DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 200

GENERAL AIR POLLUTION PROCEDURES AND DEFINITIONS

General

340-200-0040

State of Oregon Clean Air Act Implementation Plan

(1) This implementation plan, consisting of Volumes 2 and 3 of the State of Oregon Air Quality Control Program, contains control strategies, rules and standards prepared by the Department of Environmental Quality and is adopted as the state implementation plan (SIP) of the State of Oregon pursuant to the federal Clean Air Act, 42 U.S.C.A 7401 to 7671q.

(2) Except as provided in section (3), revisions to the SIP will be made pursuant to the Commission's rulemaking procedures in division 11 of this chapter and any other requirements contained in the SIP and will be submitted to the United States Environmental Protection Agency for approval. The State Implementation Plan was last modified by the Commission on December 6, 2012.

(3) Notwithstanding any other requirement contained in the SIP, the Department may:

(a) Submit to the Environmental Protection Agency any permit condition implementing a rule that is part of the federally-approved SIP as a source-specific SIP revision after the Department has complied with the public hearings provisions of 40 CFR 51.102 (July 1, 2002); and

(b) Approve the standards submitted by a regional authority if the regional authority adopts verbatim any standard that the Commission has adopted, and submit the standards to EPA for approval as a SIP revision.

NOTE: Revisions to the State of Oregon Clean Air Act Implementation Plan become federally enforceable upon approval by the United States Environmental Protection Agency. If any provision of the federally approved Implementation Plan conflicts with any provision adopted by the Commission, the Department shall enforce the more stringent provision.

Stat. Auth.: ORS 468.020, 468A.035 & 468A.070
Stats. Implemented: ORS 468A.035
Hist.: DEQ 35, f. 2-3-72, ef. 2-15-72; DEQ 54, f. 6-21-73, ef. 7-1-73; DEQ 19-1979, f. & ef. 6-25-79; DEQ 21-1979, f. & ef. 7-2-79; DEQ 22-1980, f. & ef. 9-26-80; DEQ 11-1981, f. & ef. 3-26-81; DEQ 14-1982, f. & ef. 7-21-82; DEQ 21-1982, f. & ef. 10-27-82; DEQ 1-1983, f. & ef. 1-21-83; DEQ 6-1983, f. & ef. 4-18-83; DEQ 18-1984, f. & ef. 10-16-84; DEQ 25-1984, f. & ef. 11-27-84; DEQ 3-1985, f. & ef. 2-1-85; DEQ 12-1985, f. & ef. 9-30-85; DEQ 5-1986, f. & ef. 2-21-86; DEQ 10-1986, f. & ef. 5-9-86; DEQ 20-1986, f. & ef. 11-7-86; DEQ 21-1986, f. & ef. 11-7-86; DEQ 4-1987, f. & ef. 3-2-87; DEQ 5-1987, f. & ef. 3-2-87; DEQ 8-1987, f. & ef. 4-23-87; DEQ 21-1987, f. & ef. 12-16-87; DEQ 31-1988, f. 12-20-88, cert. ef. 12-23-88; DEQ 2-1991, f. & cert. ef. 2-14-91; DEQ 19-1991, f. & cert. ef. 11-13-91; DEQ 20-1991, f. & cert. ef. 11-13-91; DEQ 21-1991, f. & cert. ef. 11-13-91; DEQ 22-1991, f. & cert. ef. 11-13-91; DEQ 23-1991, f. & cert. ef. 11-13-91; DEQ 24-1991, f. & cert. ef. 11-13-91; DEQ 25-1991, f. & cert. ef. 11-13-91; DEQ 1-1992, f. & cert. ef. 2-4-92; DEQ 3-1992, f. & cert. ef. 2-4-92; DEQ 7-1992, f. & cert. ef. 3-30-92; DEQ 19-1992, f. & cert. ef. 8-11-92; DEQ 20-1992, f. & cert. ef. 8-11-92; DEQ 25-1992, f. 10-30-92, cert. ef. 11-1-92; DEQ 26-

1992, f. & cert. ef. 11-2-92; DEQ 27-1992, f. & cert. ef. 11-12-92; DEQ 4-1993, f. & cert. ef. 3-10-93; DEQ 8-1993, f. & cert. ef. 5-11-93; DEQ 12-1993, f. & cert. ef. 9-24-93; DEQ 15-1993, f. & cert. ef. 11-4-93; DEQ 16-1993, f. & cert. ef. 11-4-93; DEQ 17-1993, f. & cert. ef. 11-4-93; DEQ 19-1993, f. & cert. ef. 11-4-93; DEQ 1-1994, f. & cert. ef. 1-3-94; DEQ 5-1994, f. & cert. ef. 3-21-94; DEQ 14-1994, f. & cert. ef. 5-31-94; DEQ 15-1994, f. 6-8-94, cert. ef. 7-1-94; DEQ 25-1994, f. & cert. ef. 11-2-94; DEQ 9-1995, f. & cert. ef. 5-1-95; DEQ 10-1995, f. & cert. ef. 5-1-95; DEQ 14-1995, f. & cert. ef. 5-25-95; DEQ 17-1995, f. & cert. ef. 7-12-95; DEQ 19-1995, f. & cert. ef. 9-1-95; DEQ 20-1995 (Temp), f. & cert. ef. 9-14-95; DEQ 8-1996(Temp), f. & cert. ef. 6-3-96; DEQ 15-1996, f. & cert. ef. 8-14-96; DEQ 19-1996, f. & cert. ef. 9-24-96; DEQ 22-1996, f. & cert. ef. 10-22-96; DEQ 23-1996, f. & cert. ef. 11-4-96; DEQ 24-1996, f. & cert. ef. 11-26-96; DEQ 10-1998, f. & cert. ef. 6-22-98; DEQ 15-1998, f. & cert. ef. 9-23-98; DEQ 16-1998, f. & cert. ef. 9-23-98; DEQ 17-1998, f. & cert. ef. 9-23-98; DEQ 20-1998, f. & cert. ef. 10-12-98; DEQ 21-1998, f. & cert. ef. 10-12-98; DEQ 1-1999, f. & cert. ef. 1-25-99; DEQ 5-1999, f. & cert. ef. 3-25-99; DEQ 6-1999, f. & cert. ef. 5-21-99; DEQ 10-1999, f. & cert. ef. 7-1-99; DEQ 14-1999, f. & cert. ef. 10-14-99, Renumbered from 340-020-0047; DEQ 15-1999, f. & cert. ef. 10-22-99; DEQ 2-2000, f. 2-17-00, cert. ef. 6-1-01; DEQ 6-2000, f. & cert. ef. 5-22-00; DEQ 8-2000, f. & cert. ef. 6-6-00; DEQ 13-2000, f. & cert. ef. 7-28-00; DEQ 16-2000, f. & cert. ef. 10-25-00; DEQ 17-2000, f. & cert. ef. 10-25-00; DEQ 20-2000 f. & cert. ef. 12-15-00; DEQ 21-2000, f. & cert. ef. 12-15-00; DEQ 2-2001, f. & cert. ef. 2-5-01; DEQ 4-2001, f. & cert. ef. 3-27-01; DEQ 6-2001, f. 6-18-01, cert. ef. 7-1-01; DEQ 15-2001, f. & cert. ef. 12-26-01; DEQ 16-2001, f. & cert. ef. 12-26-01; DEQ 17-2001, f. & cert. ef. 12-28-01; DEQ 4-2002, f. & cert. ef. 3-14-02; DEQ 5-2002, f. & cert. ef. 5-3-02; DEQ 11-2002, f. & cert. ef. 10-8-02; DEQ 5-2003, f. & cert. ef. 2-6-03; DEQ 14-2003, f. & cert. ef. 10-24-03; DEQ 19-2003, f. & cert. ef. 12-12-03; DEQ 1-2004, f. & cert. ef. 4-14-04; DEQ 10-2004, f. & cert. ef. 12-15-04; DEQ 1-2005, f. & cert. ef. 1-4-05; DEQ 2-2005, f. & cert. ef. 2-10-05; DEQ 4-2005, f. 5-13-05, cert. ef. 6-1-05; DEQ 7-2005, f. & cert. ef. 7-12-05; DEQ 9-2005, f. & cert. ef. 9-9-05; DEQ 2-2006, f. & cert. ef. 3-14-06; DEQ 4-2006, f. 3-29-06, cert. ef. 3-31-06; DEQ 3-2007, f. & cert. ef. 4-12-07; DEQ 4-2007, f. & cert. ef. 6-28-07; DEQ 8-2007, f. & cert. ef. 11-8-07; DEQ 5-2008, f. & cert. ef. 3-20-08; DEQ 11-2008, f. & cert. ef. 8-29-08; DEQ 12-2008, f. & cert. ef. 9-17-08; DEQ 14-2008, f. & cert. ef. 11-10-08; DEQ 15-2008, f. & cert. ef 12-31-08; DEQ 3-2009, f. & cert. ef. 6-30-09; DEQ 8-2009, f. & cert. ef. 12-16-09; DEQ 2-2010, f. & cert. ef. 3-5-10; DEQ 5-2010, f. & cert. ef. 5-21-10; DEQ 14-2010, f. & cert. ef. 12-10-10; DEQ 1-2011, f. & cert. ef. 2-24-11; DEQ 2-2011, f. 3-10-11, cert. ef. 3-15-11; DEQ 5-2011, f. 4-29-11, cert. ef. 5-1-11; DEQ 18-2011, f. & cert. ef. 12-21-11; DEQ 1-2012, f. & cert. ef. 5-17-12

LANE REGIONAL AIR PROTECTION AGENCY

TITLE 29

DESIGNATION OF AIR QUALITY AREAS

Section 29-0010 Definitions

The definitions in Title 12 and this rule apply to this division. If the same term is defined in this rule and Title 12, the definition in this rule applies to this division. Definitions of boundaries in this rule also apply to LRAPA Rules and Regulations.

(1) "AQCR" means Air Quality Control Region.

(2) "AQMA" means Air Quality Maintenance Area.

(3) "CO" means Carbon Monoxide.

(4) "CBD" means Central Business District.

(5) "Criteria Pollutant" means any of the six pollutants set out by the Clean Air Act (sulfur oxides, particulate matter, ozone, carbon monoxide, nitrogen dioxide, and lead) for which the EPA has promulgated standards in 40 CFR 50.4 through 50.12 (July, 1993).

(6) "Eugene-Springfield UGB" means the area within the bounds beginning at the Willamette River at a point due east from the intersection of East Beacon Road and River Loop No.1; thence southerly along the Willamette River to the intersection with Belt Line Road; thence easterly along Belt Line Road approximately one-half mile to the intersection with Delta Highway; thence northwesterly and then northerly along Delta Highway and on a line north from the Delta Highway to the intersection with the McKenzie River; thence generally southerly and easterly along the McKenzie River approximately eleven miles to the intersection with Marcola Road; thence southwesterly along Marcola Road to the intersection with 42nd Street; thence southerly along 42nd Street to the intersection with the northern branch of US Highway 126; thence easterly along US Highway 126 to the intersection with 52nd Street; thence north along 52nd Street to the intersection with High Banks Road; thence easterly along High Banks Road to the intersection with 58th Street; thence south along 58th Street to the intersection with Thurston Road; thence easterly along Thurston Road to the intersection with the western boundary of Section 36, T17S, R2W; thence south to the southwest corner of Section 36, T17S, R2W; thence west to the Springfield City Limits; thence following the Springfield City Limits southwesterly to the intersection with the western boundary of Section 2, T18S, R2W; thence on a line southwest to the Private Logging Road approximately one-half mile away; thence southeasterly along the Private Logging Road to the intersection with Wallace Creek; thence southwesterly along Wallace Creek to the confluence with

the Middle Fork of the Willamette River; thence generally northwesterly along the Middle Fork of the Willamette River approximately seven and one-half miles to the intersection with the northern boundary of Section 11, T18S, R3W; thence west to the northwest corner of Section 10, T18S, R3W; thence south to the intersection with 30th Avenue; thence westerly along 30th Avenue to the intersection with the Eugene City Limits; thence following the Eugene City Limits first southerly then westerly then northerly and finally westerly to the intersection with the northern boundary of Section 5, T18S, R4W; thence west to the intersection with Greenhill Road; thence north along Greenhill Road to the intersection with Barger Drive; thence east along Barger Drive to the intersection with the Eugene City Limits (Ohio Street); thence following the Eugene City Limits first north then east then north then east then south then east to the intersection with Jansen Drive; thence east along Jansen Drive to the intersection with Belt Line Road; thence northeasterly along Belt Line Road to the intersection with Highway 99; thence northwesterly along Highway 99 to the intersection with Clear Lake Road; thence west along Clear Lake Road to the intersection with the western boundary of Section 9, T17S, R4W; thence north to the intersection with Airport Road; thence east along Airport Road to the intersection with Highway 99; thence northwesterly along Highway 99 to the intersection East Enid Road; thence east along East Enid Road to the intersection with Prairie Road; thence southerly along Prairie Road to the intersection with Irvington Road; thence east along Irvington Road to the intersection with the Southern Pacific Railroad Line; thence southeasterly along the Southern Pacific Railroad Line to the intersection with Irving Road; thence east along Irving Road to the intersection with Kalmia Road; thence northerly along Kalmia Road to the intersection with Hyacinth Road; thence northerly along Hyancinth Road to the intersection with Irvington Road; thence east along Irvington Road to the intersection with Spring Creek; thence northerly along Spring Creek to the intersection with River Road; thence northerly along River Road to the intersection with East Beacon Drive; thence following East Beacon Drive first east then south then east to the intersection with River Loop No.1; thence on a line due east to the Willamette River and the point of beginning.

(7) "Maintenance Area" means any area that was formerly nonattainment for a criteria pollutant but has since met EPA promulgated standards and has had a maintenance plan to stay within the standards approved by the EPA pursuant to 40 CFR 51.110 (July, 1993).

(8) "Nonattainment Area" means any area that has been designated as not meeting the standards established by the U.S. Environmental Protection Agency (EPA) pursuant to 40 CFR 51.52 (July, 1993) for any criteria pollutant.

(9) "O3" means Ozone.

~~(10~~(10) "Oakridge PM2.5 Nonattainment Area" means the area enclosed by the following: T21S, R2E, Sect 11 (NW Corner) east to T21S, R3E, Sect 11 (NE corner),

south to T21S, R3E, Sect 23(SE Corner), west to T21S, R2E, Sect 23(SW corner) correctly back to T21S, R2E, Sect 11(NW corner).

(11) "Oakridge UGB" means the area enclosed by the following: Beginning at the northwest corner of Section 17, T21S, R3E and the city limits; thence south along the western boundary of Section 17, T21S, R3E along the city limits approximately 800 feet; thence southwesterly following the city limits approximately 750 feet; thence west along the city limits approximately 450 feet; thence northwesterly along the city limits approximately 450 feet; thence on a line south along the city limits approximately 250 feet; thence on a line east along the city limits approximately 100 feet; thence southwesterly along the city limits approximately 200 feet; thence on a line east along the city limits approximately 400 feet; thence on a line south along the city limits to the channel of the Willamette River Middle Fork; thence south-easterly up the Willamette River Middle Fork along the city limits approximately 7200 feet; thence exiting the Willamette River Middle Fork with the city limits in a northerly manner and forming a rough semicircle with a diameter of approximately one-half mile before rejoining the Willamette River Middle Fork; thence diverging from the city limits upon rejoining the Willamette River Middle Fork and moving southeasterly approximately 5600 feet up the Willamette River Middle Fork to a point on the river even with the point where Salmon Creek Road intersects with U.S. Highway 58; thence on a line east from the channel of the Willamette River Middle Fork across the intersection of Salmon Creek Road and U.S. Highway 58 to the intersection with the Southern Pacific Railroad Line; thence northerly along the Southern Pacific Railroad Line to the intersection with the northern boundary of Section 22, T21S, R3E; thence west along the northern boundary of Section 22, T21S, R3E to the intersection with Salmon Creek Road; thence on a line north to the intersection with the Southern Pacific Railroad Line; thence east along the Southern Pacific Railroad Line approximately 600 feet; thence on a line north to the intersection with High Prairie Road; thence on a line west approximately 400 feet; thence on a line north to the intersection with the northern boundary of Section 15, T21S, R3E; thence west along the northern boundary of Section 15, T21S, R3E to the intersection with the southeastern corner of Section 9, T21S, R3E; thence north along the eastern boundary of Section 9, T21S, R3E approximately 1300 feet; thence on a line west approximately 1100 feet; thence on a line south to the intersection with West Oak Road; thence northwesterly along West Oak Road approximately 2000 feet; thence on a line south to the intersection with the northern boundary line of the city limits; thence westerly and northwesterly approximately 8000 feet along the city limits to the point of beginning.

(~~11~~12) "Particulate Matter" means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by an applicable reference method with the Department's ***Source Sampling Manual***, (January, 1992).

(~~12~~13) PM10:

(a) When used in the context of emissions, means finely divided solid or liquid material, including condensible water, other than combined water, with an aerodynamic diameter less than or equal to a nominal 10 microns, emitted to the ambient air as measured by as

applicable reference method in accordance with the Department's ***Source Sampling Manual*** (January, 1992);

(b) When used in the context of ambient concentration, means airborne finely divided solid or liquid material with an aerodynamic diameter less than or equal to a nominal 10 microns as measured in accordance with 40 CFR Part 50, Appendix J (July, 1993).

(~~13~~14) "UGA" means Urban Growth Area. (synonymous with "UGB")

(~~14~~15) "UGB" means Urban Growth Boundary.

Section 29-0020 Designation of Air Quality Control Regions

Oregon's thirty-six counties are divided into five AQCRs. The AQCR boundaries follow county lines, and there are no counties that belong to more than one AQCR. The five AQCRs are as follows:

(1) **Portland Interstate AQCR**, containing ten counties:

(a) Benton County;

(b) Clackamas County;

(c) Columbia County;

(d) Lane County;

(e) Linn County;

(f) Marion County;

(g) Multnomah County;

(h) Polk County;

(i) Washington County;

(j) Yamhill County.

(2) **Northwest Oregon AQCR**, containing three counties:

(a) Clatsop County;

(b) Lincoln County;

(c) Tillamook County.

(3) **Southwest Oregon AQCR**, containing five counties:

(a) Coos County;

(b) Curry County;

(c) Douglas County;

(d) Jackson County;

(e) Josephine County.

(4) **Central Oregon AQCR**, containing eight counties:

(a) Crook County;

(b) Deschutes County;

(c) Hood River County;

(d) Jefferson County;

(e) Klamath County;

(f) Lake County;

(g) Sherman County;

(h) Wasco County.

(5) **Eastern Oregon AQCR**, containing ten counties:

(a) Baker County;

(b) Gilliam County;

(c) Grant County;

(d) Harney County;

(e) Malheur County;

(f) Morrow County;

(g) Umatilla County;

(h) Union County;

(i) Wallowa County;

(j) Wheel County.

Section 29-0030 Designation of Nonattainment Areas

The following areas are designated as Nonattainment Areas:

(1) PM10 Nonattainment Areas:

(a) The Oakridge Nonattainment Area for PM10 is the Oakridge UGB as defined in Section 29-0010.

(2) PM2.5 Nonattainment Areas:

(a) The Oakridge Nonattainment Area for PM2.5 is defined in Section 29-0010.

Section 29-0040 Designation of Maintenance Areas

The following areas are designated as Maintenance Areas:

(1) Carbon Monoxide Maintenance Areas:

(a) The Eugene Maintenance Area for Carbon Monoxide is the Eugene-Springfield UGB as defined in Section 29-0010.

(2) PM10 Maintenance Areas:

(a) The Eugene-Springfield Maintenance Area for PM10 is the Eugene-Springfield UGB as defined in Section 29-0010.

Section 29-0050 Designation of Prevention of Significant Deterioration Areas

(1) All of the following areas which were in existence on August 7, 1977, shall be Class I Areas and may not be redesignated:

(a) Mt. Hood Wilderness, as established by Public Law 88-577;

(b) Eagle Cap Wilderness, as established by Public Law 88-577;

(c) Hells Canyon Wilderness, as established by Public Law 94-199;

(d) Mt. Jefferson Wilderness, as established by Public Law 90-548;

(e) Mt. Washington Wilderness, as established by Public Law 88-577;

(f) Three Sisters Wilderness, as established by Public Law 88-577;

(g) Strawberry Mountain Wilderness, as established by Public Law 88-577;

(h) Diamond Peak Wilderness, as established by Public Law 88-577;

(i) Crater Lake National Park, as established by Public Law 88-577 and expanded in the 1990 Clean Air Act Amendments;

(j) Kalmiopsis Wilderness, as established by Public Law 88-577;

(k) Mountain Lake Wilderness, as established by Public Law 88-577;

(l) Gearhart Mountain Wilderness, as established by Public Law 88-577.

(2) All other areas, in Oregon are initially designated Class II, but may be redesignated as provided in Section 29-0060.

(3) The following areas may be redesignated only as Class I or II:

(a) An area which as of August 7, 1977, exceeded 10,000 acres in size and was a national monument, a national primitive area, a national preserve, a national recreational area, a national wild and scenic river, a national wildlife refuge, a national lakeshore or seashore; and

(b) A national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres in size.

(4) The extent of the areas referred to in section (1) and (3) of this rule shall conform to any changes in the boundaries of such areas which occurred between August 7, 1977, and November 15, 1990.

Section 29-0060 Redesignation of Prevention of Significant Deterioration Areas

(1)(a) All areas in Oregon, except as otherwise provided under Section 29-0050, are designated Class II as of December 5, 1974;

(b) Redesignation, except as otherwise precluded by Section 29-0050, may be proposed by LRAPA, as provided below, subject to approval by the EPA Administrator as a revision to the State Implementation Plan.

(2) LRAPA may submit to the EPA Administrator a proposal to redesignate areas of the state Class I or II provided that:

(a) At least one public hearing has been held in accordance with procedures established in the Plan;

(b) Other States, Indian Governing Bodies, and Federal Land Managers whose lands may be affected by the proposed redesignation were notified at least 30 days prior to the public hearing;

(c) A discussion of the reasons for the proposed redesignation, including a satisfactory description and analysis of the health, environmental, economic, social and energy effects of the proposed redesignation, was prepared and made available for public inspection at least 30 days prior to the hearing and the notice announcing the hearing contained appropriate notification of the availability of such discussion;

(d) Prior to the issuance of notice respecting the redesignation of an area that includes any Federal lands, LRAPA has provided written notice to the appropriate Federal Land Manager and afforded adequate opportunity, not in excess of 60 days to confer with LRAPA respecting the redesignation and to submit written comments and recommendations. In redesignating any area with respect to which any Federal Land Manager had submitted written comments and recommendations, LRAPA shall have published a list of any inconsistency between such redesignation and such comments and recommendations together with the reasons for making such redesignation against the recommendation of the Federal Land Manager; and

(e) LRAPA has proposed the redesignation after consultation with the elected leadership of local general purpose governments in the area covered by the proposed redesignation.

(3) Any area other than an area to which Section 29-0050 refers may be redesignated as Class III if:

(a) The redesignation would meet the requirements of section (2) of this rule;

(b) The redesignation, except any established by an Indian Governing Body, has been specifically approved by the Governor, after consultation with the appropriate committees of the legislature, if it is in session, or with the leadership of the legislature, if it is not in session, unless state law provides that the redesignation must be specifically approved by state legislation, and if general purpose units of local government representing a majority of the residents of the area to be redesignated enact legislation or pass resolutions concurring in the redesignation;

(c) The redesignation would not cause, or contribute to, a concentration of any air pollutant which would exceed any maximum allowable increase permitted under the classification of any other area or any national ambient air quality standard; and

(d) Any permit application for any major stationary source or major modification, subject to review under section (1) of this rule, which could receive a permit under this section only if the area in question were redesignated as Class III, and any material submitted as

part of that application, were available insofar as was practicable for public inspection prior to any public hearing on redesignation of the area as Class III.

(4) Lands within the exterior boundaries of Indian Reservations may be redesignated only by the appropriate Indian Governing Body. The appropriate Indian Governing Body may submit to the EPA Administrator a proposal to redesignate areas Class I, II, or III; provided that:

(a) The Indian Governing Body has followed procedures equivalent to those required of LRAPA under section (2) and subsections (3)(c) and (d) of this rule; and

(b) Such redesignation is proposed after consultation with the state(s) in which the Indian Reservation is located and which border the Indian Reservation.

(5) The EPA Administrator shall disapprove, within 90 days of submission, a proposed redesignation of any area only if he finds, after notice and opportunity for public hearing, that such redesignation does not meet the procedural requirements of this paragraph or is inconsistent with Section 29-0050. If any such disapproval occurs, the classification of the area shall be that which was in effect prior to the redesignation which was disapproved.

