#### 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 matter less than 2.5 micrometers in diameter, or PM2.5, in order to protect the health of the residents in the city of Oakridge and neighboringWestfir community. 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 the Environmental Protection Agency as a revision to the Oregon Clean Air Act State Implementation Plan. |
| **Background and need for rulemaking** | History of particulate pollution in Oakridge  Local climate and topography make the city of Oakridge prone to wintertime temperature inversions, low wind speeds and poor atmospheric dispersion.During the winter months, Oakridge air quality is often threatened by high concentrations of smoke from woodstoves settling on the valley floor.  As a result, Oakridge has struggled to meet air quality standards. Oakridge was designated a PM10 non-attainment area on January 20, 1994. The city has not violated the PM10 standard since this designation. 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 smaller particulate, PM2.5, and established a daily standard of 65 micrograms per cubic meter (μg/m3). The original PM10 strategies were so successful that Oakridge met the 1997 PM2.5 standard. In 2006, however, EPA lowered the daily PM2.5 standard based on the latest health effects research, from 65 μg/m3 to 35 μg/m3, causing Oakridge to go back into nonattainment. The area designated as nonattainment for PM2.5 was expanded to include the nearby small city 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. The committee included citizens from both Oakridge and Westfir. From July to December 2011, the committee met to evaluate pollution reduction strategies with the highest chance of success in meeting the PM2.5 standard and developed recommendations for emission reduction measures. These recommendations formed the groundwork for the city of Oakridge to adopt emission reduction measures in local ordinances, and for LRAPA to develop an attainment plan for the Oakridge-Westfir area.  State Implementation Plan  The attainment plan, developed 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 woodstove emissions comprise the majority of the fine 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 related strategies 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 measures and regulations in the contingency plan would increase the number of “red no-burn days” under the woodstove program from 20 to 30 days per year, increase the percentage of curtailment effectiveness, and decrease the allowed opacity for woodstove emissions from 40% to 20% during the winter woodstove season.  The emission reduction measures in the attainment plan are designed to meet the daily PM2.5 standard by lowering PM2.5 levels on worst days during the winter heating season to approximately 28 μg/m3, below the 24-hour health standard of 35 μg/m3. Since the woodstove curtailment program achieves the vast majority of emission reductions, the effectiveness of the program is critical to 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 received comments expressing concern that the attainment plan could further harm the local economy and hinder its recovery. LRAPA, the Oakridge Advisory Committee, and the city of Oakridge focused onstrategies with the lowest fiscal impact on local businesses and the economy.  One benefit of the attainment plan meeting the health standards on schedule is that it would allow more opportunity for future economic development.  When an area is designated as nonattainment, federal requirements for industrial sources require the most stringent control equipment for new or expanding sources, and reasonably available control technology (RACT) for existing sources. While these federal restrictions may prevent some industries from expanding or moving into the Oakridge-Westfir area, they 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 the area 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**  Some community members raised questions on the technical accuracy of monitoring data showing Oakridge-Westfir is above the PM2.5 standard. They stated that the Willamette Activity Center monitor in southwest Oakridge should not be used to determine compliance because it is located in a part of town that has the poorest air quality and is not representative of the entire city. However, EPA monitoring requirements dictate that monitoring take place in the area with the highest pollution levels in order to ensure the entire community meets health standards and is protected. 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.  LRAPA also received comments questioning the validity of the PM2.5 standard. EPA sets this standard based on the latest scientific and health effect research. EPA reviews the standard once every five years as required by law. 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 and have economic impacts 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, with citizens from Oakridge and Westfir in attendance and a public hearing was held before the LRAPA Board of Directors in Springfield on September 20, 2012. Public participation included at the meeting was public testimony from Westfir City Councilor Rob DeHarrport and testimony from Tammy Hubbard, a Westfir citizen. A summary of the public comments provided in Attachment C. |
| **Next steps** | **Plan Implementation**  If approved, DEQ must submit this PM2.5 attainment plan 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 effective implementation of the curtailment strategies and the success of the attainment plan. LRAPA must continue to assist the city in designing public education materials. Finally, LRAPA staff must continue to collaborate with the city of Oakridge and the public to track progress in reducing PM2.5 levels to meet the standard. |
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| **Attachments** | Proposed Rule Revisions  Summary of Public Comments and Agency Responses  Presiding Officer’s Report on Public Hearings  Relationship to Federal Requirements Questions  Statement of Need and Fiscal and Economic Impact  Land Use Evaluation Statement |
| **Available upon request** | Oakridge-Westfir PM2.5 Attainment Plan  Oakridge PM2.5 Advisory Committee Recommendations  Legal Notice of Hearing  Written Comments Received |
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Approved:

Division: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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