time the plan can be reevaluated and corrected. The proposed attainment plan will aid LRAPA and the community in controlling emissions to ensure clean air and protect public health in Oakridge-Westfir. |
| **Effect of rule** | Since residential wood burning emissions comprise the majority of the harmful particulate emissions in Oakridge-Westfir, most of the proposed particulate reductions will come from enhancements to the community’s woodstove curtailment program, implemented through local ordinances. Other attainment strategies for residential wood burning include continuing the program of replacing polluting uncertified woodstoves, and a public awareness and education program.  If the attainment plan fails to achieve the federal standard by December 2014, additional regulations in the contingency plan would become effective. The contingency measures would increase the average number of red woodburning curtailment days from 20 to 30 days per year, increase the percentage of curtailment effectiveness, and decrease the allowed opacity of woodburning emissions from 40% to 20% opacity during the woodburning season.  The emission reduction measures in the proposed attainment plan are designed to meet the daily PM2.5 standard by lowering PM2.5 concentrations on worst days during the winter heating season to approximately 28 μg/m3, below the 24-hour health standard of 35 μg/m3. Because the woodstove curtailment program achieves the vast majority of emission reductions, the effectiveness of the program is critical to successfully meet the PM2.5 standard in Oakridge-Westfir. |
| **Commission authority** | The commission has authority to take this action under  ORS 468.020, 468A.025 and 468A.460. |
| **Key issues** | **Economic Impacts**  During plan development and the public comment period, LRAPA heard ongoing concerns about how the plan to reduce particulate could further harm an economically struggling region, or hinder recovery. LRAPA, the Oakridge Advisory Committee, and the City of Oakridge were very cognizant of and sensitive to this issue and chose strategies with the lowest fiscal impact on local businesses, the economy and residents. The goal of the attainment plan is to meet health standards on schedule that would allow more opportunity for economic development in the future.  When an area is designated as nonattainment, federal requirements automatically apply for industrial sources, such as requiring the most stringent control equipment for new or expanding sources, and reasonably available control technology (RACT) for existing sources. While DEQ recognizes that these federal restrictions may prevent some industries from expanding or moving to Oakridge-Westfir, these restrictions are designed to reduce pollution and ensure the health of all residents. LRAPA expects the attainment plan will achieve timely compliance with the standard, which will enable LRAPA to begin the steps needed to lift the more stringent industrial restrictions. If Oakridge-Westfir meets the standard by 2014, LRAPA can begin development of a maintenance plan that can be submitted to EPA, with a request to re-designate the area back to attainment. The maintenance plan can include provisions to ease the restrictions on industrial growth, depending on the implementation success of the existing attainment plan. This will have a positive economic impact on the community.  **Evaluating Compliance with the Standard**  Community members have raised questions related to technical accuracy in determining whether Oakridge-Westfir is above the particulate standard. Commenters stated that the Willamette Activity Center monitor in southwest Oakridge should not be used to determine compliance because the location has the poorest air quality and they argue that the area as a whole is not out of compliance with the standard. This argument is in conflict with EPA requirements mandating that the data to determine compliance must be taken from the highest violating monitor, which is located at the Willamette Activity Center. Monitoring studies and EPA regulations confirm that this location is the most appropriate place for a monitor. Over the last 20 years, LRAPA has conducted numerous monitoring studies where particulate samples have been taken throughout the Oakridge area, and more recently in the Westfir area. These studies show that particulate levels are consistently high at Willamette Activity Center. The Willamette Activity Center monitor complies with specific EPA requirements on the location of monitors and how to evaluate the measurements.  LRAPA also received comments that questioned the validity of the PM2.5 standard. EPA sets this standard based on the current scientific evidence that indicates when fine particulate matter is inhaled, it is harmful to humans. EPA reviews the standard once every five years as required by law. For areas in violation of the current 35 μg/m3 standard, the federal Clean Air Act requires the development of an attainment plan to reduce emissions and restore healthy air. LRAPA expects that the proposed attainment plan will have a positive effect on the health of Oakridge-Westfir residents. There are a number of studies linking PM2.5 exposure with respiratory problems and cardiac diseases. U.S. and Canadian studies report statistically significant relationships between an increase in PM2.5 and an increase in hospitalizations for all respiratory causes, including chronic obstructive pulmonary disease, pneumonia and asthma. In addition to the greatly expanded body of evidence on hospitalization or emergency department visits for cardiovascular diseases, new epidemiologic studies have also reported associations between more subtle physiological changes in the cardiovascular system and short-term exposures to PM2.5 concentrations. These impacts could result in days of missed work that would affect the economy.  **Woodstove Emissions**  The enforcement of the woodstove curtailment program is the key strategy to help Oakridge comply with the standard. This includes a focus on habitually violating offenders, increased patrols on red days, and increased awareness and public outreach regarding the curtailment program. The curtailment program already exists, however effective enforcement is essential for success of the plan.  These and other comments, with LRAPA responses, are included in the LRAPA hearing and adoption documents. |
| **Public outreach** | A public information meeting was held in Oakridge on September 18, 2012, and the public hearing was held before the LRAPA Board of Directors in Springfield on September 20, 2012. Results of public input are provided in Attachment C. In response to comments received during the public comment period, the LRAPA Board of Directors adopted a few changes to the rules and the plan. None of the changes were significant to the overall direction of the plan. |
| **Next steps** | **Plan Implementation**  If approved, DEQ must submit the revised rules to EPA as a revision to the Oregon Clean Air Act State Implementation Plan. LRAPA must continue to provide real-time air monitoring and daily woodburning advisories and work closely with the City of Oakridge to ensure their staff is aware of the importance of the curtailment strategies to the success of the attainment plan. LRAPA must continue to assist the City in designing public education materials. LRAPA must continue to monitor for compliance with the PM2.5 standard at the Willamette Activity Center site. Finally, LRAPA staff must continue to collaborate with the City of Oakridge and the public to track progress and implement a successful PM2.5 reduction plan. |
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| **Attachments** | Proposed Rule Revisions  Revisions to Division 200  Revisions to LRAPA’s Title 29  Oakridge PM2.5 attainment plan  Summary of public comments and agency response  Hearing Officer’s Report of Public Hearings  Relationship to Federal Requirements questions  Statement of Need and Fiscal and Economic Impact  Land Use Evaluation statement |
| **Available upon request** | DEQ proposed rulemaking announcement  Oakridge PM2.5 Advisory Committee Recommendations  Written Comments Received  LRAPA minutes from board adoption |
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Approved:

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