(6) If the EPA Administrator disapproves any proposed redesignation, LRAPA or Indian Governing Body, as appropriate, may resubmit the proposal after correcting the deficiencies noted by the EPA Administrator.

Section 29-0070 Special Control Areas

The following areas are designated as Special Control Areas:

(1) Lane County;

(2) Within incorporated cities having a population of 4,000 or more, and within three miles of the corporate limits of any such city.

Section 29-0080 Motor Vehicle Inspection Boundary Designations

In addition to the area specified in ORS 815.300, pursuant to ORS 468A.390, the following geographical areas are designated as areas within which motor vehicles are subject to the requirement under ORS 815.300 to have a Certificate of Compliance issued pursuant to ORS 468A.380 to be registered or have the registration of the vehicle renewed.

(1) There are currently no geographic areas in Lane County subject to motor vehicle inspection programs.

Section 29-0090 Oxygenated Gasoline Control Areas

There currently are no oxygenated gasoline control areas in Lane County.

Oakridge Fine Particulate Matter ($PM_{2.5}$) Attainment Plan

LRAPA
Lane Regional Air Protection Agency
1010 Main Street
Springfield, Oregon 97477

November 15, 2012 Final with changes from Board of Director's Adoption October 18, 2012 and November 15, 2012

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EXECUTIVE SUMMARY

The U.S. Environmental Protection Agency (EPA) adopted revisions to the National Ambient Air Quality Standards (NAAQS) for $PM_{2.5}$ in September 2006. $PM_{2.5}$ is fine particulate matter two and a half microns and less in diameter, or about 1/28th the diameter of a human hair. Also referred to as respirable particulate matter, these tiny particles are inhaled deep into the lungs where they accumulate and aggravate respiratory conditions, particularly asthma. Fine particulate ($PM_{2.5}$ microns and smaller) are associated with heart and lung disease, increased respiratory symptoms and disease, decreased lung function, and premature death. Chronic exposure to fine particulate has also been implicated in increased risk for cardiac events. Populations especially at risk include children, the elderly, and those with existing health problems.

On October 8, 2009, the Environmental Protection Agency (EPA) issued final area non-attainment designations for the 24-hour national air quality standards for fine particulate matter ($PM_{2.5}$). Oakridge was designated a non-attainment area in Oregon. Under the Clean Air Act, an area that violates the federal standards is designated as "nonattainment" and must adopt a plan with emission reduction measures to bring the area back into compliance. The area designated as non-attainment for $PM_{2.5}$ contains Oakridge, the small town of Westfir and surrounding area.

The Oakridge $PM_{2.5}$ Attainment Plan

The City of Oakridge has struggled to meet air quality standards. Oakridge was proposed a PM_{10} "non-attainment" area in September 1992, and designated on January 20, 1994. The City last exceeded that standard in 1993. Voluntary measures to reduce wood smoke emissions adopted in 1999 have reduced measured particulate levels. Progress in reducing wood smoke emissions made it possible for the City of Oakridge to meet the 1997 $PM_{2.5}$ standard of 65 $\mu g/m^3$. Despite progress in improving air quality, the tightening of the $PM_{2.5}$ standard in 2006 presented yet another challenge.

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. Figure 1 shows the worst case day[1] contribution of each of these source categories in the Oakridge nonattainment area.

[1] A worst case day is defined as a design value corresponding to the 98th percentile of the data collected for a given year or an average of the 98th percentile of three years.

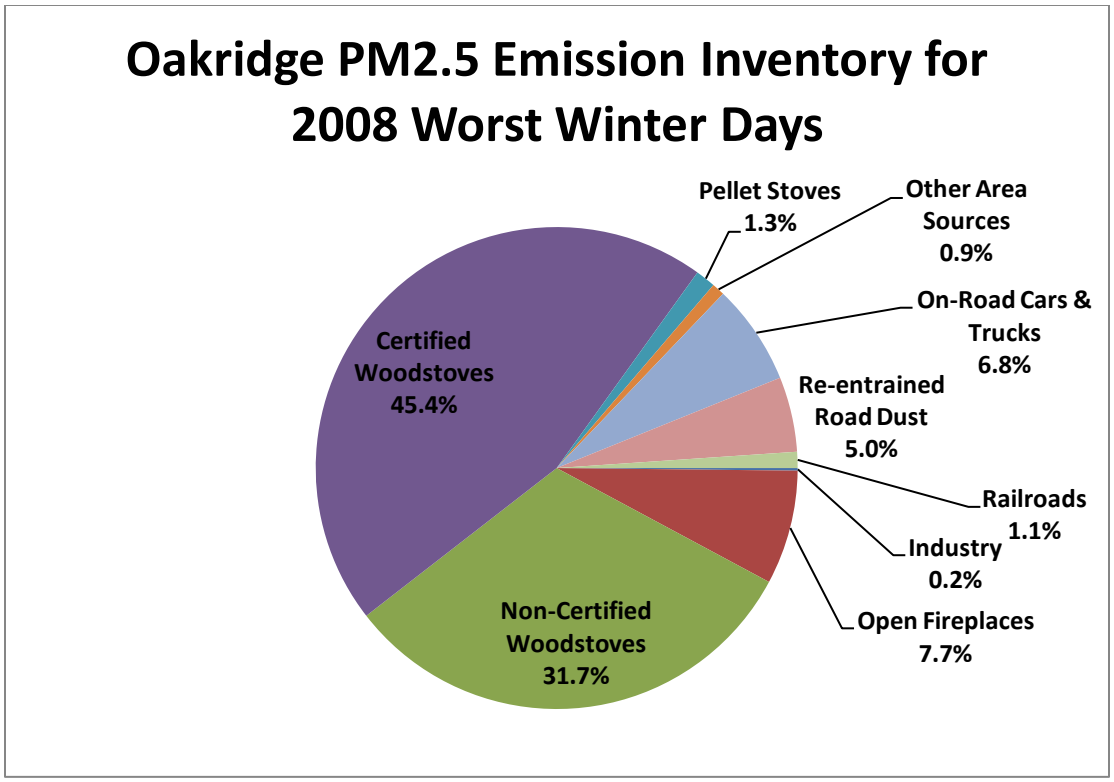

Figure 1: Oakridge Nonattainment Area 2008 Worst Case Day Emissions

Attainment of Standards

Despite significant progress in reducing particle pollution, the Oakridge area exceeded and consequently violated the federal 24-hour fine particulate ($PM_{2.5}$) 2006 standard of 35 µg/m^3 but complied with the annual $PM_{2.5}$ standard of 15 µg/m^3 in the 2001-2011 period. $PM_{2.5}$ concentrations above the 24-hour standard during this period are linked to wintertime inversions and high emissions.

The main purpose of the Oakridge $PM_{2.5}$ attainment plan is to return the Oakridge area back to compliance with the 2006 24-hour standard by 2014 as required by federal law. Oakridge does not violate the annual $PM_{2.5}$ standard. This attainment plan fulfills federal requirements regarding EPA designated nonattainment areas.

The City of Oakridge has taken steps to address pollution from woodstoves. On February 20, 2003, the Oakridge City Council adopted a home wood heating ordinance that:

- Changed previous voluntary woodburning curtailment measures to mandatory,
- Prohibited burning garbage in woodstoves and fireplaces,
- Incorporated a 40% opacity limit on chimneys,
- Incorporated the $PM_{2.5}$ standard into the program, and
- Required the removal of uncertified woodstoves from property to be sold or rented.

In December 2008, the Oakridge City Council passed an ordinance prohibiting the use of an uncertified solid fuel heating device in a residence. The Lane Regional Air Protection Agency (LRAPA) has also worked closely with the City of Oakridge and other partners to help residents replace old, uncertified wood stove with new, cleaner burning and energy efficient heating systems. LRAPA also issues daily home wood heating advisories November 1 through the last day of February. When air quality is forecast to be in the unhealthy for sensitive groups range, LRAPA activates an automatic "callware" system to alert residents by telephone about burning restrictions.

The use of these strategies and others identified by an advisory committee should further reduce ambient concentration of $PM_{2.5}$ below the national health-based standard by 2014. The estimated ambient concentrations for both the annual and the worst case day are predicted to decrease based on a ratio of the 2008 ambient concentration to the projected emission inventory for the year 2014.

The base year Design Value concentration confirms that additional strategies, beyond those implemented by 2008, are needed to bring the area into attainment. The future year concentration in Table 1 is based on implementation of the additional strategies and confirms that these strategies will be sufficient to meet the federal 24-hour standard by 2014.

	Base Year	Future Year
Worst Case Day Concentration	39.5 µg/m^3	28.2 µg/m^3
Federal Standard	35 µg/ m^3	35 µg/ m^3

Table 1: $PM_{2.5}$ Attainment Demonstration

Strategies and Contingency Plan

Woodstove Curtailment and other Woodstove Strategies

Oakridge has been proactive in adopting a number of strategies to reduce emissions from home wood heating. These strategies include:

- City ordinances to curtail burning during stagnant weather periods.
- City ordinance requiring the removal of an uncertified wood stove upon sale of a home.
- City ordinance prohibiting the use of a noncertified wood stove in a residence.
- Partnering in additional change-out programs to encourage removal of noncertified stoves.

A new stove certification program by EPA and the woodstove replacement programs continue to result in a significant emissions reduction in Oakridge. The continued replacement of older woodstoves coupled with better enforcement of daily advisories is expected to continue to decrease emissions through 2014 even with a moderate growth in households.

Other Strategies

Curtailing open burning has been identified as a way to reduce PM emissions. The Oakridge City Ordinance prohibits burning within the City limits on days with high concentrations of particulate matter in the month of October and March 1 – June 15. All open burning is prohibited between November 1 and February 28 inside the City limits.

Oregon Department of Forestry (ODF) requires federal land managers to follow strict smoke management instructions and avoid smoke impacts to Oakridge. ODF has designated Oakridge as a Special Protection Zone (SPZ) shown in Figure 2. During the November 15 through February 15 period, prescribed burning in the SPZ is allowed only when the ODF smoke management meteorologist believes there will be no measurable smoke impacts within the nonattainment area. The SPZ prohibits any prescribed burning on red advisory days.

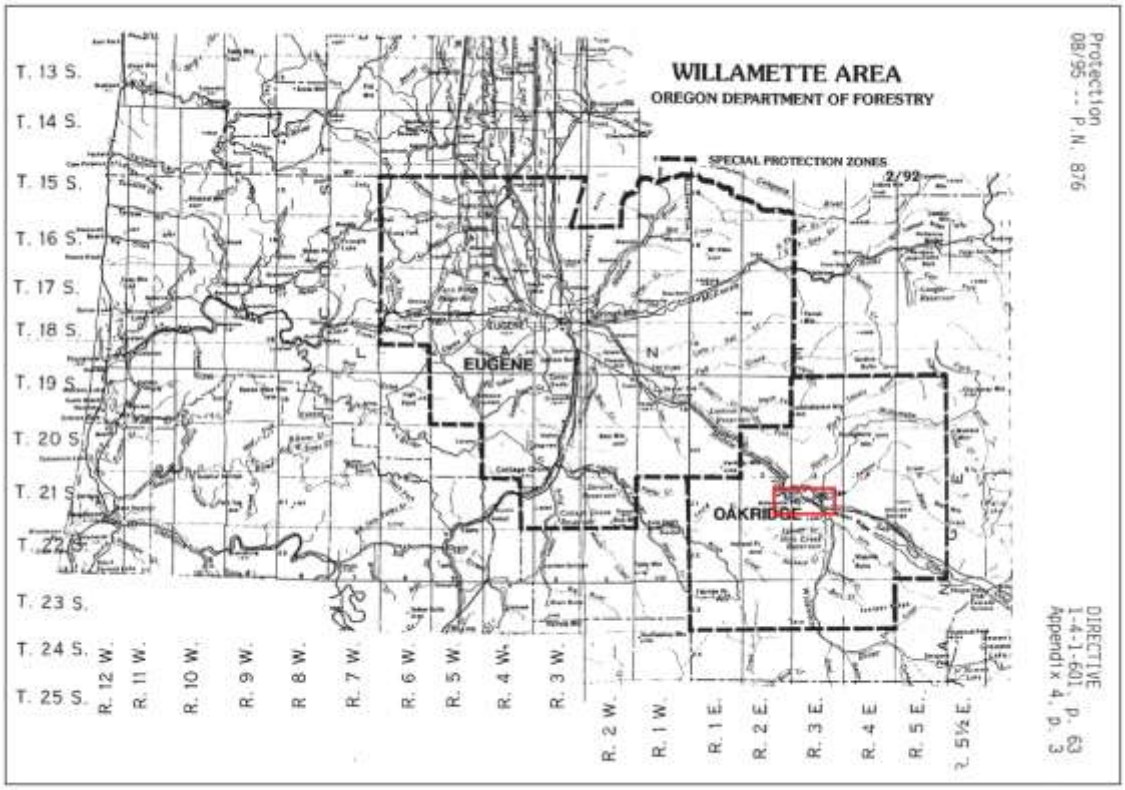

Figure 2: Special Protection Zone Surrounding Oakridge

Contingency Plan Elements

The following strategies will be implemented as contingency strategies to fully meet the air quality standards, if it becomes clear that the strengthened ongoing strategies will not be sufficient to attain the $PM_{2.5}$ standards by 2014 and or to maintain compliance with the standards through 2024 and beyond:

- Stricter opacity limit on all green or yellow advisory days, revising the current 40% opacity limit to a more restrictive 20% limit, as has been done in some other northwest communities. A 20% opacity limit on green and yellow advisory days will help reduce emissions with the goal of avoiding red advisories when no visible emissions are allowed.
- Stricter green-yellow-red advisory program, with more yellow and red advisory days each winter.
- Further restrictions on the city woodstove curtailment exemptions (for sole source, economic hardship).

If Oakridge meets the EPA Clean Air Act deadline for meeting the standard, the contingency plan will not be implemented. While this plan is not intended to attain any proposed standard, LRAPA estimates that Oakridge will meet a tightened annual standard of 12 µg/m³.

INTRODUCTION

Background

This plan addresses the 24-hour and the annual ambient air quality standards for $PM_{2.5}$ as defined in the federal Clean Air Act. In September 2006, the U.S. Environmental Protection Agency (EPA) strengthened the daily (24-hr) $PM_{2.5}$ (fine particulate) standard by lowering the level from 65 $\mu g/m^3$ to 35 $\mu g/m^3$ and retained the annual $PM_{2.5}$ standard of 15 $\mu g/m^3$. Areas in violation of the $PM_{2.5}$ standard (based on the most recent three years of federal reference monitoring data) are designated as a "nonattainment area" by the EPA. Oakridge, Oregon has been designated as nonattainment for the daily $PM_{2.5}$ standard. The Lane Regional Air Protection Agency (LRAPA) must develop an attainment plan that will bring air quality into compliance with the standard as soon as possible, and submit this plan to EPA.

What is $PM_{2.5}$?

Particulate matter (PM) is the general term used for a mixture of solid particles or liquid droplets found in the air. Some particles are large or dark enough to be seen as soot or smoke. Others are so small they can be detected only with an electron microscope. These particles come in a wide range of sizes ("fine" particles are less than 2.5 micrometers in diameter and coarser-sized particles are larger than 2.5 micrometers), and originate from many different sources. Fine particles ($PM_{2.5}$) generally result from fuel combustion from residential fireplaces and woodstoves, pile and forest burning, industrial facilities, and motor vehicles. Coarse particles (PM_{10}) are generally emitted from sources such as vehicles traveling on paved and unpaved roads, materials handling, and wood products operations, as well as wind-blown dust.

These particles can accumulate in the respiratory system and are associated with numerous health effects. Fine particles are most closely associated with such health effects as increased hospital admissions and emergency room visits for heart and lung disease, increased respiratory symptoms and disease, decreased lung function and premature death. Sensitive groups that are at greatest risk include the elderly, individuals with cardiopulmonary disease such as asthma, and children.

National Ambient Air Quality Standards for $PM_{2.5}$

EPA has established National Ambient Air Quality Standards (NAAQS) for $PM_{2.5}$ at 35 micrograms per cubic meter ($\mu g/m^3$) for a daily (24-hour) standard and 15 $\mu g/m^3$ as an annual standard. Any value monitored above these levels, as defined by federal rules and guidance, is considered an exceedance. EPA uses the 98^{th} percentile of the 24-hr $PM_{2.5}$ within any given year and averages it over three calendar years. An exceedance of the average 98^{th} percentile over three years greater than 35 $\mu g/m^3$ is considered a violation. An exceedance of the annual standard averaged over three years becomes a violation of the annual standard. If an area violates either standard, EPA designates it as a nonattainment area. This plan includes a demonstration of continuing attainment with both standards.

Purpose of Attainment Plan

This document provides a pathway for continued improvement to reduce particulate emissions and to return the Oakridge Nonattainment Area (NA) to attainment for $PM_{2.5}$ (state

classification will be “maintenance”) by achieving the more protective national health standards adopted in 2006. It is a plan to ensure Oakridge meets the 24-hour and annual National Ambient Air Quality Standards for $PM_{2.5}$ and maintains the annual standard for $PM_{2.5}$. This document complies with the applicable 1990 Federal Clean Air Act (CAA) requirements and Environmental Protection Agency (EPA) guidance and policies. The attainment plan provides strategies to meet the $PM_{2.5}$ standards by 2014 and provides contingency measures should Oakridge not meet the deadline. To demonstrate "attainment" requires the collection of representative monitoring data using approved measuring instruments and procedures, with adequate quality assurance. EPA will review the plan to determine if it is approvable and publish its findings in the Federal Register. Redesignation back to attainment is possible only after Oakridge meets the standards for three consecutive years and a maintenance plan is drafted, adopted by the LRAPA Board of Directors, the Environmental Quality Commission (EQC) and approved by EPA. EPA will then formally redesignate Oakridge back into attainment in the Federal Register.

Oakridge Area Description

Oakridge, Oregon lies in an alluvial plain in the foothills at the southern end of the Willamette River valley. The city is in Lane County, Oregon, approximately 45 miles east-southeast of Eugene, and 28 miles west of Willamette Pass, the summit of the Cascade Mountain Range. The city limits of present-day Oakridge includes the historic City of Oakridge and, directly west, the area formerly known as Willamette City. Figure 3 shows the location of Oakridge in Lane County.

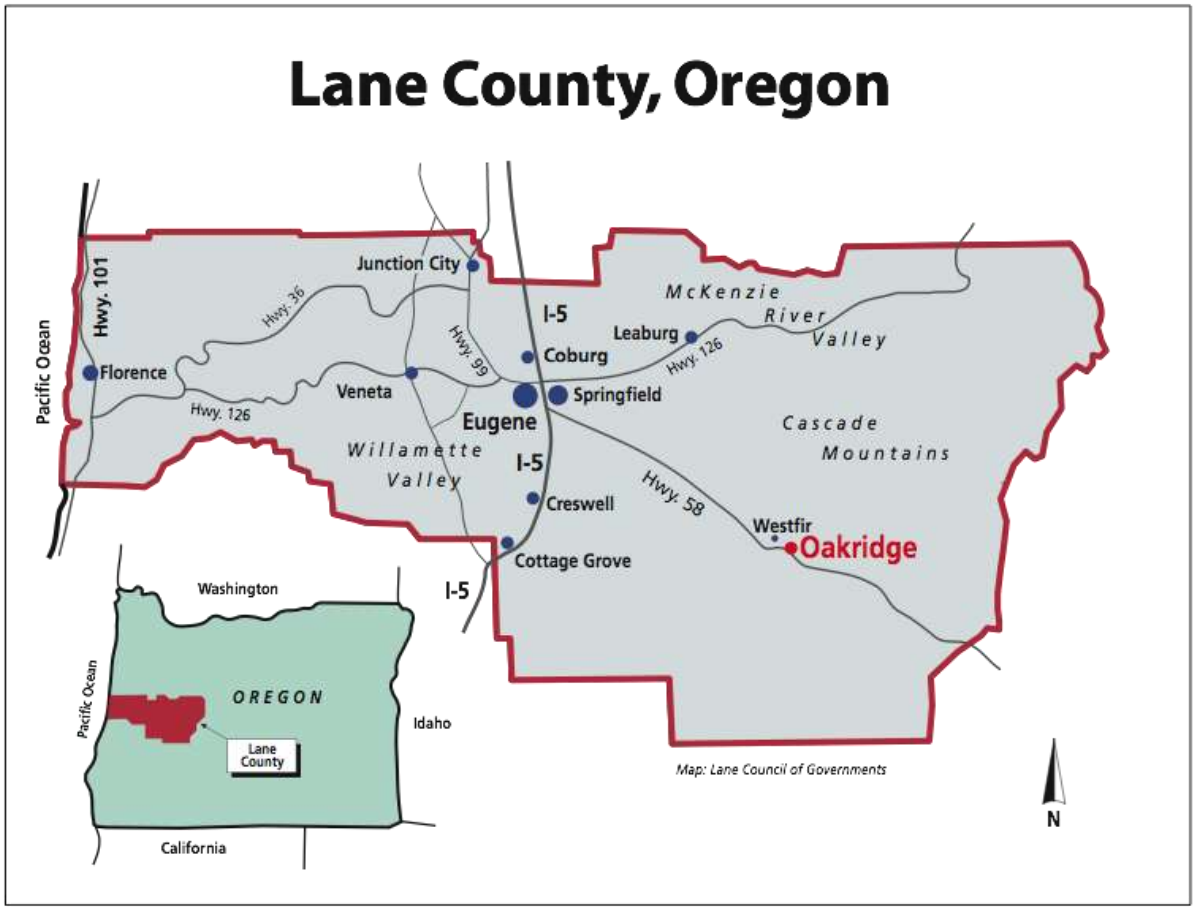

Figure 3: Oakridge Location

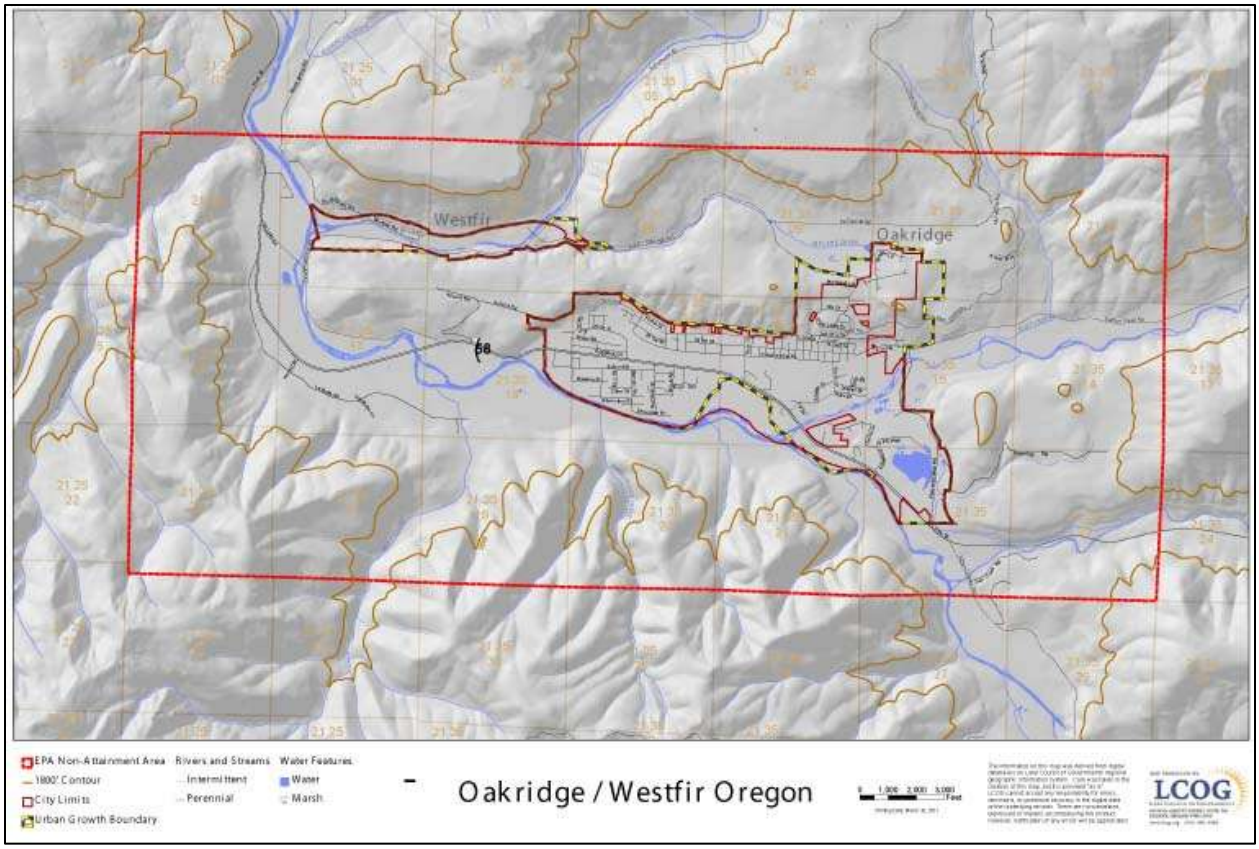

Figure 4: Nonattainment Area

The area of applicability for this attainment plan includes an area that contains the City of Oakridge and the small town of Westfir. Figure 4 shows the Oakridge non-attainment area.

The City of Oakridge is situated in a valley oriented east-west, through which flows the middle fork of the Willamette River. Elevation of the area ranges from 1100 feet at the lower (west) end to 1600 feet with areas of densest population situated between 1100 feet and 1200 feet. Mountains rise on the north and south sides to 1700 feet and 1600 feet, respectively.

Westfir is a very small (population 335) isolated rural mountain community that is located along the north fork of the Willamette River about 1 mile NW of Oakridge. Its elevation is about the same as Oakridge and it is surrounded by the same high mountains. Westfir and Oakridge are in separate steep sided river valleys separated by a 400-foot ridge. The Westfir valley is very narrow, only about 1/4 mile across at its widest point, while the Oakridge valley is about 1 mile across at its widest point.

History of Efforts to Address Particulate Matter in Oakridge

Oakridge has historically struggled with air quality issues during the winter months, especially on cold days during periods of air stagnation. Oakridge was proposed a PM_{10} non-attainment area in December 1993, effective on January 9, 1994. PM_{10} is defined as particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by

an approved method listed in 40 CFR 53. Initial efforts to curtail wood smoke were developed for the Oakridge Urban Growth Boundary (UGB) by 1991, however, at that time the area still had not met the standard. LRAPA subsequently submitted a formal PM_{10} plan to EPA in 1996. EPA approved the attainment plan on May 14, 1999. One of the key strategies in the plan included a mandatory woodstove curtailment program and a woodstove change-out program. On March 19, 1992, the Oakridge City Council amended its open burning ordinance #689 to allow open backyard burning only during the months of October, March, April, and May and bans the use of burn barrels. Oakridge City Code 92.04.A.2 currently regulates open backyard burning inside the Oakridge city limits. This eliminated burning during wintertime periods of maximum atmospheric stagnation when burning is more likely to contribute to exceedances of the 24-hour standard. An aggressive wood stove change-out project, along with a voluntary residential wood burning advisory program, further reduced winter time PM_{10} emissions. In a letter of agreement with the Oregon Department of Transportation (ODOT), dated July 29, 1996, ODOT agreed to use a chemical de-icing compound on Highway 58 as an alternative to sanding roads during the winter season. As a result of these strategies, the area was able to meet and continue to meet the PM_{10} standards from 1994 to present.

EPA revised the particulate standard in 1997 to include $PM_{2.5}$ and established a daily standard of 65 $\mu g/m^3$. LRAPA began monitoring fine particulate matter ($PM_{2.5}$) concentrations in 1998. The original PM_{10} strategies included in the 1996 attainment plan were so successful in maintaining clean air that Oakridge also met the fine particulate ($PM_{2.5}$) standard.

In 2006, EPA modified the $PM_{2.5}$ standard, cutting the threshold for the 24-hour exceedance day roughly in half to 35 $\mu g/m^3$. Oakridge has not yet been able to meet this new daily $PM_{2.5}$ standard, so continued progress is need to further reduce particulate emissions. LRAPA has measured $PM_{2.5}$ at the same location in the Oakridge (Willamette Activity Center) since 1998 and PM_{10} since 1989. LRAPA has also operated a nephelometer in Oakridge since 1989 which makes it possible to estimate $PM_{2.5}$ during 1989-1998. Many of the same pollutant sources for PM_{10} are the same for $PM_{2.5}$.

Between 2006 and 2011, $PM_{2.5}$ concentrations in Oakridge on worst winter days violated the more protective 24-hour national health standard adopted in 2006. There were no exceedances of the annual $PM_{2.5}$ standard. EPA's deadline for meeting the standards is December 2014. Emission reduction strategies included in this plan should provide compliance with the Clean Air Act Amendments even with a modest population growth. If the community fails to meet the standard by 2014, automatic contingency measures will be implemented and are clearly identified in this plan.

What is in this Attainment Plan?

Nonattainment Area

The plan provides an analysis of the existing nonattainment area situation. It describes the past and the current state of air quality. It identifies and quantifies the current nature of the air quality problem.

Attainment Demonstration

The key component of the plan is in the attainment demonstration analysis where emissions are predicted into the future but strategies are identified to reduce emissions. There is also an explanation of the past and current economic situation and past and current meteorological situation. It predicts air quality into the future based on a growth analysis to show how much worse the air quality can become. It tells how the air quality can improve by implementing these various approaches or tactics to reduce emissions enough to meet the standards. Credit is given to each strategy or tactic and emission reductions are estimated into the future. It provides for a commitment by the community to return Oakridge to attainment status and explains and quantifies those commitments. The commitment shows how to improve air quality by using these strategies and promises to watch for changes to assure the commitment is met. If the commitment is not met, it identifies what future additional strategies will be necessary to implement immediately, should the initial commitments fail to meet the standard by 2014.

The following strategies are in place and critical for meeting the $PM_{2.5}$ air quality health standards by 2014:

- Woodstove change-out programs. A model is in place to replace non-certified woodstoves with heat pumps, pellet stoves, or high-efficiency certified woodstoves. The current funding has been committed, and the most recent phase of this program was completed during December 2011.
- Continue woodstove-fireplace curtailment program (green-yellow-red advisories, with curtailment required during air stagnation pollution episodes); the city ordinance requires curtailment on red days; LRAPA provides the daily air quality and meteorological forecasts during November-February.
- Continue program prohibiting backyard/open burning: Burning of garbage is prohibited at all times; city ordinance prohibits open burning of yard debris during November-February; LRAPA provides daily open burning advisory during March-May and October; and open burning is prohibited in June-September during the fire season established by fire departments.
- Maintain the Special Protection Zone for Oakridge as required in the ODF smoke Management Plan.
- Continue outdoor recreational fire (chimineas and other patio heaters) program; LRAPA rules prohibit outdoor recreational fires on yellow-red advisory days during November-February.
- Continue Oregon Heat Smart program; requires removal of non-certified woodstoves upon home sale, and prohibits burning of garbage in woodstoves and fireplaces.
- Prohibit the use of uncertified woodstoves

The plan proposes strengthening existing strategies and introduces new strategies to be implemented in the community. The plan demonstrates that new and continued permanent and voluntary strategies are sufficient to meet the $PM_{2.5}$ standards by 2014 and the community will continue to meet the standard into the future.

The primary source of $PM_{2.5}$ in Oakridge is residential wood heating. The most serious $PM_{2.5}$ problems occur during the winter in the urban area of Oakridge, when cooler temperatures trap particles near the ground by atmospheric inversions. Monitoring data clearly shows the high particulate levels occurring during the nighttime periods with light winds and strong temperature inversion. The levels drop significantly after sunrise. These diurnal high and low concentration periods also correspond to the general use of woodstoves as home heating devices. The emissions are greatest during the evening and nighttime periods.

Implementation

The plan describes final commitments by Oregon and the Oakridge community to make the plan work. It outlines the commitment for LRAPA to work with the local community to find solutions to the air quality problem.

Attainment Plan Development Process

LRAPA used the 2008 $PM_{2.5}$ emission inventory and the feedback of the Oakridge Advisory Committee, the Lane Council of Governments (LCOG), and the Oregon Department of Transportation (ODOT) to develop the $PM_{2.5}$ attainment plan. The Advisory Committee prepared a list of strategies that was submitted to LRAPA for inclusion in the plan.

Additional strategies recommended by the committee are included in the ***Attainment Plan and Demonstration*** section of this document. The LRAPA Advisory Committee and the Oregon Department of Transportation also reviewed and made recommendations on the plan.

NONATTAINMENT AREA

Since the 1990s, Oakridge has undertaken many efforts to manage or control particulate emissions. For example, efforts have been made on several occasions to improve air quality by implementing very stringent controls such as a clean air ordinance to regulate both burning in woodstoves and open burning. Due to the success of these programs to address PM_{10} emissions, when EPA revised the PM standard in 1997 to include $PM_{2.5}$, Oakridge was in compliance. Despite these aggressive efforts, in 2006 when the $PM_{2.5}$ standard was revised Oakridge found itself in violation of the 24-hour $PM_{2.5}$ standard.

Ambient Air Quality Monitoring in Oakridge

The Oakridge area has one particulate ($PM_{2.5}$) monitoring site with the sampler located at 47674 School Street, also known as the Willamette Activity Center. LRAPA has monitored at the Willamette Activity Center site since 1987 for PM_{10} and since 1998 for $PM_{2.5}$. After rigorous quality assurance, the data from the Willamette Activity Center site is transferred to ODEQ and on to EPA's database. The data from the Willamette Activity Center monitor was used as the basis for the nonattainment determination and for determining compliance with the standard.

Image 1: Smoke inversion over Oakridge, where the Willamette Activity Center is located. The particulate matter trapped near the surface by a temperature inversion is clearly visible.

National Ambient Air Quality Standards (NAAQS)

As mentioned previously, in 2006 the EPA revised the $PM_{2.5}$ standard to more accurately reflect the latest health information. EPA revised the 24-hour standard from 65 µg/m^3 to 35 µg/m^3, and kept the annual standard at 15.0 µg/m^3. EPA determines compliance with the $PM_{2.5}$ standards based on averaging air quality measurements both annually and on a 24-hour basis.

Annual $PM_{2.5}$ standard

The annual standard for $PM_{2.5}$ is met whenever the three year average of the annual mean $PM_{2.5}$ concentrations for a designated monitor is less than or equal to 15.0 µg/m^3. Oakridge has met this standard since monitoring started at Willamette Activity Center (Figure 5).

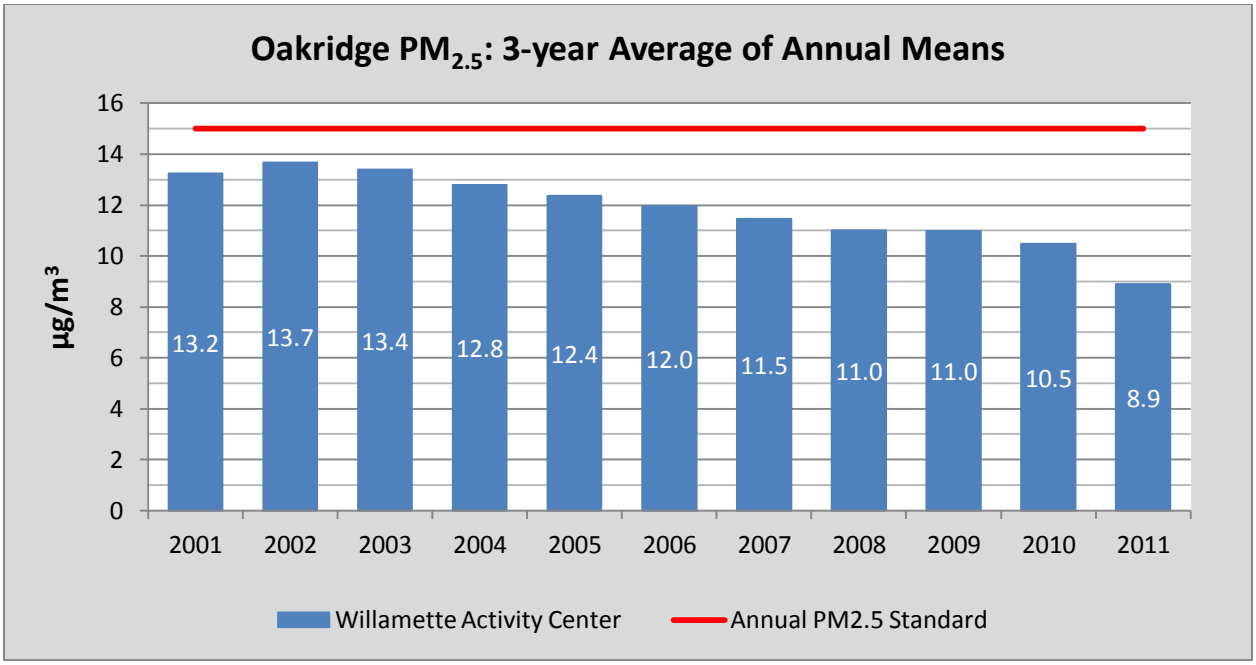

Figure 5: **$PM_{2.5}$ Annual Standard comparison concentrations from the Oakridge monitor.**

24-hour $PM_{2.5}$ standard

The 24-hour standard for $PM_{2.5}$ is met whenever the three year average of the annual 98th percentile of values at a monitoring site is less than or equal to 35 µg/m^3. The 98th percentile is a concentration below which 98% of observations fall. This value is used for the 24-hour standard instead of the maximum observation for any given year. By doing so, EPA ensures infrequent peaks are ignored and a more robust value is used for comparison.

From 2001 through 2005, Oakridge was in compliance with the $PM_{2.5}$ standard of 65 µg/m^3. However in 2006, when EPA revised the standard to 35 µg/m^3, Oakridge violated the 24-hour standard. The three year average 98th percentile for the Oakridge monitoring site has continued to violate the 24-hour standard each year since the standard tightened in 2006, but has decreased significantly over the period 2006 - 2011.

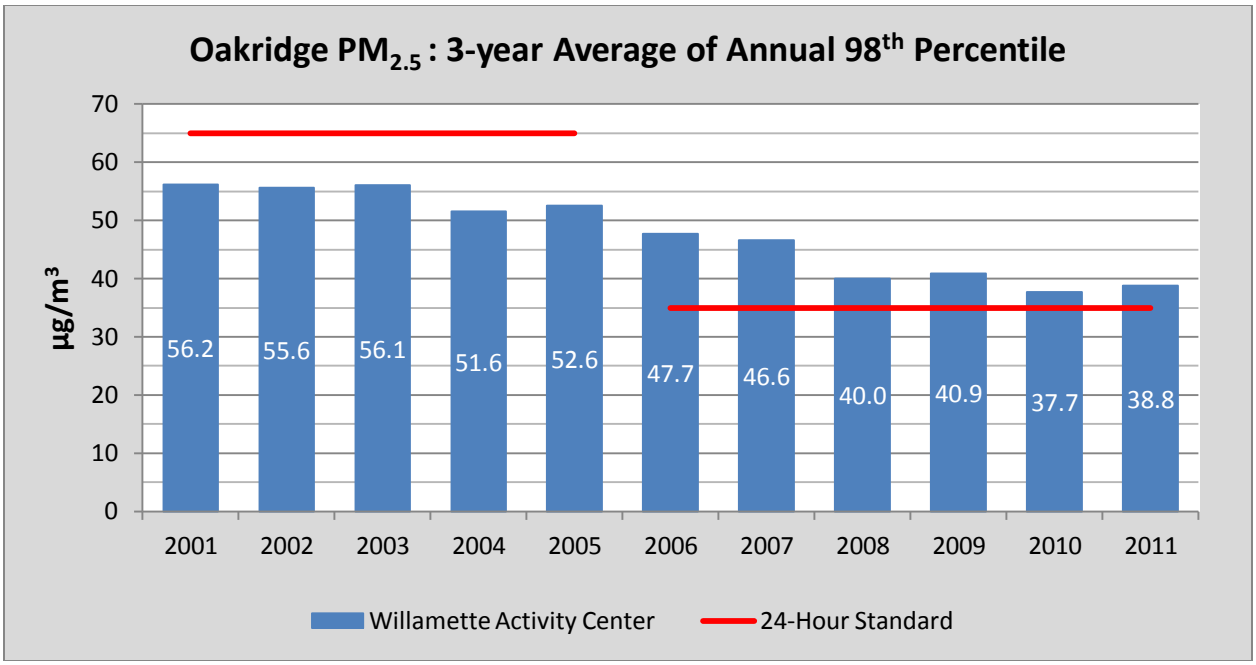

Figure 6: **$PM_{2.5}$ 24-hour Standard comparison concentrations from the Oakridge monitor.**

Additional Monitoring

In addition to the Oakridge Federal Reference Method (FRM) monitor, between October 2009 and March 2010, investigative monitoring was done in the Westfir area to determine $PM_{2.5}$ concentrations there, and relative difference from the Willamette Activity Center monitor. Several saturation samplers and a Nephelometer were used for this purpose. Figure 7 shows the relative $PM_{2.5}$ concentrations, as a function of Nephelometer light scattering, of Westfir and Oakridge. More information regarding the methods and results of this monitoring is available in Appendix A.1.

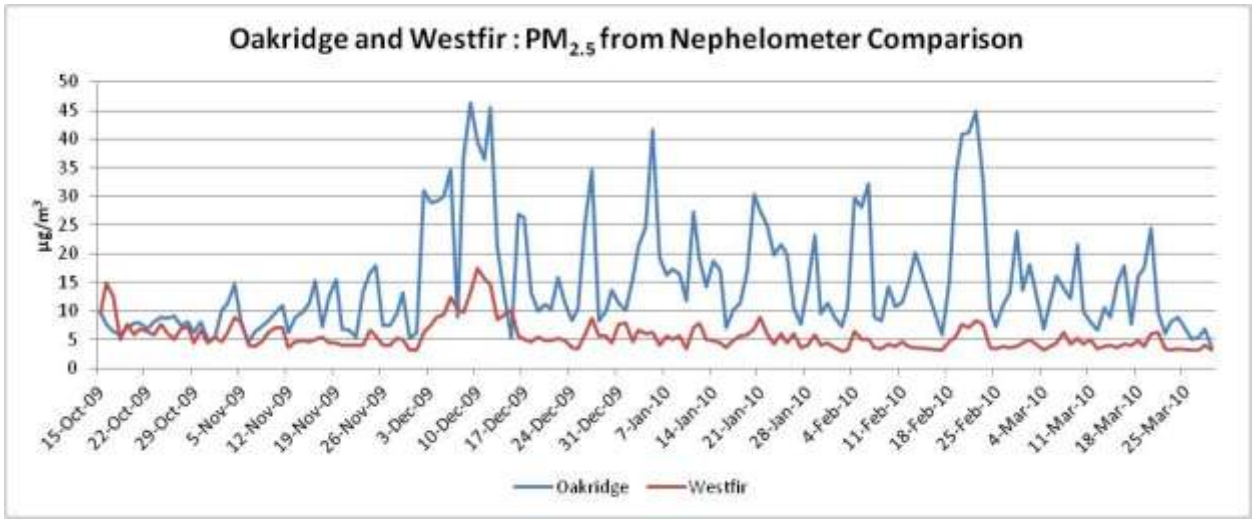

Figure 7: Nephelometer estimated $PM_{2.5}$ for Oakridge and Westfir during winter 2009-2010.

Verification of Monitoring Location

LRAPA has conducted a field study to verify that the Willamette Activity Center $PM_{2.5}$ monitoring site generally represents peak level $PM_{2.5}$ concentrations within Oakridge, and is the most appropriate location for a $PM_{2.5}$ monitor. The one year, six site monitoring survey was conducted in 2002-2003, and is attached in Appendix A. Results are summarized in Figure 8 and Table 2.

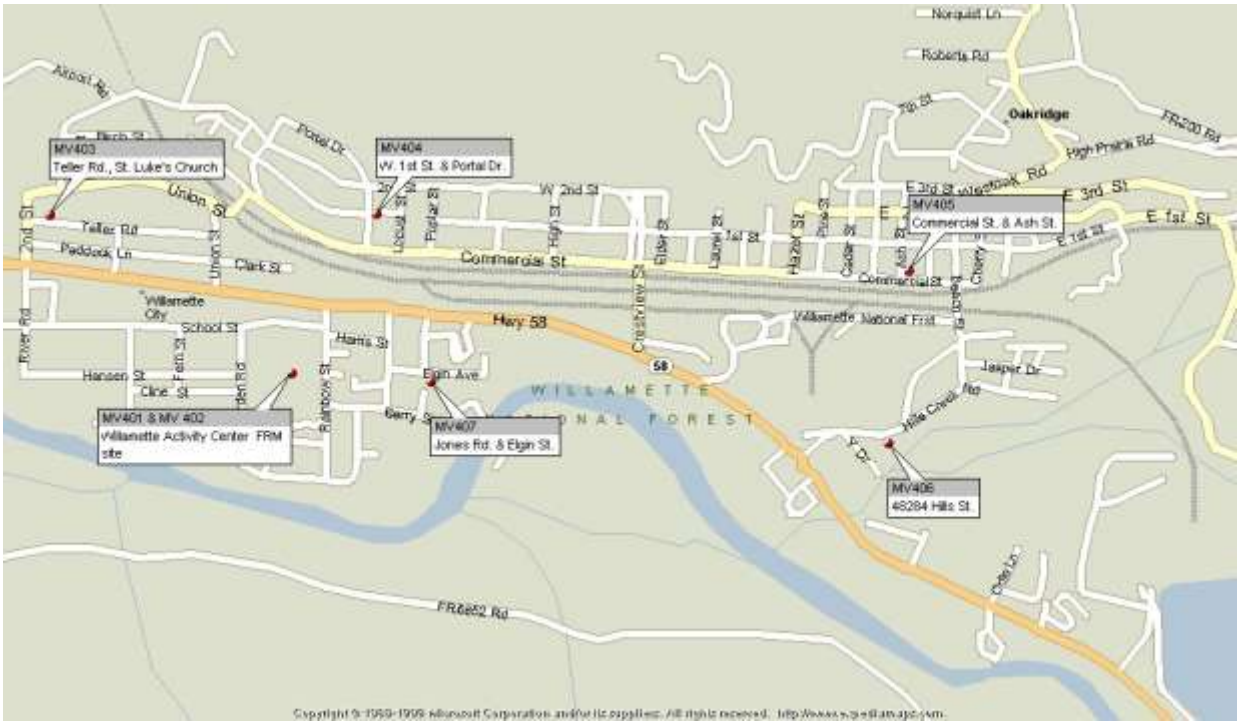

Figure 8: 2002-2003 Oakridge Monitoring Survey Site Map

	n (max 103)	Capture rate	Annual mean µg/m^3	Maximum value µg/m^3	n > 15 µg/m^3	Difference from primary (MV401) (%)
WAC FRM	100	96%	12.8	56.8	28	-
MV401 (primary)	99	95%	13.6	58.1	29	-
MV402 (duplicate)	96	92%	13.5	57.1	28	-
MV403	95	91%	10.9	53.3	18	-19.9
MV404	100	96%	11.4	41.0	23	-16.2
MV405	94	90%	8.3	42.3	8	-39.0
MV406	96	92%	8.6	36.7	14	-36.8
MV407	98	94%	13.0	47.6	26	-4.4

Table 2: 2002-2003 Oakridge Monitoring Survey Results

Findings of this survey agreed with those of PM_{10} saturation studies from 1991 and 1994. Within Oakridge the highest levels were found in the southwestern portion of the town. Therefore, it was confirmed that this site represents peak levels of $PM_{2.5}$ concentrations in Oakridge. In addition, the Willamette Activity Center monitor also represents an area where people live, work, and play, reconfirming the monitor location is the most appropriate for Oakridge.

ATTAINMENT PLAN AND DEMONSTRATION

Emission Inventory

An emission inventory consists of emission estimates from sources that emit $PM_{2.5}$ within the Oakridge nonattainment area boundary. The emissions inventory data is essential in developing the attainment demonstration, as it helps identify the sources contributing to the air quality problem and the emission reduction strategies, once implemented, that reduce pollution levels below the standard. Sources of $PM_{2.5}$ in Oakridge include minor industry, on-road mobile sources (e.g., car and truck exhaust, road dust), railroads, and area sources (e.g., outdoor burning, woodstoves, and fireplaces).

Base Year Emission Inventory (2008)

The base year emission inventory is used as the starting point for the attainment demonstration. This inventory includes sources in the nonattainment area during the 2008 baseline year.

The 2008 emission inventory is summarized in Table 3 and Figure 9. The calculation procedures are included in Appendix D.

	-- lbs/per day --		Percent of Total NAA Emissions	
	Typical Season Day	Worst-Case Day	Typical Season Day	Worst-Case Day
Permitted Point Sources[1]				
Oakridge Sand & Gravel: Rock crushing operation	0.4	0.8	0.1%	0.1%
Oakridge Sand & Gravel: Cement plant	0.1	0.1	0.0%	0.0%
Stationary Area Sources				
Residential Wood Combustion: Fireplace[2]	38.5	42.3	7%	8%
Residential Wood Combustion: Non-Certified Woodstove/Insert[2]	158.9	174.8	30%	32%
Residential Wood Combustion: Certified Woodstove/Insert[2]	228.0	250.8	43%	45%
Pellet Stoves	6.7	7.4	1%	1%
All Other Stationary Area Sources	47.4	4.7	9%	1%
On-Road Sources				
On-Road: Exhaust, Brake, Tire	26.6	37.3	5%	7%
Re-Entrained Road Dust	12.1	27.8	2%	5%
Nonroad Sources				
Union Pacific Railroad	6.0	6.0	1%	1%
Total, All Sources, lbs/day	**525**	**552**		

(1) Worst-case day = Peak month production/20 workdays.
(2) Worst-case day = Peak Heating Degree Day

Table 3: **2008 Estimated Typical Season Day and Worst-Case Day $PM_{2.5}$ Emissions.**

The emissions inventory on worst winter days is of most interest since the $PM_{2.5}$ concentrations measured in Oakridge do not meet the current 24-hour $PM_{2.5}$ standard and the peak $PM_{2.5}$ concentrations occur on cold, stagnant days during the November-February wood-heating season. Residential wood-heating emissions (from certified and non-certified woodstoves, fireplaces, and pellet stoves) account for about 86% of the emissions on worst winter days, as illustrated in Figure 9.

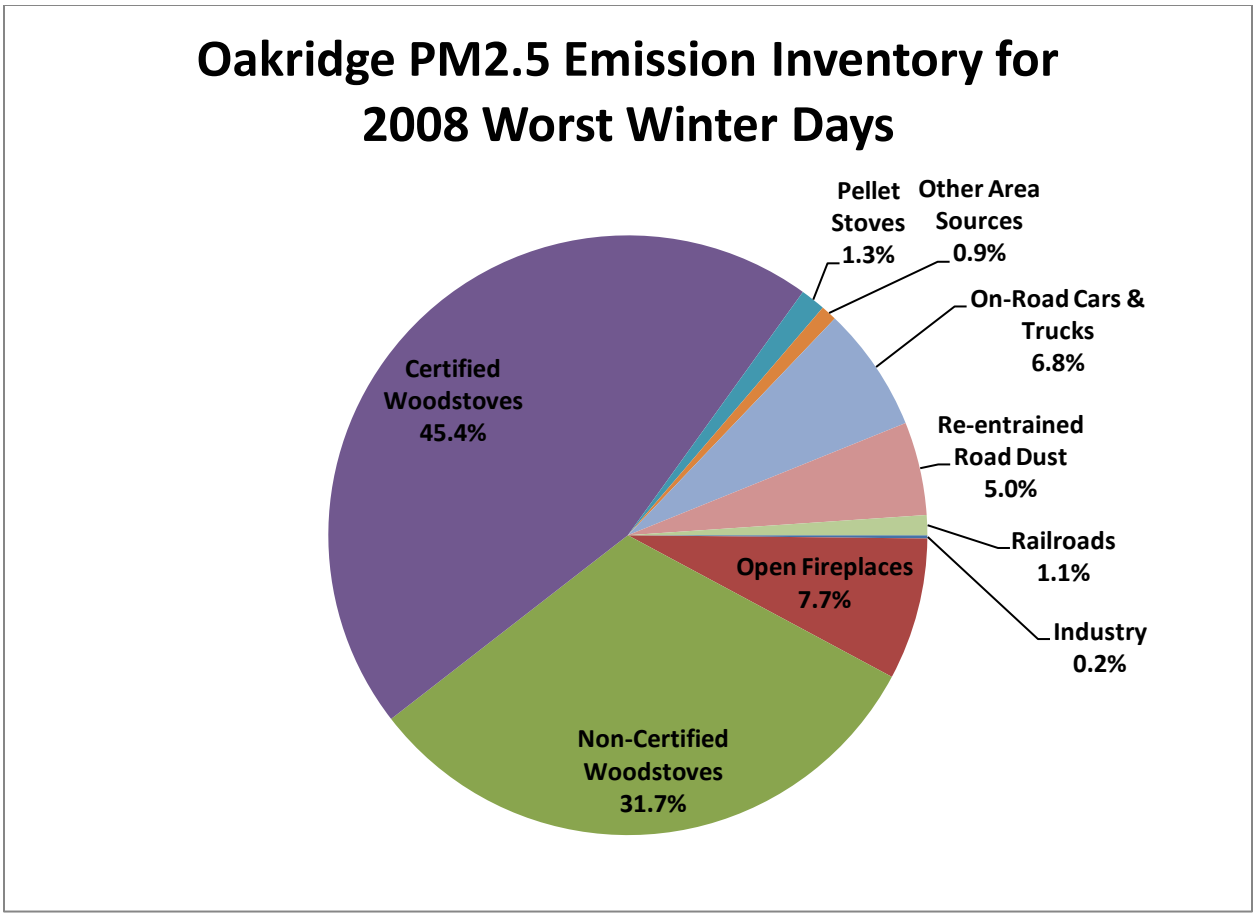

Figure 9: Oakridge $PM_{2.5}$ Emission Inventory for 2008 Worst Winter Days

Residential Wood Combustion

Residential wood combustion is a common way to heat homes in Oregon. To estimate emissions from wood burning, LRAPA conducted a survey for the 2009-2010 heating season in Oakridge-Westfir. The survey provided LRAPA with information on how many homes use various types of wood-heating devices, the amount of wood burned, and other information on wood-heating practices.

Mobile and Nonroad Sources

Road dust and tailpipe emissions of $PM_{2.5}$ from motor vehicles were calculated by Lane Council of Governments (LCOG) transportation staff by applying emission factors from the EPA MOVES computer program to total vehicle miles traveled in the nonattainment area. Estimated vehicle miles traveled are from previous transportation modeling by LCOG for the Oregon Department of Transportation. Emissions from railroads were provided by Union Pacific Railroad staff using the EPA NONROAD2008a emissions protocol.

Industrial Point Sources

LRAPA maintains data on industrial point source emissions in Lane County. The only operating industrial point sources within Oakridge-Westfir area are two minor aggregate industry sources operated by Oakridge Sand & Gravel.

Attainment Year Emission Inventory (2014)

The attainment year inventory is an estimation of emissions for the year that the area is expected to have attained the $PM_{2.5}$ standard. It includes projected emissions for the attainment year based on a number of different factors. Growth rates for population, employment, and VMT through 2014 were used to estimate 2014 emissions. LRAPA took credit for emissions reductions as a result of the woodstove replacement project implemented during 2009-2012 that reduced the number of non-certified woodstoves accounted for in the 2008 emission inventory.

The attainment year emission inventory is based on 2008 emissions inventory, estimated growth rates and the emission reduction strategies that have recently been put into effect. The emission reduction strategies primarily include the continued implementation (with specific strengthening revisions in some cases) of the existing control measures that have been effective in achieving the PM_{10} standards and the initial (1997) $PM_{2.5}$ standards on schedule. The key ongoing control strategies, which were in place prior to 2008, include:

- City ordinance to curtail burning during stagnant weather periods;
- City ordinance requiring the removal of a non-certified wood stoves upon sale of a home;
- City ordinance prohibiting the use of a non-certified wood stove in a residence; and
- Partnering in additional change-out programs to encourage removal of non-certified woodstoves.

Details of the ongoing control strategies, strengthened control strategies, and contingency measures are described in the subsequent section on the Oakridge Advisory Committee recommendations.

Economic Factors

The economy in Oakridge has shifted from logging-based industries to a more recreation-oriented model. The decline in the harvesting and processing of timber has left Oakridge with no industrial employer or businesses that support the lumber industry. In the 1990's, the population in Oakridge declined sharply as jobs disappeared. Current census figures show only modest growth of 1.8% between 2000 and 2010, with the current population at 3,205. Within the civilian labor force, 16% were unemployed in 2010 and 21.7% of all families had incomes below the poverty level. The low cost of living has attracted low-income and unemployed people to Oakridge.

The recreation industry has picked up in Oakridge, with mountain biking being very popular. A hostel, brew pub, and other small businesses have opened to support the visitors attracted to the area. Despite the recent business growth, few jobs have been created. Population and employment in Oakridge are expected to increase only modestly over the next 20 years. The population estimate for the year 2025 is 4,000. Any new employment has been assigned to the potential development of the Oakridge Industrial Park.

Growth Rates

Growth is expected to be low to moderate in the Oakridge-Westfir area through 2014. Population, housing, and employment forecasts are expected to increase gradually. VMT growth is based on the previous transportation modeling by LCOG in the Highway 58 corridor.

The 2014 emission inventory is summarized in Table 4. The calculation procedures are included in Appendix D.

	-- lbs/per day --		Percent of Total NAA Emissions	
	Typical Season Day	Worst-Case Day	Typical Season Day	Worst-Case Day
Permitted Point Sources[1]				
Oakridge Sand & Gravel: Rock crushing operation	1.7	4.0	0.4%	1.1%
Oakridge Sand & Gravel: Cement plant	4.3	14.0	0.9%	3.7%
Stationary Area Sources				
Residential Wood Combustion: Fireplace[2]	38.5	29.6	8%	8%
Residential Wood Combustion: Non-Certified Woodstove/Insert[2]	106.1	81.7	22%	21%
Residential Wood Combustion: Certified Woodstove/Insert[2]	252.4	194.4	52%	51%
Pellet Stoves	7.3	8.0	1%	2%
All Other Stationary Area Sources	47.4	4.7	10%	1%
On-Road Sources				
On-Road: Exhaust, Brake, Tire	15.7	22.2	3%	6%
Re-Entrained Road Dust	7.1	16.3	1%	4%
Nonroad Sources				
Union Pacific Railroad	6.0	6.0	1%	2%
Total, All Sources, lbs/day	**486**	**381**		

(1) Worst-case day = Permitted hourly (x24) operating capacity
(2) Worst-case day = Peak Heating Degree Day

Table 4: 2014 Estimated Typical Season Day and Worst-Case Day $PM_{2.5}$ Emissions.

Comparison of 2008 to 2014 Emissions

The emission inventory shows an overall decrease in emissions for the attainment year (2014) based on the effectiveness of the emission control strategies.

The differences in the 2008 and 2014 emission inventories are the combination of increases due growth factors and decreases due to emission control strategies. For example, motor vehicle emissions decreased overall due to progressively cleaner gasoline and diesel fuels and motor vehicles, but part of the emissions decrease was offset by gradual growth in traffic volumes. Industry emissions were conservatively increased to reflect operation at maximum capacity in 2014, but both industrial sources are minor so this did not have a major effect on the 2014 inventory. The most significant category is residential wood-heating; emissions were increased to reflect population growth during 2008-2014, decreased due to non-certified woodstove replacements with cleaner burning units during 2009-2012, and decreased due to improvements in the programs for curtailment during stagnant air episodes.

Attainment Strategies – Emission Reduction Analysis

This section describes strategies currently in place or those to be implemented to achieve compliance with the 24 hour $PM_{2.5}$ standard. These strategies are expected to improve air quality and meet the $PM_{2.5}$ standard by the required 2014 attainment date. These strategies

are also known as Reasonably Available Control Measures (RACM). For large industrial emission sources they are called Reasonably Available Control Technologies (RACT) but currently there are not any large industrial facilities located in the Oakridge-Westfir area. For the Oakridge nonattainment area, the main source of emissions is wood smoke from residential wood combustion, and RACM is applicable to this emission category. The current and proposed emission control strategies are consistent with the RACM requirements for residential wood combustion (EPA-450/2-89-015).

The RACT / RACM analysis took into account direct PM2.5 and the precursors NOx and SO2 as required by the 2007 implementation rule. Preliminary analysis of the airshed found very little contribution of local sources to secondary sulfate and nitrate relative to direct PM2.5. Since the total local emissions of NOx and SO2 are not a major factor in ambient PM2.5 at the violating monitor, it was a reasonable hypothesis that small changes in that total NOx and SO2 emission budget would be a very minor factor in PM2.5 in Oakridge relative to primary PM2.5 emissions. Thus the attainment model was simplified to not take attainment credit for emission changes in PM2.5 nitrate and sulfate precursors. LRAPA is confident that direct PM2.5 is the cause of (and solution to) PM2.5 nonattainment and that there is little opportunity for reducing PM2.5 through emission reductions of NOx and SO2.

Particulate Matter Reduction Strategies (1989 -2008)

The strategies and regulations implemented between 1989 and 2008 resulted in a reduction of $PM_{2.5}$ emissions. Projections show implementing and strengthening ongoing strategies will make it possible for the Oakridge area to achieve the standard by 2014. Future strategies are a continuum of past strategies developed over the years that have been adjusted and updated to address the current $PM_{2.5}$ standard. Local efforts include revisions to the existing Oakridge clean air ordinance, public education, and woodstove change-outs. State and federal regulations recently implemented affect woodstoves and transportation emissions.

These strategies are permanent and enforceable; they are currently implemented and enacted by city ordinance, state, or federal rules. There are penalties for violating these ordinances or rules.

The Oakridge Air Pollution Control Ordinance #889

LRAPA and the City of Oakridge initiated a voluntary home wood heating advisory program in 1989 after air quality data showed Oakridge exceeded the federal PM_{10} standard on numerous occasions. Five years later, on January 20, 1994, EPA officially declared Oakridge a PM_{10} non-attainment area. In August of 1996, the City of Oakridge adopted a wood heating curtailment program. A plan to get the area back into attainment with the standards was adopted by EPA in March 1999, and became effective on May 14th of that year. The Oakridge plan included voluntary measures.

On February 20, 2003, the Oakridge City Council revised the home wood heating ordinance that:

- Changed their voluntary curtailment measures to mandatory,

- Prohibited burning garbage in woodstoves and fireplaces,
- Incorporated a 40% opacity limit on chimneys,
- Incorporated the $PM_{2.5}$ standard into the program, and
- Required the removal of uncertified woodstoves from property to be sold or rented.

In fall 2007, the City of Oakridge revised its home wood heating ordinance to reflect the tightened $PM_{2.5}$ standard of 35 $\mu g/m^3$. The revision changed the concentration levels that trigger the green/yellow/red advisories. A revision to the ordinance in December 2008 included a provision that stated a person or persons may not install or use any solid fuel heating device in any structure within the City except for certified wood stoves or certified pellet stoves with emissions that do not exceed 1.0 grams/hour weighted average tested in conformance with the EPA method, or a fireplace that is not a sole source of heat.

LRAPA Advisory Programs

Since initiated in 1989, the LRAPA advisory program has provided a daily wood burning advisory for Oakridge. The program is operated by LRAPA in cooperation with the City of Oakridge and local news media. The advisory, issued daily by LRAPA staff during the months of November through February, is determined by comparing current pollution levels to meteorological conditions and weather forecasts. The advisories are displayed daily on the LRAPA website and can be obtained via telephone at a dedicated hotline number. Advisories are broadcast on radio and television and daily in the regional newspaper. An automatic phone "callware" system is activated when air quality is deteriorating and long periods of stagnant conditions are forecast. The phone system calls all numbers with the 782 prefix in the Oakridge/Westfir area and leaves a recorded message.

(a) The advisory operates using a "green-yellow-red" system as described in the Oakridge City ordinance. A "green" advisory is issued when $PM_{2.5}$ levels are forecast by LRAPA to be less than 25 $\mu g/m^3$, and good smoke dispersion conditions are forecast. "Yellow" advisories are posted when $PM_{2.5}$ levels are forecast by LRAPA to be equal to or greater than 25 $\mu g/m^3$, but less than 30 $\mu g/m^3$, and the forecast is for marginal smoke dispersion conditions. Under this advisory, residents are advised to burn wood sparingly, and only if alternatives are unavailable. A "Red" advisory is posted when $PM_{2.5}$ levels are forecast to be equal to or greater than 30 $\mu g/m^3$, and the forecast is for marginal or poor smoke dispersion conditions. During a Red advisory, no person in charge of a property shall operate or allow to be operated a solid fuel heating device which emits visible emissions unless the person has been granted an exemption by the Oakridge City Administrator. Residents with exemptions may use any solid fuel heating device. Exemptions are based on sole source of heat or economic need. During Stage II Red II advisory, when $PM_{2.5}$ levels are forecast to be equal to or greater than 35 micrograms per cubic meter no person in charge of property shall operate or allow to be operated a solid fuel burning device unless: the person has been granted an exemption to use the device by the City

Administrator; or the person is operating a pellet stove which emits no visible emissions into the air outside of the building housing the device.

Open Burning Ordinance

On March 19, 1992, the Oakridge City Council amended its open burning ordinance #689 to allow open backyard burning only during the months of October, March, April, and May and bans the use of burn barrels. Oakridge City Code 92.04.A.2 currently regulates open backyard burning inside the Oakridge city limits. This eliminates burning during wintertime periods of maximum atmospheric stagnation when burning is more likely to contribute to exceedances of the 24-hour $PM_{2.5}$ standard. The open burning restrictions provide a more protective measure to avoid additional contributions to the particulate levels.

Woodstove Change-out Programs

Since 1993, LRAPA has administered woodstove change-out programs to help residents replace old, uncertified wood stoves with cleaner burning, more efficient heating systems. This control measure is central to achieving attainment, and will enhance both long- and short-term compliance. The first program conducted in 1993 provided economic incentives for residents to replace old, high polluting woodstoves with alternative heating systems with lower emission rates. These include electric furnaces and heat pumps, oil, gas, pellet stoves, or EPA certified low-emission woodstoves.

The initial program was funded by the U.S. EPA, together with support from the Oregon Department of Environmental Quality and LRAPA. The program provided up to $2,500.00 per low- or moderate- income household for installation of approved alternative heat sources, either as no-interest loans or outright grants. Participants were required to certify, in writing, that they disposed of their old stoves, and would not utilize non-approved alternatives in the future. A total of 130 stoves were replaced.

In 2005, LRAPA developed the Warm Homes, Clean Air Program for Oakridge. The program is ongoing as funding becomes available. Warm Homes matches Oakridge and Westfir residents with funding from nine partner agencies to help with heating upgrades, weatherization, and home repairs. As part of the program, LRAPA has provided funding for woodstove replacements. During a change-out conducted between 2006 and 2008, 59 uncertified woodstoves were replaced. Table 5 shows a historical view of the Oakridge Wood Stove Change-outs.

Oakridge Wood Stove Change-out Programs		
Years	1993-96	2006-07
# of Stoves	130	59

Table 5: Oakridge Wood Change-out Programs (1993-96/2006-07)

Statewide Certification of Woodstoves

In 1986, the Oregon Legislature required the certification of any woodstove sold in Oregon. This requirement was subsequently adopted by EPA on a national basis in 1990. Additionally,

the State Building Code Agency prohibits the installation of uncertified woodstoves. The dual effect of this certification and installation requirement resulted in reducing the amount of wood smoke pollution that used to be emitted from the uncertified stoves.

Highway Road Sanding

In an effort to reduce PM_{10} emissions from road sanding during winter months, the Oregon Department of Transportation (ODOT) signed a letter of agreement regarding using anti-icing agents as an alternative to sand on Highway 58 running through Oakridge. The use of the chemical de-icing compound, calcium magnesium acetate, inhibits ice formation. The practice has resulted in a significant reduction of particulate, however it is not likely to contribute to $PM_{2.5}$ reductions.

Smoke Management

By statute, the Oregon Department of Forestry (ODF) is responsible for administering a smoke management program. Smoke from prescribed burning has not significantly impacted the nonattainment area in the past, however, there have been safeguards implemented to prevent unintended smoke impacts to the Oakridge nonattainment area. Oakridge is protected under the Oregon Smoke Management Plan as a smoke sensitive area. This means that all prescribed burning during the year is managed in such a way as to avoid any smoke intrusions into the community.

In addition, a Special Protective Zone (SPZ) surrounds Oakridge where additional restrictions apply to prescribed burning within the zone during the winter months (November 15 through February 15). During this time, prescribed burning is allowed only when the ODF smoke management meteorologist determines there would be no measurable smoke within the nonattainment area. Between December 1 and February 15, no prescribed burning is allowed in the SPZ on "red" woodstove days. Between November 15 and February 15, no pile burning is allowed if ODF believes that the piles will produce significant smoke after the third day.

Road Paving

According to the emissions inventory done prior to 1991, there were about 2.4 miles of unpaved streets in Oakridge. Since then, based on city records, virtually all unpaved roads have been paved, along with numerous unpaved commercial driveways and parking lots.

Industrial Requirements

Within the designated Oakridge $PM_{2.5}$ nonattainment area, new major sources and major modifications of a nonattainment pollutant, including $PM_{2.5}$ precursors SO_2 or NO_X, are required to meet LAER control technology. Industrial sources must also obtain emission offsets and demonstrate that a net air quality benefit will be achieved. These are the most stringent requirements for industry. In addition, existing sources will be evaluated for RACT and will be required to meet performance standards for certain industry.

Public Education

LRAPA has maintained a strong presence on the Oakridge community through public education programs aimed to inform residents and teach school age children about air quality issues. In 2006, LRAPA developed a school flag project for Oakridge Elementary School. LRAPA provides

air quality flags that are hung at the entrance to the school, which is located on a main street near downtown Oakridge. The highly visible flags display the current Air Quality Index (AQI) reading for that day. Information on air quality is obtained by students from the LRAPA website. The flags have also been used during periods of bad air quality caused by wildfires. A specialized curriculum was developed by LRAPA public affairs staff for third –fifth grade students. An LRAPA staff person makes an annual visit to the school in the fall to teach a class on air quality and explain how to use the flags.

For over ten years, LRAPA has taught an air quality class at outdoor school, held each May in Oakridge. The class focuses on the science of air pollution and the specific challenges of wood smoke pollution in Oakridge. An average of 75 sixth grade students attends the class each year.

Additional Strategies

Beginning in the early 90's, LRAPA developed various strategies to reduce and track wood smoke emissions. LRAPA provided plastic tarps to residents for covering wood piles to keep wood dry. A seasonal worker, hired by LRAPA, conducts drive-by compliance surveys on green, yellow, and red days using pre-established survey routes. Surveys are turned in monthly November- February.

Current Strategies 2009-2011

Wood Stove Change-out program

The Warm Homes wood stove change-out program continued in 2009. Funding from U.S. EPA helped replace 11 uncertified wood stoves with new heating devices. In October 2010, LRAPA received funds from the American Recovery and Reinvestment Act. LRAPA used the funding to conduct another round of wood stove change-outs in Oakridge and Westfir. The program offered two-tier funding for qualified residents within the non-attainment boundary designated by U.S. EPA. Residents who qualified as low income based on Housing and Urban Development's (HUD) income guidelines received a full rebate of up to $5,000 to pay for a ductless heat pump, certified wood stove or pellet stove. All other qualified applicants received a rebate of up to $2,000 based on emission reductions. The program ended in December 2011. LRAPA provided rebates to replace 79 stoves. Wood heat was most popular; 56 new wood stoves were installed, 10 pellet stoves, and 13 electric ductless systems.

Oakridge Wood Stove Change-out Programs		
Years	2009	2010-11
# of Stoves	11	79

Table 6: Oakridge Wood Change-out Programs (2009/2010-11)

Heat Smart: Stove Removal upon Sale of Home

In 2010, a statewide requirement mandating the removal of an uncertified stove at the time of home sale went into effect. This statewide rule closely mirrored the existing requirement in the Oakridge ordinance. Under the rule, all uncertified devices that are on the property being sold (including residences, shops, garages, and outbuildings) must be removed at the time of home

sale. The Oregon Heat Smart law requires DEQ to confirm residences where owners removed or changed-out uncertified woodstoves upon home sale. DEQ currently administers the Heat Smart program and tracks submittals of all uncertified removals at the time of home sale. These submittals can be used to estimate the level of compliance in Oakridge and identify any need for additional education or follow-up. DEQ has established in rules, penalties for noncompliance and hopes to conduct periodic enforcement sweeps throughout the state.

Public Education

As mentioned earlier in this section, LRAPA has maintained a vigorous public education program in Oakridge. In 2009 -2011, the program was expanded to reach a wider audience. In 2010, LRAPA produced a television commercial to promote compliance with home wood heating advisories and clean burning practices. The commercial has run every fall on three major television networks; all are available to Oakridge viewers. Radio ads targeting open burning and home wood heating have aired on a network of radio stations in Lane County since 2009. Almost stations all are available in Oakridge.

Articles in the weekly newspaper, the Dead Mountain Echo, serving the Oakridge area have been submitted by LRAPA staff periodically to keep the public informed about poor air quality, LRAPA programs, and other topics related to wood smoke. Display advertisements and fliers inserted into the paper are also used to promote high profile projects, the Warm Homes program being an example.

Transportation and Fuel-Related Emissions

Federal, state and local transportation regulations and programs recently implemented will reduce mobile and non-road emissions. These include:

- Federal regulations requiring:
  - Reduced sulfur content of gasoline and diesel
  - Increased fuel economy
- Oregon regulations requiring:
  - Low emissions vehicles beginning with model year 2009 and newer
  - Renewable fuel standard for biodiesel – 5%
- Local programs:
  - Implementing diesel retrofits of school buses

The Transportation Conformity Analysis is included in Appendix K. The Motor Vehicle Emissions Budgets are:

- **On-Road Worst Case Day $PM_{2.5}$ Emissions of 38.5 pounds per day (22.2 pounds per day of exhaust, brake and tire wear, and 16.3 pounds per day of re-entrained road dust); and**
- **On-Road Worst Case Day NOx Emissions of 562.3 pounds per day.**

Strengthened Ongoing Strategies in 2012-2014

While the current strategies in place indicate Oakridge will reach attainment with the $PM_{2.5}$ standard by 2014, to ensure compliance, a number of future strategies were identified by a local advisory committee. The advisory committee evaluated options for how to improve air quality in Oakridge and suggested potential control measures. With the help of the committee, LRAPA developed a list of strategies to ensure Oakridge meets the 2014 attainment date.

Oakridge Air Quality Advisory Committee Strategy Recommendations

In July 2011, LRAPA formed an advisory committee in Oakridge to discuss current air quality strategies and explore the feasibility of a number of new strategies identified that would reduce $PM_{2.5}$ emissions. They also discussed contingency strategies should Oakridge fail to meet the standard by 2014. While the strategies in place (e.g., City ordinance, LRAPA's advisory programs, federal and state regulations) indicated the area would meet the standard by 2014, the committee suggested strengthening the strategies to provide a cushion to ensure attainment by 2014. The following strategies are included as part of this plan.

Woodstove Change-outs

Due to the effectiveness of this strategy in the past, LRAPA will continue to pursue funds to continue offering woodstove change outs within the nonattainment area. Implementation of this strategy may provide substantial reductions in $PM_{2.5}$ in the future. LRAPA is not applying any emission credit for this strategy to the 2014 inventory, as it is dependent upon the acquisition of funding which affects the number of stoves replaced. In the most recent round of wood stove change-outs, 75% of the participants qualified as low-income. The poor economy in Oakridge makes it essential any future change-out incentives include grants to cover all of the cost of replacement for low income individuals and substantial (at least 50%) incentives to residents who are not "low income".

Enforcement of Oakridge Ordinance

Oakridge Ordinance #889 allows the City to impose a penalty not greater than $500.00 upon anyone who violates City Code related to the use of a solid fuel heating device. Each day's violation will incur additional fines. At this time, the City of Oakridge has enforcement authority of the ordinance. LRAPA is working with the Oakridge Police Department to strengthen enforcement on Red advisory days. LRAPA has provided a series of door hangers that can be left at a residence with an excessively smoky chimney. The door hangers include language from the City Ordinance, including potential fines for a violation.

Enhancements to Key Ongoing Strategies

The Oakridge Advisory Committee identified several strategy enhancements that were felt to be key to the success of the ongoing strategies. Most of these strategies can be implemented without additional resources.

- Expanded education and outreach, including multiple versions of educational door-hangers that can be distributed to all homes in Oakridge.
- Training and certification of police on smoke reading and opacity limits enforcement.

- Enforcement with citations as appropriate for violations of curtailment during pollution episodes, excessive opacity (40%) requirements, operation of non-certified woodstoves, and burning of garbage.
- Ongoing improvements in the air quality forecasting and green-yellow-red advisory programs to ensure that all problem stagnation days are addressed appropriately, which may increase the number of yellow or red days.
- Alternatives to fines payment as appropriate (e.g., attend workshop on clean burning practices, replacement of non-certified woodstove with cleaner burning unit, etc.).
- Use of fines to fund ongoing woodstove replacement program or other emission reduction strategies.

Contingency Strategies

The following strategies are recommended as contingency strategies to fully meet the air quality standards, if it becomes clear that the strengthened ongoing strategies described above will not be sufficient to attain the $PM_{2.5}$ standards by 2014 and or to maintain compliance with the standards through 2024 and beyond:

- Stricter opacity limit on all green or yellow advisory days, revising the current 40% opacity limit in the city ordinance to a more restrictive 20% limit, as has been done in some other northwest communities. A 20% opacity limit on green and yellow advisory days will help reduce emissions with the goal of avoiding red advisories when no visible emissions are allowed.
- Stricter green-yellow-red advisory program, with more yellow and red advisory days each winter.
- Further restrictions on city woodstove curtailment exemptions (for sole source, economic hardship).

Industrial Emission Reductions

Reasonably Available Control Technology. The two existing industrial sources in the Oakridge-Westfir area are minor industrial sources of $PM_{2.5}$ emissions. The facilities are a portable rock crusher and a ready-mix concrete plant owned and operated by Oakridge Sand & Gravel.

These two minor sources together emit less than one ton per year of $PM_{2.5}$ emissions and contribute less than 1% to the base year emission inventory. These two minor sources are well below the LRAPA significant emission rate (SER) for $PM_{2.5}$ of 10 tons per year.

The air pollution control technology installed on these sources are the standard for the industry and meet RACT requirements. The rock crusher has water-spray controls and the concrete plant has baghouse controls.

Even the elimination of the emissions from these two sources would not significantly affect progress to meet the $PM_{2.5}$ standard. For example, the worst-day $PM_{2.5}$ concentrations need to be reduced by about one microgram per cubic meter ($\mu g/m^3$) per year in order to meet the $PM_{2.5}$ standard by 2014 (i.e., reduced from 39.5 $\mu g/m^3$ in the 2006-2010 baseline period to 35

µg/m^3 by the 2014 attainment date). The modeled impact of these two sources if operated at maximum permitted production rates in 2014 is much less than one µg/m^3, or much less than the annual progress required by 2014. Further, both of these sources consistently operate well below maximum production rates, especially during the winter months when $PM_{2.5}$ concentrations are a problem.

Estimated Reductions and Credits for Future Strategies

The emission changes between 2008 and 2014 are due to the combination of increases due to growth factors and decreases due to emission control strategies.

The most significant category is residential wood-heating; emissions were increased in the 2014 inventory to reflect population growth during 2008-2014, decreased due to non-certified woodstove replacements with cleaner burning units during 2010-2012, and decreased due to 2012-2013 improvements in the programs for curtailment during stagnant air episodes. The emission decrease due to woodstove replacements was based on the actual number of woodstove replacements documented after the 2008 baseline year. The emission decrease for the more effective woodstove curtailment program is conservatively estimated at a 30% emission reduction on worst winter days as a result of enforcement of the existing city ordinances during stagnant air episodes subsequent to the 2006-2010 baseline period; mandatory curtailment programs in Oregon have historically documented reductions of 50% or more.

Traffic volumes are projected to gradually increase in future years but motor vehicle emissions are calculated to decrease overall due to progressively cleaner gasoline and diesel fuels and motor vehicles. Industry emissions were conservatively increased in the inventory to reflect operation at maximum capacity in 2014, but both industrial sources are minor so this did not have a major effect on the 2014 emission inventory.

Attainment Demonstration

The attainment demonstration shows how Oakridge will meet the $PM_{2.5}$ standard by 2014 through the implementation of control measures listed above. LRAPA used a "proportional rollback/rollforward analysis" or rollback model to conduct the analysis. The goal of this section is to demonstrate that future concentrations are less than the NAAQS at the Willamette Activity Center monitor and other unmonitored parts of the designated nonattainment area.

Baseline Design Value

The demonstration starts with estimating the baseline design value, or baseline concentration, for $PM_{2.5}$. The baseline design value is a statistic, expressed as a concentration that describes the $PM_{2.5}$ levels at the Willamette Activity Center monitor relative to the NAAQS. The procedure for its calculation is presented in Appendix N to 40 CFR 50, "Interpretation of the National Ambient Air Quality Standards for Particulate Matter" and "EPA Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for O_3, $PM_{2.5}$, and Regional Haze". $PM_{2.5}$ measurements from 2006 to 2010 are used to calculate the design

value of 39.5 µg/m^3 (see Table 7). Detailed methods on the baseline design value calculation are in Appendix G.

Year	$PM_{2.5}$ (µg/m^3)
2006	38.6
2007	42.7
2008	38.7
2009	41.3
2010	33.0
Baseline DV	**39.5**

Table 7: Annual $PM_{2.5}$ values used to calculate baseline design value.

Background on Precursors

Speciated $PM_{2.5}$ samples were collected at Willamette Activity Center for the period July 2009-2011. The samples showed the dominance of organic and elemental carbon, with secondary inorganic aerosol nitrate and sulfate comprising relatively minor concentrations of total $PM_{2.5}$. Concern had been expressed about the role of secondary organic aerosols (SOAs) as components of total organic carbon, and an additional analysis was conducted by a research scientist at Portland State University (PSU) in collaboration with ODEQ to better understand the magnitude of these aerosols in the Klamath Falls, Oregon air shed. The results of this analysis showed that the contributions from both biogenic and anthropogenic sources to be minor, less than 1% and 3%, respectively, of total design value $PM_{2.5}$. In consultation with EPA, LRAPA chose to adopt these percent contributions as a conservative assumption for the Oakridge NAA demonstration. Because all secondary aerosols were determined to be minor contributors to total $PM_{2.5}$, these components and their concentrations are held constant in the rollback model and assigned a Relative Response Factor (RRF) of 1.0, assuming future year precursor concentrations are constant or declining. The precursor emissions to secondary aerosols, including NO_X, SO_2, ammonia, and biogenic and anthropogenic VOCs, are not used in the attainment demonstration (LRAPA is utilizing a rollback analysis for the attainment demonstration).

In addition to the study of secondary aerosols, a positive matrix factorization (PMF) study based on the speciated data from Willamette Activity Center was conducted by EPA Region 10 to identify likely sources of speciated $PM_{2.5}$. The study showed the importance of residential woodsmoke to the high levels of organic carbon, an estimated 70-75% of total PM concentrations.

The SANDWICH speciation formulation, based on adjusted and corrected Willamette Activity Center speciation data, is used to speciate the FRM measured design value (DV) for use in the rollback model. The SANDWICH is a profile of the DV with which to describe the components that contribute to $PM_{2.5}$ exceedances. This profile is shown in Figure 10, and shows that over 95% of total PM is from organic and elemental carbon with smaller amounts of secondary inorganic aerosols, such as sulfate (1%) and nitrate (0.4%). The SANDWICH analysis, and the

PMF study are described in more detail in Appendix E.1 and Appendix E.2. Based on the evidence cited above, the major sources contributing to nonattainment in Oakridge are considered to be those that emit direct emissions of $PM_{2.5}$. As a result, LRAPA has focused its strategies for the attainment demonstration on these sources.

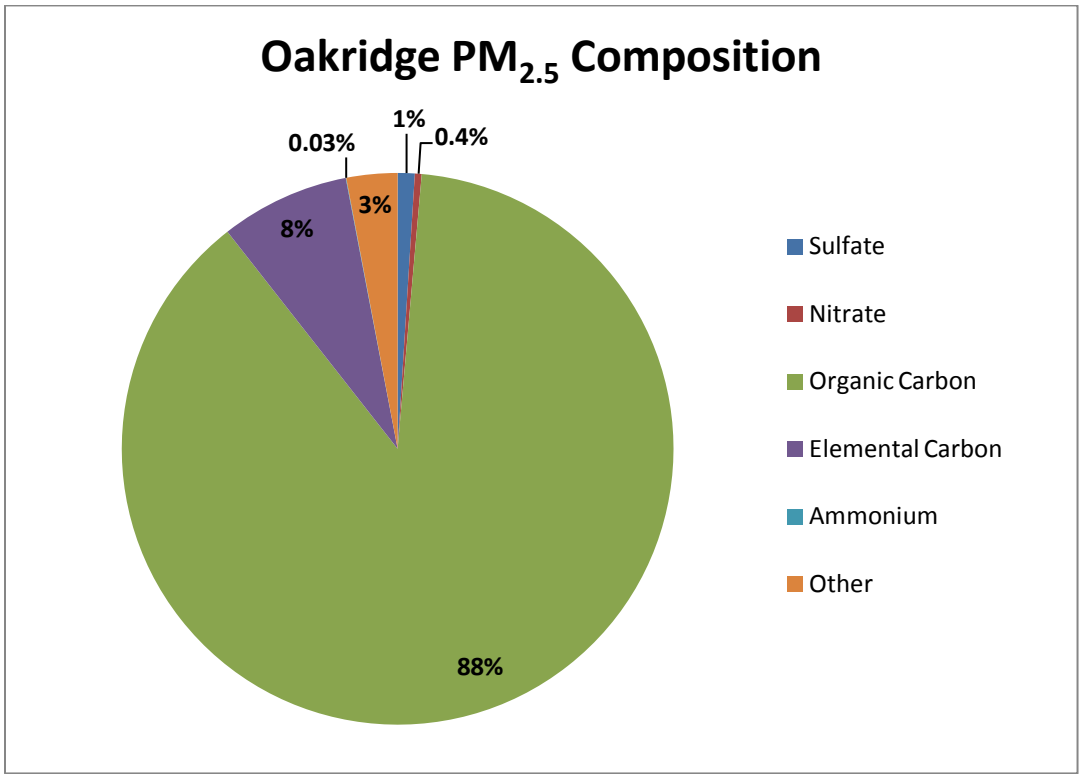

Figure 10: **Speciated Components of $PM_{2.5}$ (using SANDWICH analysis)**

Speciated Filter Sample Analysis

$PM_{2.5}$ is a mixture and can be divided into major components: mass associated with sulfates, nitrates, ammonium, organic carbon, elemental carbon, particle bound water, and other primary inorganic particulate matter. Percent contribution to the total mass by each of these major components is used to estimate relative contribution by different emission sources.

From July 2009 to 2011, LRAPA conducted $PM_{2.5}$ speciation monitoring at the Willamette Activity Center location. Total $PM_{2.5}$ mass measurements using the FRM are used mainly to determine attainment or nonattainment of the standard. However, to provide information about particular source contribution to that total mass it was necessary to co-locate a speciation sampler that allows the breakdown of the total mass into different chemical species.

The total mass of $PM_{2.5}$ using the FRM sampler is not equal to the simple sum of the measured components from the speciation filter, therefore it is necessary to make adjustments to

represent FRM mass. In order to apply the results of the speciated filter analysis to the aerosol mass measurements, EPA Region 10 conducted the Sulfate, Adjusted Nitrate, Derived Water, Inferred Carbonaceous Material Balance Approach (SANDWICH) which is the default method in EPA modeling guidance to define baseline $PM_{2.5}$. The SANDWICH approach uses a combination of speciation measurements and modeled estimates to represent FRM $PM_{2.5}$ measurements. The goal is to reconstruct the measured speciated components so that they add up to the measured FRM $PM_{2.5}$ mass. Table 8 shows the results as percent contribution by a speciated component (sulfates, nitrates, organic carbon (OC), elemental carbon (EC), ammonia (NH_3), and other primary particulate (OPP)). Detailed methods of the SANDWICH analysis are included in Appendix E.1.

% Sulfate	% Nitrate	% OC	% EC	% Water	% NH3	% OPP
1.1	0.4	88.4	7.6	1.4	0.03	1.1

Table 8: Contribution by speciated components. Results of SANDWICH analysis for the top 25% high concentration winter (Oct-Mar) days.

Minor $PM_{2.5}$ Components

In addition to the speciated components in Table 8, ODEQ, in partnership with Portland State University, examined contribution by secondary organic aerosols in Klamath Falls, Oregon and found it to be relatively low. Anthropogenic secondary organic aerosols contribute 3% and biogenic 1% to the total measured $PM_{2.5}$ mass. LRAPA chose to adopt these percent contributions as a conservative assumption for the Oakridge NAA demonstration. Secondary organic aerosols and the other minor components sulfate, nitrate, and background EC and OC are assumed to be constant in rollback modeling. More details about this analysis are included in Appendix E.1.

Each source emits a different proportion of OC, EC, and OPP, the three components used to develop a speciated emissions inventory. This proportion, or the speciation profiles, for each source category are taken primarily from EPA SPECIATE 4.2 and 4.3 databases. The following source categories are included in the analysis:

1	Cement Production
2	Sand and gravel mining
3	Fireplace
4	Woodstove Insert Non-Cert
5	Woodstove Insert Cert (Non-Cat)
6	Pellet / Woodstove Cert
7	Ag and open burn
8	Rail
9	Passenger Vehicles - light diesel
10	Trucks - Heavy diesel
11	Passenger Vehicles - gas
12	Vehicle Road Dust

Rollback Model

In evaluating the appropriate modeling analysis of $PM_{2.5}$ for Oakridge, LRAPA considered many different modeling approaches, including rollback and more sophisticated methods such as dispersion modeling. However, both dispersion and receptor are more resource intensive and do not offer substantial improvements in demonstrating attainment under conditions that exist in Oakridge. A rollback model can simulate worst case day conditions when stagnant conditions and slow emissions movement within the nonattainment area occur.

Oakridge is particularly well suited for a rollback demonstration because of a) the relatively small area of the NAA, b) the bowl shape of the local airshed and the presence of inversions and low mixing heights during evening hours when measured particulates are highest, c) the very few types of emissions sources in the NAA, with home wood heating devices dominating the emissions. Based on these considerations, LRAPA has chosen a rollback model for the area.

The rollback model is based on the assumption that there is a direct correlation between emissions of a pollutant and measured concentrations of that pollutant in the same airshed, and that changes in emissions will result in corresponding changes in concentration. This correlation is used to predict future concentrations based on future emissions. The change in concentrations caused by changes in emissions is represented by the Relative Response Factor (RRF). An RRF less than one indicates a reduction in future concentrations, RRF equal to one indicates no change, and RRF larger than one indicates an increase. RRFs are calculated for each speciated component (EC, OC, and OPP) used in the rollback model. Details of the analysis are presented in Appendix H. The results show a cumulative RRF = 0.696, which indicates a decrease in future concentrations. After the cumulative RRF is applied to the input data for the baseline design value, the results are used to calculate a future design value of 28.2 $\mu g/m^3$.

Year	Baseline DV $PM_{2.5}$ ($\mu g/m^3$)	Future DV $PM_{2.5}$ ($\mu g/m^3$)
2006	38.6	27.5
2007	42.7	30.4
2008	38.7	27.6
2009	41.3	29.6
2010	33.0	23.6
Design Value	**39.5**	**28.2**

Table 9: **Baseline and Future projected design values**

The future ambient concentration levels are below the NAAQS (35 $\mu g/m^3$) for a 24-hour average and the attainment of the standard is demonstrated with the application of the current strategies in place. The current reduction strategies described earlier in this section lower the emissions enough to meet the NAAQS at the Willamette Activity Center monitor.

Modeled Air Quality Improvements of the Key RWC Strategies

The key long-term permanent residential wood combustion (RWC) strategies have been:

- the woodstove change-out programs replacing uncertified woodstoves with cleaner burning and more efficient home heating units;
- the Oregon and EPA woodstove certification programs requiring any new woodstoves installed since 1986 to be certified woodstoves; and
- the Oakridge ordinance and Oregon Heat Smart law requiring removal of uncertified woodstoves upon home sale.

These programs have been critical to the significant improvement in Oakridge $PM_{2.5}$ concentrations during 2005-2011 as outlined in Figures 5 and 6. In addition, the combined emission reduction of these programs will more than offset the growth in population and housing between 2008 and 2014, with a net RWC emission reduction of about 28 lb/day on typical season days and 31 lb/day on worst-case days and reduce future $PM_{2.5}$ concentrations by 2.1 $\mu g/m^3$ on worst-case days.

The key short-term RWC strategy is a strengthened mandatory curtailment program to reduce fireplace and woodstove emissions by 30% on an average of 20 red days per year (based on the number of days above 30 $\mu g/m^3$ $PM_{2.5}$ during 2005-2011). This will reduce RWC emissions by 131 lb/day and reduce future $PM_{2.5}$ concentrations by 8.7 $\mu g/m^3$ on worst-case days.

Additional details on the modeled air quality improvements due to these emission reductions are included in Appendix H (Rollback Analysis) and Appendix J (Residential Wood Combustion RACM).

Unmonitored Area Analysis

The previous section describes the demonstration of attainment at the Willamette Activity Center monitor. In addition, a supplemental analysis was conducted to examine future design values away from the Willamette Activity Center, both within Oakridge and in the neighboring city of Westfir. The unmonitored area analysis is based on a 2002–2003 saturation survey of Oakridge, and the 2009-2010 monitoring of Westfir. These monitoring efforts are described in greater detail in Appendix A.

The ratio of average concentration at each of these monitors to the average concentration at Willamette Activity Center is applied to the baseline design value at Willamette Activity Center to establish a "baseline" design value for each monitor. The same ratio is then applied to the Willamette Activity Center future design value to estimate a future design value for each site. Since there is currently only one small point source in the emissions inventory for Oakridge, a dispersion modeling exercise to estimate source impacts was deemed unnecessary.

In both monitoring efforts referenced here, the Willamette Activity Center was the location of the highest observed concentration. Base and future design values for all monitored locations

were below the NAAQS, indicating that the Willamette Activity Center concentration is the highest in the area. More detail of the unmonitored area analysis is available in Appendix A.

Application of Future Strategies

Including current strategies, and strengthening of these strategies, the rollback model shows that the Oakridge non-attainment area will achieve the standard of 35 µg/m³ by 2014. At 28.2 µg/m³, the future design value includes a buffer for potential variation while still meeting the standard. The Oakridge Advisory Committee developed contingency strategies that are part of the attainment plan and will automatically take effect, if necessary, in order to make continued progress should the area not achieve the standard by 2014. Using these contingency strategies would result in additional emission reductions and consequently could also be used to show further reduction in the attainment demonstration roll back model. At this time, these additional measures do not appear necessary. The results of the rollback at Willamette Activity Center show a cumulative RRF of 0.70 with current strategies and future strengthening of these strategies recommended by the committee.

Source Category	Base Year		Future Year	
	Emissions %	$PM_{2.5}$ µg/m^3	Emissions %	$PM_{2.5}$ µg/m^3
Residential Wood Combustion	79.6%	31.4	74.7%	21.1
Industry	0.0%	0.0	1.2%	0.3
On-road vehicles	8.4%	3.3	7.1%	2.0
Other	2.1%	0.8	2.9%	0.8
Background + secondary aerosols	9.9%	3.9	14.1%	4.0
Total	100.0%	**39.5**	100.0%	**28.2**

Table 10 shows the estimated emissions, and proportional concentrations, based on all current attainment strategies:

Source Category	Base Year		Future Year	
	Emissions %	$PM_{2.5}$ µg/m^3	Emissions %	$PM_{2.5}$ µg/m^3
Residential Wood Combustion	79.6%	31.4	74.7%	21.1
Industry	0.0%	0.0	1.2%	0.3
On-road vehicles	8.4%	3.3	7.1%	2.0
Other	2.1%	0.8	2.9%	0.8
Background + secondary aerosols	9.9%	3.9	14.1%	4.0
Total	100.0%	**39.5**	100.0%	**28.2**

Table 10: **Allocation of emissions and modeled concentrations for base and future years.**

Contingency Plan

The attainment plan must contain contingency measures that would be implemented in the event that the Oakridge nonattainment area fails to meet the standard on or after December 2014. The contingency measures are designed to correct the violation of the $PM_{2.5}$ standards and be implemented immediately. EPA requires that any contingency measures must equal one year equivalent of reasonable further progress (RFP).

In Oakridge, the worst-day $PM_{2.5}$ concentrations need to be reduced by about one microgram per cubic meter ($\mu g/m^3$) per year in order to meet the $PM_{2.5}$ standard by 2014 (i.e., reduced from 39.5 $\mu g/m^3$ in the 2006-2010 baseline period to 35 $\mu g/m^3$ by the 2014 attainment date). Therefore the RFP requirement in Oakridge would equal about one $\mu g/m^3$ of further reduction.

The Oakridge $PM_{2.5}$ attainment plan includes the following strategies as contingency strategies to fully meet the air quality standards, if it becomes clear that the strengthened ongoing strategies described above will not be sufficient to attain the $PM_{2.5}$ standards by 2014 and or to maintain compliance with the standards through 2024 and beyond:

- Stricter opacity limit, revising the current 40% opacity limit in the city ordinance to a more restrictive 20% limit, as has been done in some other northwest communities.
- Stricter green-yellow-red advisory program, with more yellow and red advisory days each winter.
- Further restrictions on city woodstove curtailment exemptions (for sole source, economic hardship).

The most quantifiable and most quickly implemented of these contingency measures would be further strengthening of the mandatory curtailment program by more consistent enforcement of the city curtailment ordinance and stricter criteria for expanding the number of yellow and red advisory days. If the standard is not met by 2014, the number of red curtailment days would be increased to an average of 30 days per year (based on the number of days above 25 $\mu g/m^3$ $PM_{2.5}$ during 2005-2011) and the frequency of curtailment enforcement (warnings and citations) would be increased accordingly in order to increase the effectiveness of the curtailment to 40% (or to 50% if necessary) on worst case days.

As outlined in the earlier section on Attainment Demonstration, a 30% RWC emission reduction from a strengthened mandatory curtailment program is projected to reduce concentrations on worst-case days by about 8.7 $\mu g/m^3$ in 2014. If the mandatory curtailment program is increased from an average of 20 days per year (based on 30 $\mu g/m^3$ $PM_{2.5}$) to 30 days per year (based on 25 $\mu g/m^3$ $PM_{2.5}$ in the contingency plan) this will further ensure that the full 8.7 $\mu g/m^3$ is achieved. The contingency measures for stronger enforcement on more red advisory days is expected to increase the curtailment effectiveness.

- Using these contingency strategies to increase curtailment effectiveness to 40% is expected to reduce RWC emissions by 44 lb/day and reduce $PM_{2.5}$ concentrations by an additional 2.9 $\mu g/m^3$ on worst case days.
- Using these contingency strategies to increase curtailment effectiveness to 50% is expected to reduce RWC emissions by 87 lb/day and reduce $PM_{2.5}$ concentrations by 5.8 $\mu g/m^3$ on worst case days.

Either of these contingency measures would more than achieve the one $\mu g/m^3$ target needed to meet the EPA RFP test.

If Oakridge meets the $PM_{2.5}$ standard by the EPA Clean Air Act 2014 deadline, the contingency plan will not be enacted. If Oakridge does not meet the $PM_{2.5}$ standard by the EPA Clean Air Act 2014 deadline, the contingency plan will be enacted by the beginning of the immediate next wood-heating season, November 15, 2015.

If the high $PM_{2.5}$ concentration was determined to be an Exceptional Event based on EPA's Exceptional Events Rule, as flagged by ODEQ and concurred by EPA, no further action may be needed.

Acknowledgements

Oakridge Advisory Committee

LRAPA would like to thank the members of the Oakridge Advisory Committee for their efforts in developing the list of strategies aimed at reducing $PM_{2.5}$ emissions in the community.

Committee Members:

James Affa	Private Citizen
James Coey	Private Citizen
Rob DeHarpport	Private Citizen
Herb Hilton	Private Citizen
Glenn Fortune	Oakridge City Council
Don Hampton	Former Oakridge Mayor
Gordon Zimmerman	Former Oakridge City Manager
John Murray	Lane Electric Coop
Paul Engelking	University of Oregon Chemistry Professor, LRAPA Citizens Advisory Committee
Brian Forge	LRAPA Board Member

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Oregon Department of Environmental Quality
U.S. Environmental Protection Agency

Summary of Public Comment and Agency Response

Title of Rulemaking: Oakridge $PM_{2.5}$ Attainment Plan

Prepared by: Merlyn Hough and staff **Date:** October 18, 2012

Comment period

The public comment period opened on Monday, August 20, 2012 and closed on Thursday, September 20, 2012.

Organization of comments and responses

This document summarizes public comment received and LRAPA's responses on Oakridge $PM_{2.5}$ Attainment Plan and Rules.

A public meeting was held in Oakridge on September 18, 2012, and a formal public hearing at the LRAPA board meeting on September 20, 2012.

Comments are summarized by issue category. All persons who provided comments are listed at the back of this document and the comment/response number follows each commenter.

Total Number of Comments

130 comments were received during the comment period.

1. Economic Impact
a. In general
1) Comment: Enforcement of the PM2.5 standard is threatening the economic well-being and prosperity of the Oakridge/Westfir area. The struggling economy and lack of jobs in Oakridge/Westfir is further crippled due to bureaucratic over-reach. The PM2.5 standard is an arbitrary number that is keeping businesses from locating to Oakridge.
Response: *LRAPA is responsible for collaborating with communities that violate federal air pollution health standards to develop a plan that will decrease the pollution to safe levels. In working with the Oakridge Advisory Committee, LRAPA has proposed strategies that minimize local economic impacts as much as possible. 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 or reasonable control measures (such as opacity standards, operation and maintenance plans, and fugitive plans) for existing sources. While LRAPA recognizes that these restrictions may prevent some industries from locating in Oakridge, they are designed to help clean up the air and ensure the health of all residents.* *As required by the Clean Air Act, the U.S. Environmental Protection Agency has established the PM2.5 standard to protect public health based on its review of current health studies. The PM2.5 particulate standard is not an arbitrary number. It was developed by an independent panel of scientists who evaluated all relevant medical and scientific data and recommended a concentration, which was then vetted through an extensive public review process.*
***2) Comment*:** Oakridge and Westfir are economically depressed areas and the economy has

suffered with the decline of logging in Oregon. The wood stove curtailment program and requirement to replace old wood stoves places undue economic hardship on families already struggling to meet basic needs.

Response: *LRAPA understands and is sympathetic to the economic needs of families in Oakridge and Westfir. Since 2006, LRAPA and partner agencies have provided over $1 million in funding and assistance to local residents to replace wood stoves and upgrade their homes to make them more energy efficient. Additional assistance for wood stove change-outs will be only provided as funds become available.*

2. Funding for the Warm Homes program

***1) Comment*:** According to LRAPA, over $1 million has been spent in Oakridge. Where was the money spent?

Response: *LRAPA and partner agencies provided funding directly to Oakridge/Westfir residents. Over 90% of the funding helped replace woodstoves and provide home repairs, weatherization and other energy efficiency upgrades. Between 5% and 10% was designated for administrative costs incurred by LRAPA.*

3. Monitoring

a. Number/location of monitors

1) Comment: The LRAPA monitor is located in the area with the worst concentration of wood smoke and does not represent the entire area. Air quality should be tested using multiple monitors in the City of Oakridge. The current federal method for determining the standard is not fair.

Response: *LRAPA acknowledges that there is only one monitor to determine compliance, however, the Willamette Activity Center location is the most appropriate place for a monitor. The U.S. Environmental Protection Agency (EPA) monitoring requirements are nationally consistent and focus on measuring peak concentrations and population exposure. This monitor was located to measure the highest concentrations to which the population is exposed. Concentrations at this location must be reduced in order to achieve attainment. Even if LRAPA were to place additional federal monitors in the area, EPA requirements still mandate that the data be taken from the highest violating monitors, not an average of all the monitors in the area.*

4. Attainment area boundary

a. The attainment area boundary is too large

1) Comment: The attainment area boundary is arbitrary and not based on sound science or peer review. Westfir and the surrounding area should not be included when it has been acknowledged the worst air quality is in the southwest part of Oakridge.

Response: *LRAPA agrees with this comment and recommended the attainment boundary only include the Oakridge urban growth boundary as described in the Oakridge PM_{10} attainment plan. Monitoring was conducted over a one-year period at two locations in Westfir. LRAPA concluded that there was no evidence that Westfir emissions are impacting Oakridge, and there was strong topographic and meteorological evidence, as well as visual observations and photographs, that confirmed Westfir emissions were not impacting Oakridge.EPA proposed a significant modification and rectangular expansion of the Governor-recommended Oakridge Urban Growth Boundary (UGB) nonattainment area; in contrast, LRAPA concluded that the Oakridge UGB was appropriate, and the*

larger rectangular boundary was unjustified by the technical information, unnecessary to attainment of the $PM_{2.5}$ standard, and disruptive to the ongoing successful local-state-federal air quality improvement program. Despite providing what LRAPA and the City of Westfir believed to be conclusive evidence, LRAPA was unsuccessful in arguing the attainment boundary should be reduced to the Oakridge urban growth boundary. Even though the official nonattainment area is larger than LRAPA and many local residents believe is necessary, the proposed Attainment Plan focuses on the appropriate smaller area and relies heavily on City of Oakridge ordinances that apply only within the city limits of Oakridge, not in the City of Westfir or areas in between.

5. PM2.5 standard

1) Comment: The 24-hour $PM_{2.5}$ standard is not based on sound science. The standard should undergo an independent, scientific peer review.

Response: *$PM_{2.5}$ (particle pollution) standards are set based on the latest, peer reviewed medical research on the effects of air pollution and public health. The studies are reviewed by an independent group of science advisors, the Clean Air Scientific Advisory Committee (CASAC). Recommendations are made by CASAC to EPA. The Clean Air Act requires EPA to review the $PM_{2.5}$ (particle pollution) standards every five years.*

An extensive body of scientific evidence shows that exposure to particle pollution causes premature death and is linked to a variety of significant health problems, such as increased hospital admissions and emergency department visits for cardiovascular and respiratory problems, including non-fatal heart attacks. PM also is linked to the development of chronic respiratory disease.

The $PM_{2.5}$ standard was determined as the result of a deliberate, thoughtful, and very complex process of evaluating the science of air pollution and public health. For more information about the Clean Air Scientific Advisory Committee and their work reviewing the $PM_{2.5}$ health effects information, please visit: http://yosemite.epa.gov/sab/sabpeople.nsf/WebCommittees/CASAC

***2) Comment*:** If Oakridge attains the standard, will the standard be tightened again and put Oakridge back in a non-attainment situation?

Response: *The health-based 24-hour standard for $PM_{2.5}$ was tightened by more than 50% in 2006 from 65 micrograms per cubic meter ($\mu g/m^3$) to 35 $\mu g/m^3$. EPA is currently recommending keeping the 24-hour standard at 35 $\mu g/m^3$ and tightening the annual standard to 12-13 $\mu g/m^3$. Oakridge will meet the annual standard even if it is reduced to 12-13 $\mu g/m^3$. The standards will be reviewed again in five years. It is not known at this time if further tightening of the 24-hour or annual standard will occur.*

Oakridge has made significant progress in meeting the current $PM_{2.5}$ standard and air quality has improved, making the community healthier. The progress made to date in reducing air pollution has made violations of the new fine particulate standard less severe and easier to manage. While Oakridge does violate the new $PM_{2.5}$ standard, the solutions and a return to attainment are all within reach, due in large part to the past work of reducing air pollution in the community. It is important to keep in mind that EPA only tightens national ambient air quality standards when there is compelling scientific evidence that the current standards are inadequate to protect public health. Tightening a standard can make things more challenging for a community; however, the main goal is to ensure a healthily community for all citizens. Once adequate standards are set, LRAPA works with local communities to consider both the environmental and economic health of a community as action to meet standards are developed.

6. Residential Wood Burning

a. In general

1) Comment: A commenter believes wood burning, even in an uncertified woodstove, can be done properly with no visible emissions.

Response**:** *LRAPA agrees that when used properly, a stove produces lower emissions than not burning properly. However, uncertified stoves do emit more $PM_{2.5}$, even under perfect burning conditions.*

2) Comment**:** Stricter enforcement and education are needed for repeat offenders who have smoky chimneys. Many new residents do not take the time to season their wood and burn green wood, resulting in excessive smoke emissions.

Response: *LRAPA, through its public education and advisory programs, encourages people to use clean, seasoned firewood and employ proper burning practices in the winter months. LRAPA and the City of Oakridge have widely distributed a woodburning handbook (Home Wood Heating: A guide to clean burning), and LRAPA has also provided a series of educational and enforcement door hangers to the Oakridge police that can be placed at residences with smoky chimneys.*

One of the recommendations suggested in the attainment plan is to set up a firewood exchange where residents can trade green wood for dry seasoned wood. Support for a program like this was heard at the September 18, 2012 public meeting in Oakridge. LRAPA is exploring models to set up a local program.

b. Curtailment Program

1) Comment: Simplify LRAPA's home wood heating hotline message so information about Oakridge can be obtained quicker.

Response: *The advisory line messages will be reviewed and modified.*

c. Changeout Program

1) Comment: Wood stove change-outs should be concentrated in the worst area near the LRAPA monitor.

Response: *Many residents in the southwest part of Oakridge have participated in wood stove exchange programs funded by LRAPA. The program will continue as funding becomes available.*

7. Comments about LRAPA

1) Comment: As a government agency, LRAPA is intruding into our personal lives and taking away our freedoms. We would like to eliminate LRAPA.

Response: *LRAPA acknowledges concerns about the impacts of efforts to control air pollution. To incorporate diverse interests and community values, LRAPA has collaborated extensively with Oakridge citizens and local elected officials. Through this process, LRAPA has developed a plan to address air quality problems using reasonably available methodologies that target the main sources of pollution in the community.*

As a local agency, LRAPA has the responsibility to administer and enforce the federal Clean Air Act. Eliminating LRAPA will not release Oakridge of the federal Clean Air Act requirements regarding non-

attainment status.
2) Comment: Where does LRAPA get its funding?
Response: *During the fiscal year ending June 30, 2012, LRAPA had core budget revenues of $1.9 million. About 65% of this was from industrial and other permit fees, 32% was from local-state-federal funds, and the remaining 3% was from various other sources. In addition to these core revenues, LRAPA also passes through air quality grant funds to homeowners, schools, businesses and communities. For example, last year LRAPA distributed $411,992 in federal grant funds for homeowner rebates to replace old woodstoves with cleaner, more energy-efficient heating systems in Oakridge ($201,992), Cottage Grove ($12,000), Eugene ($139,500) and Springfield ($58,500).*
3) Comment: Why are we just hearing about this now?
Response: *LRAPA has been working with the community of Oakridge since 2005 to reduce wood smoke emission in anticipation of EPA¹s decision to tighten the standard, which would put Oakridge out of attainment. Over the last seven years, stories have appeared in the media and residents have received information about wood stove change-out programs in the mail and in electric bills. The City of Oakridge monthly newsletter has been used to update residents. Discussions of the issue have taken place at numerous Oakridge city council meetings.*
8. Comments on the attainment plan
a. Transportation
1) Comment: Based on the Emissions Inventory data received from LRAPA, the Oregon Department of Transportation (ODOT) agrees with LRAPA's finding that transportation is not a major contributor to the PM2.5 non-attainment area in Oakridge. An EPA finding of insignificance would make the Oakridge PM 2.5 area exempt from regional Transportation Conformity Rule requirements (40 CFR 93.109 (f), Areas with insignificant motor vehicle emissions). Project level $PM_{2.5}$ hot spot conformity requirements would still apply.
Response: *LRAPA agrees with this comment, but it is not yet clear whether the Oakridge motor vehicle emissions data will meet the EPA criteria for a finding of insignificance. In any event, the conformity reporting requirements are not expected to be unduly burdensome.*
b. Explanation of Attainment
1) Comment: *S*pecific sections of the Plan, notably the RACT/RACM analysis and the Contingency Measures, either do not include all of the pertinent information associated with that section or do not clearly identify where to find such information.
Response: *These sections have been revised and expanded, using information from the related appendices, in order to address these concerns.*
***2) Comment*:** In the section title "Attainment of Standards" the Plan states that "[t]he base year Design Value concentration confirms that *additional strategies,* beyond those implemented by 2008, are needed to bring the area into attainment." (p. 9, emphasis added). Later in the "Future Strategies" section, the Plan states that ' [w]hile the *current strategies* in place indicated Oakridge will reach attainment with the PM2.5 standards by 2014, to ensure compliance, a number of future strategies were identified by a local advisory committee." (p. 33 emphasis added). This distinction is critical because if Oakridge believes that the additional strategies are required for attainment they must be

explained in more detail and adopted/enacted prior to the final submission to EPA.
Response: *These sections have been revised and clarified to address these concerns.*
c. Discussion of Strategies
1) Comment**:** The plan states LRAPA is working with the Oakridge Police Department to strengthen enforcement on red advisory days (p. 34), but does not explain how the Department will strengthen enforcement or even how it intends to conduct enforcement- during regular patrols, with enforcement sweeps, in response to complaints/tips?
Response: *The City of Oakridge police plan to conduct visit before the official start of the residential wood heating season with residents known to consistently have smoky chimneys. Police and City workers will also use door hangers provided by LRAPA to educate or warn residents when a smoky chimney is observed during regular patrols and work routines and in response to complaints. LRAPA also responds to formal complaints made directly to the agency and will send a "good neighbor" packet to inhabitant of the source property in the case of an initial complaint.*
2) Comment**:** Why have existing strategies that have been in place since 2008 - the continuation of which are the primary strategy for attainment - have not yielded greater progress toward the projected 2014 design value in the last three years?
Response: *Meteorology is a major factor in the year-to-year variations in air quality. The PM2.5 standards are three-year standards. The strengthened ongoing strategies recommended by the Oakridge Advisory Committee in 2011 are being implemented during 2012 and are expected to improve air quality in 2012-2014 and subsequent years. The benefits of the woodstove replacements during 2010-2011 are expected to improve air quality in 2010-2012 and subsequent years.*
3) Comme**nt:** The plan suggests strengthening current strategies but does not specifically provide detailed information about the measures and how they would implemented or what strategies would have better results. For example, what improvements in forecasting are expected, how will the program to use fines for purchasing certified woodstoves be implemented and administered, what specific alternatives to paying fines would be implemented and how specifically would these alternatives be a stronger measure than enforcement?
Response: *Regarding forecasting improvements LRAPA is modifying the advisory methodology to be more conservative and to ensure an average of 20 red advisory days per season, which is the average number of days per season with PM2.5 concentrations above 30 ug/m3; the current forecasting methodology has resulted in an average of only about 10 red advisory days per season. The revised methodology will be the combination of predicted PM2.5 (based on actual PM2.5 for the most recent 12 hours and the weather service forecast for the next 12 hours) and the 24-hour ventilation index forecast from the NWAirQuest MM5 model. The forecasted versus actual weather and air quality data will be documented, reviewed and refined over time to ensure that the methodology is conservative and results in the appropriate number of red advisory days.* *Regarding programs to use fines for woodstove replacements, those programs will be developed as the City of Oakridge gains experience on the number and amounts of fines, and the City and LRAPA explore additional supplemental grant funding opportunities. This type of program is expected to be more effective than fines alone by not only supporting increased curtailment effectiveness in the short-term but also promoting woodstove replacements as long-term solutions.*
d. Applicability of the Plan

1) Comment: The Plan states that its area of applicability includes the cities of Oakridge and Westfir (p. 15). However, the principal reduction strategies in the Plan are implemented in the city of Oakridge's Ordinance No. 889 (Appendix F-1). Please clarify the geographic extent of Ordinance 889.
Response: *Oakridge Ordinance 889 only applies to areas within the city limits of Oakridge. LRAPA's analysis indicates Westfir is not a contributor to particle pollution problems in the southwest area of Oakridge. Advisories issued by LRAPA during the residential home wood heating season as stated in the City ordinance are followed voluntarily by residents outside the Oakridge city limits.*
e. RACT/RACM
***1) Comme*nt:** A RACM analysis is required for each measure considered for emissions reduction. This analysis should therefore list the potential measures considered and provide information and analysis sufficient to support the decision to adopt of reject a measure. Review criteria for measures could include quantified emissions reductions, cost per ton of emissions reduced, political-economic feasibility, local considerations, etc.
Response: *LRAPA staff evaluated a much longer list of potential strategies before, during and after the Oakridge Advisory Committee process. Even after this more extensive review, LRAPA concurred with the Advisory Committee recommendations. .*
2) Comment: The PM2.5 Implementation Rule requires that for a RACM/RACT analysis SO2 is required to be included and NOx is presumptively included unless a demonstration can be made that it is not a significant contributor. The Plan must clearly explain what steps were taken for these pollutants so that the RACT/RACM analysis clearly identifies how these precursors were considered when selecting control measures.
Response: *LRAPA has included the chemical speciation monitoring results in the Attainment Plan and appendices. These speciation results confirm that secondary particulate formation from SO2 and NOx are insignificant. For example sulfates contributed only 1.1% and nitrates only 0.4% to PM2.5 concentrations on the high winter days. In contrast, organic carbon (primarily from residential wood combustion) contributed 88% of the PM2.5 on high winter days. LRAPA will emphasize these results in Appendix J (RACT/RACM Analysis) .*
3) Comment: The Plan should include a table clearly identifying emission reductions projected for each identified RACM strategy.
Response: *LRAPA has expanded the Attainment Demonstration and Contingency Plan sections with additional details from the appendices.*
4) Comment: The RACT/RACM appendix includes redundant background information and significant amount of irrelevant information (including the discussion about the residential wood combustion emissions control measures guidance). This information does not need to be included in the analysis.
Response: *LRAPA has included additional information, perhaps more information than necessary, in the appendices in order for them to be understood as stand-alone documents, but believes this is helpful to the interested reader.*
***5) Comment*:** The Plan includes as a measure the Oakridge Ordinance prohibiting open burning within the city limits each November to February. It appears that this Ordinance was not provided with the Plan. A copy of the Ordinance should be included with the final submission and we

recommend that the Ordinance be made available for review before the final submission.

Response: *The City Code document pertaining to open burning within the city limits has been added to the plan and will be made available before final submission.*

f. Contingency Measures

***1) Comment*:** Identify how the calculation for one year of reductions was made.

Response: *LRAPA has provided more details in the Attainment Plan, using information from the related appendices.*

***2) Comment*:** Provide a more detailed explanation for each contingency measure, particularly the measures that would impose stricter advisories and restrict curtailment exemptions. The specifics of these measures are not provided and it is not readily apparent what they would entail or how they would be implemented. For all three contingency measures provide a table that estimates the amount of emissions reduction for each measure and shows that they meet the contingency measure requirements.

Response: *LRAPA has provided more details in the Attainment Plan, using information from the related appendices. .*

***3) Comment*:** Contingency measures are required to take effect automatically without any further action by a local government or state. Consequently, contingency measures must be adopted/enacted prior to submission the submission of an attainment plan, although the implementation of contingency measures can be prospective and contingent on continued non-attainment. We recommend that the regulatory language enacting the contingency measures referenced in the Plan be provided for review before it is included in the final Plan submitted to EPA for review.

Response: *LRAPA has provided the Oakridge City Council with language for a new section of City Ordinance # 889. The contingency measures are outlined and a date for implementation is included, if the measures are needed for further emission reductions.*

***4) Comment*:** Explain how a 20% opacity limit would benefit air quality when Oakridge Ordinance 889 already prohibits any visible emissions on red advisory days. It is not clear how this contingency measure improves air quality since it is weaker than what is currently in the ordinance.

Response: *The 20% opacity limit included in the contingency measures would be applied at all times, not just during a red advisory. Limiting emissions during green and yellow advisories days will help reduce emissions that build up over time resulting in a total burn ban on a red advisory day.*

g. Emissions Inventory

***1) Comment*:** Emissions Inventory (EI) documentation for the Oakridge-Westfir PM2.5 Nonattainment Area (Appendix D) does not meet federal requirements. Specifically, the EI contained the following omissions and deficiencies:

State Implementation Plans (SIPs) for PM2.5 nonattainment areas violating the 2006 24-hr standard require the development of emissions inventories for primary PM2.s and PM2.s precursors. PM25 precursors are defined as NOx, SO2, VOC, and NH3. The current Oakridge-Westfir EI only accounts for primary PM2.5 emissions. The requirement to develop emissions inventories for PM2.5 precursors is clearly set forth at 40 CPR§§51.1002(c) and 51.1008(a)(l) *(see also,* 72 Fed. Reg.

20,586, 20,648 (Apr. 25, 2007) and Emissions Inventory Guidance, EPA-454/R-05-001, p. 14 Section 3.2.1). Non-road emissions must be also accounted for in the EI.

Response: *LRAPA is providing additional documentation on other categories of emissions in Appendix D (Emission Inventory) as requested.*

2) Comment: Nonroad emissions must be accounted for in the EI. Typically, nonroad emissions are estimated using the EPA NONROAD model and cover small and large nonroad vehicles, equipment, and engine emissions. Examples of nonroad sources pertinent to Oakridge include rail, aviation, lawn and garden equipment, agricultural and construction equipment, recreational vehicles (e.g., dirt bikes, snowmobiles), and logging equipment. Some of these categories may be considered de minimis and should be documented in the EI (ex. aviation). For rail emissions, the Union Pacific Railroad rail emissions report (Appendix D-4) lacks sufficient information to verify the PM2.5 attributed to rail emissions in Table D-1. The rail emissions report should detail the methodology used to estimate emissions, source of emissions data, a summary of emissions data, and emissions calculations.

Response: *LRAPA is providing additional documentation on nonroad categories of emissions in Appendix D (Emission Inventory) as requested.*

h. Deficiencies

Comment:

a: Page 12, Table D-1: there is no explanation for what is included in the category "All Other Stationary Area Sources.", how this number was determined, or why the lbs/day falls by 90% on worst-case days compared to typical season days.

b: Page 13 and Appendix D-1: Appendix D-1 does not explain or clarify how the final lbs/day for permitted point sources in Table D-1 was determined. The calculations and source information needs to be clearly shown.

c: Page 14 and Appendix D-2: Appendix D-2 should include where all increases and reductions in the number of devices in use come from between Tables 3a and 4a.

d: Page 15: There should be documentation to support the forecast 30% reduction in wood burning based on a strengthened mandatory curtailment.

e: Page 16 Table D-2: The EI for 2014 should walk through all the calculations behind the emissions reductions for each category in Table D-2 compared to Table D-1.

f: Page 19: There needs to be some documentation to support/estimate what level of increased warnings and citations will achieve each 10% bump in effectiveness.

g: The EI also needs to document what EI development quality control and quality assurance measures LRAP A has in place.

Other concerns

a: The EI develops emissions estimates for the worst case day. However, it would be more appropriate for the inventory to represent emissions on days that are representative of the current design value (98% day).

b: Page 11: under "Sources Not Inventoried", the EI should list which minor sources were

considered, which were omitted, and the rationale. *c: Page 15 and Appendix D-3: The LCOG report is listed as draft. This should be replaced by the final report.*
Response: *LRAPA has revised and expanded Appendix D (Emission Inventory) to address these questions.*
i. Unmonitored Area Analysis
1) Comment**:** The saturation study report has information on the quality control and quality assurance for that study but not for the subsequent Westfir monitoring. Please include information for the Westfir monitoring similar to what was done for other sampling sites in the saturation study report.
Response: *Quality control data has been used to calculate error for the Westfir study, similar to the Oakridge study, and has been included in Appendix A.*
2) Comment**:** Please include descriptions from Figure 1 in the saturation study report for sites used for monitoring rather than code numbers.
Response: *The saturation study report figure is in both the attainment plan and Appendix A.*
9. Comments on LRAPA Rules
a. General
1) Comment**:** The plan should clearly cite to all enacted rules that LRAPA is asserting are enforceable measures (described in the plan as PM Reduction Strategies, current strategies, and future strategies).
Response: *The key City of Oakridge ordinances have been clearly identified in the Attainment Plan.* *b. Oakridge Ordinance #889*
2) Comment**:** The key measure in the plan is Oakridge ordinance #889. As of now, the ordinance can only be enforced by Oakridge but the City Administrator can delegate enforcement to LRAPA. In order for LRAPA to exercise this delegated authority, it presumably must rely on its own authorities. This would require an amendment to LRAPA Title 16 to include reference to administration of the Oakridge ordinance.
Response: *LRAPA Title 16 can be amended in the future if the Oakridge City Administrator gives LRAPA authority for enforcing Oakridge City Ordinance #889.*
10. Other Comments
a. Calculations
1) Comment**:** In Table 10 on page 40, the concentrations attributed to each source category do not correspond to information in the rollback model. For example, the contribution of residential wood combustion to the 2008 design value may be overestimated by 2 ug/m3. Please clarify your calculation methodology.
Response: *Background and secondary aerosol concentrations had not been removed prior to*

calculating percentages and corresponding concentrations. Table 10 has been revised with corrected values for each source category and now includes a category for background and secondary $PM_{2.5}$. LRAPA will follow up with EPA Region 10 technical staff regarding this method.
2) Comment: LRAPA will need to provide a motor vehicle emissions budget for the nonattainment area with the official submission if you submit a Finding of Insignificance for Motor Vehicle emissions for the Oakridge nonattainment area.
Response: *LRAPA will provide a motor vehicle emissions budget, in coordination with LCOG and ODOT, if required.*
b. Language Changes
1) Comment: EPA has suggested minor language changes to sections of the plan.
Response: *Changes have been made as suggested by EPA.*

	Commenter	***Affiliation***	***Comment Response #***
1	We the People Log #57570 rec. 8-28-12	Unknown	7-1
2	James B. Norman ODOT 4040 Fairview Industrial Dr. Salem, Oregon 97302 Log #57607 rec. 9-14-12	Oregon Department of Transportation (ODOT)	8a-1
3	Eric Ravare Erav82@live.com Log #57608 rec. 9-15-12	Citizen	Sally replied via email 9/17/2012 7-1
4	Delbert Spencer Del.spencer@yahoo.com *Submitted twice:* *Log #57596 rec. 9-11-12* *Log #57614 rec. 9-18-12*	Citizen	3a-1, 6a-1, 6a-2
5	Jeanne Williams 76355 Klohn Road Oakridge, Oregon 97463 Log #57615 rec. 9-18-12	Citizen	6a-1, 6a-2
6	Terry Moody 76616 High Prairie Road Oakridge, Oregon 97463 Log #57616 rec. 9-18-12	Citizen	4a-1
7	Karen Moore 76472 Oak Street Oakridge, Oregon 97463 Log #54617 rec. 9-18-12	Citizen	6a-2
8	Randy Johnson 47679 2nd Street Oakridge, Oregon 97463 Log #57618 rec. 9-18-12	Citizen	7-3
9	Michael Petrusha 46386 Hwy 58 Westfir, Oregon 97492 Log #57619 rec. 9-18-12	Citizen	4a-1, 2-1
10	S Freeman Locust St. Oakridge, Oregon 97463 Log #57620 rec. 9-18-12	Citizen	6a-2
11	David Gordon 47755 W 1st Oakridge, Oregon 97463 Log #57621 rec. 9-18-12	Citizen	3a-1
12	Alene Hadley Oakridge Log #57622 rec. 9-18-12	Citizen	5-1
13	Fern Williams	Citizen	*1a, 4a, 5-1

	47742 W 2nd St. Oakridge, Oregon 97463 541-782-2279 Log #57623 rec. 9-18-12		
14	John Ryon 47735 W 2nd Street Oakridge, Oregon 97463 541-782-5969 Log #57624 rec. 9-18-12	Citizen	*1a, 4a, 5-1
15	Lanel Ryan 47735 W 2nd St Oakridge, Oregon 97463 541-782-5969 Log #57625 rec. 9-18-12	Citizen	*1a, 4a, 5-1
16	Daniel Williams 47742 W 2nd St. Oakridge, Oregon 97463 541-782-2279 Log #57626 rec. 9-18-12	Citizen	*1a, 4a, 5-1
17	Logan Dhonau ldhonau@comcast.net Log #57627 rec. 9-19-12	Citizen	1a-1, 4a-1, 5-1
18	Rep. Bruce Hanna House District 7 900 Court St. NE, Rm 269 Salem, Oregon 97301 503-986-1200 Log #57628 rec. 9-19-12	Co-Speaker of the House	1a-2
19	Bob Sowden Cg912project1@gmail.com Log #57630 rec. 9-19-12	Issue Committee	1a-1, 4a-1, 5-1
20	John Milandin 76750 High Prairie Road Log #57631 rec. 9-19-12	Oakridge Economic Development Advisory Committee	3a-1, 4a-1, 6c-1
21	Debra M. Suzuki US EPA Region 10 1200 Sixth Avenue, Suite 900 Seattle, WA 98101-3140 Log #57632 rec. 9-19-12	US EPA Region 10	8b-1, 8b-2, 8c-1, 8c-2, 8c-3, 8d-1, 8e-1, 8e-2, 8e-3, 8e-4, 8e-5, 8f-1, 8f-2, 8f-3, 8f-4, 8g-1, 8g-2, 8h-1, 8i-1, 8i-2, 9a-1, 9a-2, 10a-1, 10a-2
22	George Yellott yellott@comcast.com Log #57633 rec. 9-19-12	Citizen	5-1
23	Robert DeHarpport Waldolake1900@hotmail.com Log #57634 rec. 9-20-12	Citizen	1a-1, 1a-2, 3a-1, 4a-1, 5-1
24	City of Westfir 47441 Westoak Rd/PO Box 296 Westfir, Oregon 97492	City of Westfir Councilors	1a-1, 1a-2, 3a-1, 4a-1, 5-1

	• Robert DeHarpport • Matthew Meske • Larry Wilson • Leslie Wilson Log #57636 rec. 9-20-12		
25	David Crist 48385 Dennison Lane Oakridge, Oregon 97463 541-782-4840 Log #57637 rec. 9-20-12	Citizen	*1a, 4a, 5-1
26	Sharlene M. Crist 48385 Denison Lane Oakridge, Oregon 97463 541-782-4840 Log #57638 rec. 9-20-12	Citizen	*1a, 4a, 5-1
27	Jerry Swearinger PO Box 1308 Oakridge, Oregon 97463 541-782-2474 Log #57639 rec. 9-20-12	Citizen	*1a, 4a, 5-1
28	Amie Gibson Oakridge Log #57640 rec. 9-20-12	Citizen	*1a, 4a, 5-1
29	Loren Olsen 47602 Riverview Oakridge, Oregon 97463 541-863-9824 Log #57641 rec. 9-20-12	Citizen	*1a, 4a, 5-1
30	Dale Navo 76451 Union St #24 Oakridge, Oregon 97463 541-729-3281 Log #57642 rec. 9-20-12	Citizen	*1a, 4a, 5-1
31	Bill Cutforth 47723 West Commercial Oakridge, Oregon 97463 541-782-2387 Log #57643 rec. 9-20-12	Citizen	*1a, 4a, 5-1
32	Bonnie Thomas 46891 Winfrey Road Westfir, Oregon 97492 Log #57644 rec. 9-20-12	Citizen	*1a, 4a, 5-1
33	Delcie R. Bayler 47861 W Commercial St Oakridge, Oregon 97463 541-782-2881 Log #57645 rec. 9-20-12	Citizen	*1a, 4a, 5-1
34	Ernest Bayler 47861 W. Commercial St Oakridge, Oregon 97463	Citizen	*1a, 4a, 5-1

	541-782-2881 Log #57646 rec. 9-20-12		
35	Donald E. Wallser Jr. 77741 High Prairie Road Oakridge, Oregon 97463 541-782-2114 Log #57647 rec. 9-20-12	Citizen	*1a, 4a, 5-1
36	James H. Anthony 48744 McFarland Road Oakridge, Oregon 97463 541-787-2315 Log #57648 rec. 9-20-12	Citizen	*1a, 4a, 5-1
37	William J. DuMont 77997 High Prairie Rd. Oakridge, Oregon 97463 Log #57649 rec. 9-20-12	Citizen	*1a, 4a, 5-1
38	Edgar Roberts P.O. Box 696 Oakridge, Oregon 97463 541-782-2770 Log #57650 rec. 9-20-12	Citizen	*1a, 4a, 5-1
39	Dalores Roberts 47312 Airport Road Oakridge, Oregon 97463 541-782-2770 Log #57651 rec. 9-20-12	Citizen	*1a, 4a, 5-1
40	Evelyn E. Hendrickson 46715 Winfrey Rd Westfir, Oregon 97492 541-782-2695 Log #57652 rec. 9-20-12	Citizen	*1a, 4a, 5-1
41	Larry D. Hendrickson 46715 Winfrey Road Westfir, Oregon 97492 541-782-2695 Log #57653 rec. 9-20-12	Citizen	*1a, 4a, 5-1
42	Ed Martin 46480 Hines Way Westfir, Oregon 97492 541-782-3059 Log #57654 rec. 9-20-12	Citizen	*1a, 4a, 5-1
43	Herbert L. Hilton 76368 River Road/P.O. Box 479 Oakridge, Oregon 97463 541-782-4379 Log #57655 rec. 9-20-12	Citizen	*1a, 4a, 5-1
44	Ted M. Handegard Jr Log #57620 rec. 9-20-12	Citizen	*1a, 4a, 5-1
45	Norma Zielinsky 46751 Winfrey Road	Citizen	*1a, 4a, 5-1

	Westfir, Oregon 97492 Log #57657 rec. 9-20-12		
46	Robert E. Zielinsky 46751 Winfrey Road Westfir, Oregon 97492 Log #57658 rec. 9-20-12	Citizen	*1a, 4a, 5-1
47	Nancy G. King 76383 River Road/P.O. Box 212 Oakridge, Oregon 97463 Log #57659 rec. 9-20-12	Citizen	*1a, 4a, 5-1
48	Danny O. King 76383 River Road Oakridge, Oregon 97463 541-782-3384 Log #57660 rec. 9-20-12	Citizen	*1a, 4a, 5-1
49	Warren D. Sloan P.O. Box 212/47472 School St Oakridge, Oregon 97463 541-782-3258 Log #57661 rec. 9-20-12	Citizen	*1a, 4a, 5-1
50	Craigie M. Sloan P.O. Box 212/47472 School St Oakridge, Oregon 97463 541-782-3258 Log #57662 rec. 9-20-12	Citizen	*1a, 4a, 5-1
51	Jerry Selanders 47683 Rainbow Ct Oakridge Oregon 97463 541-782-2444 Log #57663 rec. 9-20-12	Citizen	*1a, 4a, 5-1
52	Verleen Alexander 76322 Rook Road Oakridge, Oregon 97463 541-782-3633 Log #57664 rec. 9-20-12	Citizen	*1a, 4a, 5-1
53	Richard L. Alexander 76322 Rook Road Oakridge, Oregon 97463 541-782-3633 Log #57665 rec. 9-20-12	Citizen	*1a, 4a, 5-1
54	Robert C. Dunning P.O. Box 777 Oakridge, Oregon 97463 541-782-3759 Log #57666 rec. 9-20-12	Citizen	*1a, 4a, 5-1
55	Douglas H. Dick P.O. Box 898 Oakridge, Oregon 97463 541-782-3179 Log #57667 rec. 9-20-12	Citizen	*1a, 4a, 5-1

56	Leah Brewer 48434 Jasper Drive Oakridge, Oregon 97463 541-953-9566 Log #57668 rec. 9-20-12	Citizen	*1a, 4a, 5-1
57	Chris Brown?? Owner Kathryn Tabor 47639 Cline St./P.O. Box 1285 Oakridge, Oregon 97463 Log #57669 rec. 9-20-12	Citizen	*1a, 4a, 5-1
58	Sharon Baker 77061 Westridge Avenue Westfir, Oregon 97492 541-782-1118 Log #57670 rec. 9-20-12	Citizen	*1a, 4a, 5-1
59	Danny D. King Jr. P.O. Box 212 Oakridge, Oregon 97463 541-206-7374 Log #57671 rec. 9-20-12	Citizen	*1a, 4a, 5-1
60	David Olson 84630 Hwy 58/P.O. Box Oakridge, Oregon 97463 541-285-8811 Log #57672 rec. 9-20-12	Citizen	*1a, 4a, 5-1
61	Ed Bates 84630 Hwy 58 Oakridge, Oregon 97463 541-285-8811 Log #57673 rec. 9-20-12	Citizen	*1a, 4a, 5-1
62	David W. Dwyer 541-782-4319 Log #57674 rec. 9-20-12	Citizen	*1a, 4a, 5-1
63	Mark Schroeder 76483 Spot St. Oakridge, Oregon 97463 541-782-2056 Log #57675 rec. 9-20-12	Citizen	*1a, 4a, 5-1
64	David Sulick 47824 Elgin Oakridge, Oregon 97463 541-782-3013 Log #57676 rec. 9-20-12	Citizen	*1a, 4a, 5-1
65	Joyce Alene Hadley 47611 Union Street Oakridge, Oregon 97463 541-782-2457 Log #57677 rec. 9-20-12	Citizen	*1a, 4a, 5-1
66	James E. Parrett 47484 School St. Oakridge, Oregon 97463	Citizen	*1a, 4a, 5-1

	541-782-2180 Log #57678 rec. 9-20-12		
67	Irene Parrett 47484 School St. Oakridge, Oregon 97463 541-782-2180 Log #57679 rec. 9-20-12	Citizen	*1a, 4a, 5-1
68	Roger M. Jones 77996 Brock Rd. Oakridge, Oregon 97463 541-782-3261 Log #57680 rec. 9-20-12	Citizen	*1a, 4a, 5-1
69	David Hadley P.O. Box 1144 Oakridge, Oregon 97463 Log #57681 rec. 9-20-12	Citizen	*1a, 4a, 5-1
70	Ed Tabor P.O. Box 532 Oakridge, Oregon 97463 541-782-4845 Log #57682 rec. 9-20-12	Citizen	*1a, 4a, 5-1
71	Mary E. Tabor 48449 Jasper Dr. Oakridge, Oregon 97463 541-782-4849 Log #57683 rec. 9-20-12	Citizen	*1a, 4a, 5-1
72	Sherry E. Klosterman 48314 Hills Street Oakridge, Oregon 97463 541-228-2252 Log #57684 rec. 9-20-12	Citizen	*1a, 4a, 5-1
73	Jimi Martinez P.O. Box 276 Oakridge, Oregon 97463 541-782-2966 Log #57685 rec. 9-20-12	Citizen	*1a, 4a, 5-1
74	Sabino Martinez P.O. Box 276 Oakridge, Oregon 97463 541-782-2966 Log #57686 rec. 9-20-12	Citizen	*1a, 4a, 5-1
75	Debra Allen 48274 Hills Street Oakridge, Oregon 97463 541-782-2038 Log #57687 rec. 9-20-12	Citizen	*1a, 4a, 5-1
76	Marjorie Petrusha 46386 Hwy 58 Westfir, Oregon 97492 541-782-2341	Citizen	*1a, 4a, 5-1

	Log #57688 rec. 9-20-12		
77	Mike Johnson 541-782-4457 Log #57689 rec. 9-20-12	Citizen	*1a, 4a, 5-1
78	Mike Petrusha 46386 Hwy 58 Westfir, Oregon 97492 541-782-2341 Log #57690 rec. 9-20-12	Citizen	*1a, 4a, 5-1
79	Michael Petrusha Log #57691 rec. 9-20-12	Citizen	
80	William E. Robinson 47816 Elgin Ave Oakridge, Oregon 97463 541-782-4423 Log #57692 rec. 9-20-12	Citizen	*1a, 4a, 5-1
81	Anonymous Top of High Prairie Road P.O. Box 308 Oakridge, Oregon 97463 Log #57693 rec. 9-20-12	Citizen	*1a, 4a, 5-1
82	Wendy L. Martin 46882 Sunset Ave. Westfir, Oregon 97463 541-782-3214 Log #57694 rec. 9-20-12	Citizen	*1a, 4a, 5-1
83	Dale A. Harrison 46882 Sunset Ave. Westfir, Oregon 97492 541-782-3214 Log #57695 rec. 9-20-12	Citizen	*1a, 4a, 5-1
84	Chris L. McKinney P.O. Box 1233 Oakridge, Oregon 97463 46882 Sunset Ave. Westfir, Oregon 97492 541-782-3214 Log #57696 rec. 9-20-12	Citizen	*1a, 4a, 5-1
85	Ben Dougherty 46882 Sunset Ave Westfir, Oregon 97492 P.O. Box 1233 Oakridge, Oregon 97463 541-782-3214 Log #57697 rec. 9-20-12	Citizen	*1a, 4a, 5-1
86	Heather A. Tucker 46899 Sunset Ave. Westfir, Oregon 97492 541-731-7269 Log #57698 rec. 9-20-12	Citizen	*1a, 4a, 5-1

87	Dells Boat??? Oakridge Log #57699 rec. 9-20-12	Citizen	*1a, 4a, 5-1
88	Jeff Bates??? West 1st Log #57700 rec. 9-20-12	Citizen	*1a, 4a, 5-1
89	Paul Pollard 78219 High Prairie Oakridge, Oregon 97463 Log #57701 rec. 9-20-12	Citizen	*1a, 4a, 5-1
90	Larry Sweet 76361 Jones Road Oakridge, Oregon 97463 541-510-3420 Log #57702 rec. 9-20-12	Citizen	*1a, 4a, 5-1
91	Michael Kinyon 47709 School St. Oakridge, Oregon 97463 541-954-7580 Log #57703 rec. 9-20-12	Citizen	*1a, 4a, 5-1
92	William Mckhean 47651 Cline St. Oakridge, Oregon 97463 541-525-6871 Log #57704 rec. 9-20-12	Citizen	*1a, 4a, 5-1
93	Sonny Cartwright 48408 High Leah Dr. Oakridge, Oregon 97463 541-525-4331 Log #57705 rec. 9-20-12	Citizen	*1a, 4a, 5-1
94	Michael Cramrice 47830 W 2nd St. Oakridge, Oregon 97463 541-556-4478 Log #57706 rec. 9-20-12	Citizen	*1a, 4a, 5-1
95	Sandy Cremeen P.O. Box 372 Oakridge, Oregon 97463 541-782-3923 Log #57707 rec. 9-20-12	Citizen	*1a, 4a, 5-1
96	Timothy Wade Tonkin 76884 20th Westfir, Oregon 97492 541-782-2912 Log #57708 rec. 9-20-12	Citizen	*1a, 4a, 5-1
97	Ollie D. Addington P.O. Box 562 Oakridge, Oregon 97463 Log #57709 rec. 9-20-12	Citizen	*1a, 4a, 5-1
98	Julie Ann Jackson	Citizen	*1a, 4a, 5-1

	46877 Sunset Ave. Westfir, Oregon 97492 541-536-4124 Log #57710 rec. 9-20-12		
99	Thomas N. Tonkin 76884 20th Westfir, Oregon 97492 541-782-2912 Log #57711 rec. 9-20-12	Citizen	*1a, 4a, 5-1
100	Jeff Deloach 47833 Commercial St. Oakridge, Oregon 97463 541-782-5901 Log #57712 rec. 9-20-12	Citizen	*1a, 4a, 5-1
101	John Wabinz 541-912-7719 Log #57713 rec. 9-20-12	Citizen	*1a, 4a, 5-1
102	Deana Wolfe 76585 Meadow Way Oakridge, Oregon 97463 541-968-0191 Log #57714 rec. 9-20-12	Citizen	*1a, 4a, 5-1
103	Lorraine E. Campbell 541-782-4319 Log #57715 rec. 9-20-12	Citizen	*1a, 4a, 5-1
104	Bill Thayer 76512 Poplar St Oakridge, Oregon 97463 Log #57716 rec. 9-20-12	Citizen	*1a, 4a, 5-1
105	Joyce Dyer 46766 Sunset Westfir, Oregon 97492 541-782-5711 Log #57717 rec. 9-20-12	Citizen	*1a, 4a, 5-1
106	Tammy Hubbard 46892 Sunset Ave Westfir, Oregon 97492 Log #57718 rec. 9-20-12	Citizen	*1a, 4a, 5-1
107	Larry Swearingen 46761 Winfrey Westfir, Oregon 97492 541-782-2865 Log #57719 rec. 9-20-12	Citizen	*1a, 4a, 5-1
108	Larry Miles 46892 Sunset Ave Westfir, Oregon 97492 Log #57720 rec. 9-20-12	Citizen	*1a, 4a, 5-1
109	Travis Hendrickson 46715 Winfrey Rd. Westfir, Oregon 97492	Citizen	*1a, 4a, 5-1

	541-782-2695 Log #57721 rec. 9-20-12		
110	Barbara Colp 46772 Sunset Ave Westfir, Oregon 97492 Log #57722 rec. 9-20-12	Citizen	*1a, 4a, 5-1
111	Don J. Colp 46772 Sunset Ave Westfir, Oregon 97492 541-782-4874 Log #57723 rec. 9-20-12	Citizen	*1a, 4a, 5-1
112	Eric T. Martinson 46808 Sunset Ave. Westfir, Oregon 97492 541-782-1819 Log #57724 rec. 9-20-12	Citizen	*1a, 4a, 5-1
113	K. G. Ballard 46791 Winfrey Westfir, Oregon 97492 541-782-2779 Log #57725 rec. 9-20-12	Citizen	*1a, 4a, 5-1
114	Elaena Shepard 46797 Winfrey Rd. Westfir, Oregon 97492 541-337-5350 Log #57726 rec. 9-20-12	Citizen	*1a, 4a, 5-1
115	Jana Howery 76485 Locust St Oakridge, Oregon 97463 541-968-6145 Log #57727 rec. 9-20-12	Citizen	*1a, 4a, 5-1
116	George Marlow 46900 Sunset Ave. Westfir, Oregon 97492 541-521-3959 Log #57728 rec. 9-20-12	Citizen	*1a, 4a, 5-1
117	Richard Hankins 47070 Airport Rd. Oakridge, Oregon 97463 541-782-1151 Log #57729 rec. 9-20-12	Citizen	*1a, 4a, 5-1
118	Ray Gonzales 46802 Sunset Ave. Westfir, Oregon 97492 Log #57731 rec. 9-20-12	Citizen	*1a, 4a, 5-1
119	Michele Mello Gonzales 46802 Sunset Avenue Westfir, Oregon 97492 541-782-2761 Log #57730 rec. 9-20-12	Citizen	*1a, 4a, 5-1

120	Dannett L Marlow 46900 Sunset Avenue Westfir, Oregon 97492 541-520-5330 Log #57732 rec. 9-20-12	Citizen	*1a, 4a, 5-1
121	Stephen Lokan 1521 N. Park Avenue Eugene, Oregon 97404 541-782-2668 Log #57733 rec. 9-20-12	Citizen	*1a, 4a, 5-1
122	Brenda Lokan 48649 Hwy 58 Oakridge, Oregon 97463 541-782-2668 Log #57734 rec. 9-20-12	Citizen	*1a, 4a, 5-1
123	Cash Gardner 76416 KS Drive Oakridge, Oregon 97463 541-968-8608 Log #57735 rec. 9-20-12	Citizen	*1a, 4a, 5-1
124	Adam Zepeda 48449 Vine Street Oakridge, Oregon 97463 541-868-5787 Log #57736 rec. 9-20-12	Citizen	*1a, 4a, 5-1
125	Gordon Simpson 76119 Odle Lane Oakridge, Oregon 97463 541-782-3849 Log #57737 rec. 9-20-12	Citizen	*1a, 4a, 5-1
126	Eugene Ennis P.O. Box 204 Oakridge, Oregon 97463 541-782-2819 Log #57738 rec. 9-20-12	Citizen	*1a, 4a, 5-1
127	Steven W. Powers 47775 Berry St C-5 Oakridge, Oregon 97463 541-953-7183 Log #57739 rec. 9-20-12	Citizen	*1a, 4a, 5-1
128	Michael P. Rooker 47433 School St. Oakridge, Oregon 97463 541-782-5854 Log #57740 rec. 9-20-12	Citizen	*1a, 4a, 5-1
129	Deanna Wellman Hadley PO Box 1144 541-782-5882 Log #57741 rec. 9-20-12	Citizen	*1a, 4a, 5-1
130	Deanna L. Siecinski	Citizen	*1a, 4a, 5-1

	46874 Sunset Avenue Westfir, Oregon 97492 Log #57742 rec. 9-20-12		

Form comment

State of Oregon
Department of Environmental Quality **Memorandum**

Presiding Officer's Report

Date: Oct. 26, 2012

To: Environmental Quality Commission

From: Merlyn Hough, LRAPA Director

Subject: Presiding Officer's Report for Rulemaking Hearing
Title of proposal: Oakridge-Westfir $PM_{2.5}$ Attainment Plan and Rules

Public information meeting date and time: Sept. 18, 2012, 6 to 8 p.m.
Public information meeting location: Oakridge High School Auditorium, 47997 W. 1st St., Oakridge, Oregon

Public hearing date and time: Sept. 20, 2012, 12:15 p.m.
Public hearing location: LRAPA Board of Directors Meeting, 1010 Main St., Springfield, Oregon

Public hearing authorization
At its July 26, 2012, meeting, the Lane Regional Air Protection Agency Board of Directors authorized a public hearing for Sept. 20, 2012, at the regular monthly board meeting in the LRAPA conference room in Springfield, Oregon. In addition, a public information meeting was scheduled during the public comment period for the evening of Sept. 18, 2012, at the Oakridge High School Auditorium in Oakridge, Oregon.

Public notice
Notices of the hearing were published in the Oakridge Dead Mountain Echo, the Eugene Register Guard, and the LRAPA and DEQ websites as listed on page three. A "Notice to Interested Persons" that included a printed copy of the rulemaking announcement was also sent to parties on LRAPA's mailing list as well as an email to the LRAPA and DEQ Rulemaking email list, including legislators, on Aug. 20, 2012. Additionally, a notice was published in the Secretary of State's Oregon Bulletin on Sept. 1, 2012.

Public comments
LRAPA opened the public comment period on Monday, Aug. 20, 2012, and closed it on Thursday, Sept. 20, 2012. LRAPA received a total of 130 comments. LRAPA staff grouped the

comments into 12 major categories and provided responses. The comments and responses are included in attachment B of the staff report.

Public information meeting
LRAPA convened the public information meeting at 6 p.m. on Sept. 18, 2012, in the Oakridge High School Auditorium. About 50 persons attended some or all of the meeting. Several members of the LRAPA Board, LRAPA staff, Oakridge City Council and city staff were present to answer questions.

LRAPA staff provided an overview presentation of the proposed Oakridge-Westfir $PM_{2.5}$ Attainment Plan. A few general questions were asked and answered, proceeded by the audience separating into four table groups for more discussion in smaller groups on these topics:
1. Technical issues related to air monitoring, analysis, modeling, reporting and trending;
2. Public information on reducing woodstove emissions, getting financial assistance, etc.;
3. Conversations with City of Oakridge Mayor and Councilors or LRAPA Board Members; and
4. How to submit comments for including in the public record.

The audience reconvened just after 7 p.m. to ask and answer questions of broader interest. The meeting adjourned at about 8 p.m., although some smaller group conversations continued. Several people submitted written comments to include in the public record.

Public hearing
The LRAPA Board of Directors held its regular monthly meeting at 12:15 p.m. on Sept. 20, 2012. The public hearing was scheduled as Agenda Item #6. LRAPA Chair **Bill Brommelsiek** opened the public hearing at 12:29 p.m.

Only two persons, **Rob DeHarpport**, and **Tammy Hubbard**, spoke in person at the hearing, but Mr. DeHarpport brought 107 comment letters with him for the public hearing record. This is a summary of his testimony:

> Mr. DeHarpport serves on the Oakridge School Board and the Westfir City Council. He also served on the Oakridge Advisory Committee with LRAPA. He was speaking for the people at large in the Oakridge/Westfir area. Many believe the measures in the attainment plan are excessive and limit economic growth. He brought in 107 letters today. It is basically a form letter. Most of the people have lived in the area most of their lives. They feel it is excessive overreach by the EPA. They understand that LRAPA is promulgating the rules that are set by Washington DC. Westfir City Council submitted a letter. LRAPA staff has acknowledged the Westfir airshed should be separate from the nonattainment area map that the EPA adopted. Other residents also believe that is true, but in the case of Westfir, LRAPA has documented the Westfir air quality compared to Oakridge. And it does not contribute to the problem in the southwestern part of Oakridge. We would like to see the Westfir area removed or see an independent scientific review. But that would be redundant, because it has been done. Back to the PM2.5 rule, there is a lot of concern by the people

outside the problem area. They feel like they are being unnecessarily regulated. Nobody up there wants to see dirty air. But the fact remains many folks have lived there since back in the day of wigwam burners and boilers without scrubbers or cleaners. It's a miracle they are still alive or it highlights the fact that the PM2.5 standard is far too restrictive. He said they would appreciate it if LRAPA would continue to press the EPA and he was speaking on behalf of the Westfir City Council. They voted 4 to 0 in favor of the letter to either bring in an independent peer review to examine this nonattainment airshed boundary, which they believe is arbitrarily concocted, and revise the map.

The LRAPA Board of Directors then discussed these comments with Mr. DeHarpport, and later discussed other questions and comments heard at the information meeting in Oakridge.

Jeannine Parisi asked how people thought the plan limited growth potential. Mr. **DeHarpport** said the LRAPA team has worked hard to get Oakridge at attainment level. The goal post has been moved regarding the PM2.5 level, not only the annual average standard but also the 24-hour standard. With the evidence that LRAPA provided him there is a seven-year period in 2005-2011 when we were at non-attainment level 96 out of 2,555 days. That is 2.6 percent. That included the fact there was a memorandum of agreement with ODOT to not use sand and gravel on the highway to reduce the dust that contributes to the fine particulates. The concern is any increased activity of trucks, vehicles and smoke of any sort would put them back out of compliance. Specifically, a sawmill. Another federal issue is they are surrounded by seven hundred thousand acres of timber which has been off limits over the last twenty years. And they have seen the poverty level grow in the Oakridge and Westfir area, with 80 percent of the kids on free and reduced lunches.

Andrea Ortiz asked how long the record would be open for additional comments. **Bill Brommelsiek** said the official closing was at noon today. Mr. **DeHarpport** wanted to add that concerning the PM2.5, it should also be subject to an independent peer review, because of the economic impacts on rural communities and elsewhere. **Brommelsiek** asked if he meant the actual standard. Mr. DeHarpport said the actual EPA standard.

Merlyn Hough stated that the following notices were published, and this was to be entered into the hearing record.

- LRAPA website beginning Aug. 17, 2012
- DEQ website beginning Aug. 20, 2012
- Aug. 20, 2012 – Legislators emailed notice
- Aug. 20, 2012 - Eugene Register Guard
- Aug. 21, 2012 - Oakridge Dead Mountain Echo
- Aug. 23, 2012 - Oakridge Dead Mountain Echo Classified Legal Ads
- Sept. 1, 2012 - Secretary of State, Oregon Bulletin

Merlyn Hough and other LRAPA staff verbally reviewed the common themes of the comments and some of the initial responses staff had prepared**.**

Why is the monitor located where it is?

The applicable nationwide site criteria stipulate that the monitor should be in an area within a neighborhood scale that represents the highest impacts to neighborhoods. If the strategy is successful and you meet standards in that location you are confident you are meeting standards in other areas.

Economy

LRAPA is very concerned about the economy, but currently the area is already in nonattainment status. And it will remain so until the standards are met. The goal is to meet standards and make it easier for economic development. Part of the problem has to do with the boundaries. The logical place for any new industry would be in the industrial park that is within both the Oakridge city limits and the larger rectangular area, which includes both Oakridge and Westfir. LRAPA did not agree with the rectangular boundary when it was proposed by EPA in 2009.

Progress in the past

Yes, this has been the best air quality documented in the last several years, but we don't yet have the option of just declaring success. We declare success when we meet the federal air quality health standards.

PM2.5 standards

LRAPA does not have the authority to establish air quality health standards. Instead, this is the responsibility of EPA under the federal Clean Air Act. EPA periodically opens up the re-evaluation of each of the air quality standards, and LRAPA and the public can comment on standards at that time.

Air quality should be averaged

LRAPA must follow the averaging approach specified by EPA for measuring compliance with air quality standards.

Wood burning seasoning practices

LRAPA believes this has been a key part of why the community had been so successful in reducing air pollution over the last several years. But the rate of improvement is not enough to fully meet the standards by the 2014 deadline.

Eliminate LRAPA

LRAPA acknowledges those comments calling for the elimination of LRAPA as a public agency.

Why is LRAPA the only local air agency?

Originally, in 1968, there were three local agencies that covered the Willamette Valley. LRAPA is 44 years old and the others were phased out after about 10 years. As far as requirements in Oakridge, they are still going to be required to meet federal air quality

health standards for $PM_{2.5}$ by 2014, whether it is LRAPA or DEQ. It wouldn't change what needs to happen in the Oakridge attainment plan.

Why are we just now hearing about it?

LRAPA has worked hard to consistently get the word out using a variety of means. The staff has widely advertised the various woodstove replacement incentive programs. Additionally, advisories for yellow and red days are a prominent part of our website and the Register Guard includes the Oakridge air quality and advisory everyday on the weather page. Residents in the Oakridge area are alerted on red days with voice messages using LRAPA's callware system. There have been a series of articles on air quality programs by LRAPA in the Dead Mountain Echo. Rob DeHarpport, who spoke to the LRAPA Board today, paid for an ad recently in the Dead Mountain Echo with his concerns. LRAPA has circulated flyers in the area. Also there have been articles in the city's monthly newsletter.

Where does LRAPA get its funding?

Over half of the funding comes from various permits fees; the remainder comes from a combination of local, state and federal funding sources.

Where did the $1 million go?

That has been the total amount of grant dollars over the decades to replace old woodstoves with cleaner burning units, for weatherization and other home upgrades. Almost all of these benefits have gone directly to homeowners; in some cases LRAPA has been able to keep five to 10 percent for administrative costs. The funding has come from a number of our partner agencies such as EPA, Department of Energy and St. Vincent DePaul.

Hough said LRAPA staff will be organizing the comments and responses in writing for the Oct. 18, 2012, LRAPA Board meeting.

Brommelsiek asked if there were any other insights from board members who attended the meeting.

Brian Forge asked if the boundaries for PM_{10} had included Westfir. **Hough** said it had not.

Brommelsiek said he heard several comments about the desire for more education on running clean units. Also if they had the proper fuel (dry wood) that would help. **Scott Lucas** asked if his impression was that people didn't know how to properly burn, or if they felt like others didn't know. **Brommelsiek** answered they felt that other people didn't know how to burn properly or were unwilling. Mr. **DeHarpport** added that even with a DEQ approved stove if you burn trash you are defeating the purpose.

Scott Lucas asked if he thought it was an education issue or some people just don't care. Mr. **DeHarpport** said maybe stubborn, like Merlyn said there has been a lot of effort to reach out to people.

Jay Bozievich added that some people didn't understand there was a grace period for warming their flue, 20 percent opacity limit. There was an Oakridge police officer that said they understand that and they don't immediately write a ticket when someone starts their woodstove first thing in the morning. They wait to see if it clears up.

Joseph Gonzales commented that he was surprised with all the dislike for LRAPA; they are just a conduit for this rule. There was a lot of good discussion and LRAPA was well prepared.

Another person stepped forward to provide public comment.

Tammy Hubbard: Ms. **Hubbard** said she moved from Oakridge to Westfir. And when they bought their home in Westfir they had to change-out their woodstove for an EPA-approved woodstove. She said the contractors do educate you on how to light your stove. The problem area seems to be Willamette Center in the city of Oakridge. Some people burn around the monitoring area like they shouldn't. And if she still lived in Oakridge she wouldn't mind those people getting more incentives for replacing their woodstoves. Although everyone appreciates the incentives, she didn't think the majority of the community would oppose the problem areas receiving more incentives. She stressed again, when you receive an EPA-certified stove, you do get an education on how to use it.

Brommelsiek closed the Public Hearing at 12:59 p.m.

Hough recommended and the LRAPA Board agreed to postpone consideration of adoption of the Oakridge-Westfir Attainment Plan until the next meeting on Oct. 18, 2012, in order to review the comments and responses in writing.

The comments and responses are summarized in attachment B of the staff report.

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Relationship to Federal Requirements

Oakridge $PM_{2.5}$ Attainment Plan

Answers to the following questions identify how the proposed rulemaking relates to federal requirements and the justification for differing from, or adding to, federal requirements. This statement is required by OAR 340-011-0029(1).

1. Is the proposed rulemaking different from, or in addition to, applicable federal requirements? If so, what are the differences or additions?

This rulemaking imposes additional requirements to implement the applicable federal requirements for compliance with particulate standards. Section 110 of the Clean Air Act, 42 U.S.C. §7410 requires DEQ/LRAPA to adopt an attainment plan to reduce particulate matter of 2.5 micrometers and less ($PM_{2.5}$) in order to bring the Oakridge area into compliance with the National Ambient Air Quality Standards (NAAQS) by December 2014. The plan must also show the area will continue to meet NAAQS in the future and provide contingency measures in case it fails. Federal requirements mandate adoption of a plan that demonstrates the area will reach attainment of the standard; however, the specific strategies to achieve the standard are not mandated.

The Oakridge $PM_{2.5}$ Attainment Plan is a comprehensive mixture of emission reduction strategies consisting of local ordinances, LRAPA regulations, DEQ regulations, and non-regulatory elements including incentives and education. Residential wood combustion is the most significant contributor to $PM_{2.5}$ in Oakridge. The strategies targeting reduction in woodstove emissions include: revised woodstove curtailment levels to increase number of days when burning is restricted or prohibited, requiring removal of an uncertified woodstove upon sale of a home, tightening enforcement of wood stove curtailment, and expansion of educational efforts to reduce $PM_{2.5}$ from woodsmoke. The plan also requires public agencies to avoid prescribed burning if the smoke is expected to affect Oakridge.

In the event that listed strategies fail to bring Oakridge into attainment with the standard, a second set of contingency strategies would become effective. These strategies include: a stricter opacity limit, revising the current 40% opacity limit to a more restrictive 20% limit, as has been done in some other northwest communities; a stricter green-yellow-red advisory program, with more yellow and red advisory days each winter; and further restrictions on the city woodstove curtailment exemptions (for sole source, economic hardship).

2. If the proposal differs from, or is in addition to, applicable federal requirements, explain the reasons for the difference or addition (including as appropriate, the public health, environmental, scientific, economic, technological, administrative or other reasons).

Federal requirements set by EPA outline the procedures for preparing, adopting and submitting attainment plans, but Oregon has flexibility about how to meet the standards by establishing specific requirements. LRAPA worked with a local advisory committee to select the emission reduction strategies that are included in the plan and are necessary to meet the federal standard. The elements of the Oakridge plan include emission inventories, modeling, air quality monitoring and analysis, attainment demonstration, and enforcement mechanisms.

3. If the proposal differs from, or is in addition to, applicable federal requirements, did DEQ consider alternatives to the difference or addition? If so, describe the alternatives and the reason(s) they were not pursued.

In developing the proposed strategies for the Oakridge plan, LRAPA, the advisory committee and Oakridge City officials considered a number of alternatives. The proposed strategies were recommended over alternatives based on evaluation of their technological feasibility and environmental, health, economic, and social impacts. The advisory committee recommended two sets of strategies: an initial set of strategies that will bring the community into compliance with the federal $PM_{2.5}$ air quality standard by 2014 and a second set of contingency strategies, with stricter requirements for residents who use wood stoves, which would be implemented in the event that the federal $PM_{2.5}$ standard is not met in 2014. Both sets of strategies are included in the Oakridge plan.

DEPARTMENT OF ENVIRONMENTAL QUALITY
Chapter 340
Proposed Rulemaking
STATEMENT OF NEED AND FISCAL AND ECONOMIC IMPACT

Oakridge $PM_{2.5}$ Attainment Plan

This form accompanies a Notice of Proposed Rulemaking

Title of proposed rulemaking	Oakridge $PM_{2.5}$ Attainment Plan
Statutory authority or other legal authority	ORS 468, 468A, 468.020, 468A.025, 468A.460, & 477
Statutes implemented	ORS 468.140, ORS 468A.025, ORS 468A.035, ORS 468A.085, & ORS 468A.460 to ORS 468A.515
Need for the rule(s)	Winter air pollution levels in Oakridge violate the federal twenty-four hour fine particulate health standard also known as the $PM_{2.5}$ standard. $PM_{2.5}$ or fine particulate matter less than 2.5 micrometers (μm) in diameter, can be inhaled deeply into the lungs and can cause heart or respiratory damage especially in the young, the elderly and those with respiratory or circulatory problems. Because the Oakridge area violates the $PM_{2.5}$ standard, EPA designated Oakridge as a nonattainment area for $PM_{2.5}$ effective in December 2009. As required under the Clean Air Act, Oregon must submit a plan to return Oakridge to attainment. The attainment plan specifies the emission reduction strategies and actions to return Oakridge into compliance with $PM_{2.5}$ health standards by the Clean Air Act deadline of December 2014. The plan is based on recommendations from LRAPA's Oakridge Advisory Committee, and describes the proposed $PM_{2.5}$ reduction strategies, including what action will be taken, who will conduct the work, and when and how it will be done. The plan is a comprehensive mixture of emission reduction strategies including local ordinances, LRAPA regulations, DEQ regulations, interagency agreements and non-regulatory elements including incentives and education. The plan also adopts strategies recommended by the local advisory committee that, while not needed for National Ambient Air Quality Standard compliance, will benefit air quality in general. The proposed attainment plan will aid the community and state in controlling emissions to ensure clean air in Oakridge. Since residential wood burning emissions comprise most of the harmful particulate in Oakridge, most of the proposed particulate reductions would come from enhancements to the community's woodstove curtailment program implemented through local ordinances. Other attainment strategies include the continuing replacement of uncertified woodstoves, a public awareness and education program, and LRAPA rules requiring reasonably available controls on particulate from industrial sources. If adopted by the LRAPA Board, the proposed Oakridge $PM_{2.5}$ attainment plan and associated rules will be submitted to the Environmental Quality Commission for approval to be incorporated into the Oregon State Clean Air Act Implementation Plan.
Documents relied upon for rulemaking	The Oakridge $PM_{2.5}$ Attainment Plan and associated rules reflect the requirements, guidance and information from many sources, including: • The federal Clean Air Act, EPA guidance for the development of attainment plans,

	guidance for the preparation of emission inventories, and an air quality modeling protocol. • Materials provided to the Oakridge Advisory Committee members and information LRAPA received from the committee and placed into a report. • Oregon Labor Market Information System, Work Source Qualityinfo.org, Oregon Employment Department, http://www.qualityinfo.org/olmisj/OlmisZine . • American Resource and Recovery Act Grant results – Areas of Oakridge and Westfir within the non-attainment boundary. These documents available online or upon request from LRAPA.
Requests for other options	**Pursuant to ORS 183.335(2)(b)(G), LRAPA, in conjunction with DEQ, requests public comment on whether other options should be considered for achieving the rule's substantive goals while reducing negative economic impact of the rule on business.**
Fiscal and economic impact, statement of cost compliance	
Overview	The proposed attainment plan includes emission reduction strategies that can be implemented through rules and local ordinances. The proposed changes should not create barriers to economic growth. The largest impacts of this proposed plan will be to the wood-burning homeowner, as some of the emission reduction strategies may result in increased heating costs. However, the homeowner could also experience benefits as a result of the proposed plan through the improvement of air quality in Oakridge, potentially decreasing individual health care costs such as those related to asthma. The plan also includes contingency measures that will be implemented if the community does not reach attainment by the Clean Air Act deadline of December 2014. These contingency measures include: a stricter opacity limit, revising the current 40% opacity limit to a more restrictive 20% limit, as has been done in some other northwest communities; a stricter green-yellow-red advisory program, with more yellow and red advisory days each winter; and further restrictions on the city woodstove curtailment exemptions (for sole source, economic hardship).
Impacts on the general public	Heating costs: The attainment plan includes a city ordinance that would increase restrictions on wood burning when weather conditions could lead to accumulation of particulate in the Oakridge area. The more curtailment (red) days called, the more costs could be accrued by wood-burning residents in terms of higher electric or oil heating costs. In the most likely scenario, a resident who burned three cords of wood and shifted to using more electric heat or other heat sources would see heating cost rise during the heating season. These heating costs are variable depending on the alternative heat source used, the number of curtailment days called during the winter heating season, the cost to purchase cordwood or the transportation costs for a homeowner to cut and haul wood. This additional cost for non-wood fuels could be offset by the positive economic impact of lower health care costs and fewer missed work days if Oakridge is able to maintain particulate levels below standards. Health impacts: There are a number of studies linking $PM_{2.5}$ effects with respiratory causes and cardiac diseases. U.S. and Canadian studies report statistically significant relationships between an increase in $PM_{2.5}$ 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

	PM$_{2.5}$ concentrations (EPA, 2004, p. 9–67). These impacts could result in days of missed work that would affect the economy. LRAPA expects that the proposed attainment plan will have a positive effect on the health of Oakridge residents. Contingency measures: Should Oakridge not meet the standard, the contingency measures that could impact the general public are more frequent woodstove curtailment (red) days and further restrictions on curtailment exemptions (for sole source, economic hardship).	
Impacts to small business (50 or fewer employees – ORS183.310(10))	The proposed rules should have a positive impact on area businesses that remove and install new heating appliances in individual homes. Those businesses that market and install heating devices may see an increase in business due to the required uncertified wood stove removals from homes. Cost of inaction: Should the proposed plan and rules not be implemented, small businesses may be adversely affected because the nonattainment designation for the Oakridge community would remain and the restrictions imposed under this designation, such as emissions restrictions on large businesses wishing to locate in the area or loss of transportation project funding, could result in a negative economic climate for small businesses.	
Cost of compliance on small business (50 or fewer employees – ORS183.310(10))	a) Estimated number of small businesses subject to the proposed rule	There are two minor LRAPA-permitted sources, a rock crusher and a concrete batch plant, located in the area affected by the proposed rules and plan.
	b) Types of businesses and industries with small businesses subject to the proposed rule	No new industrial rules are included in the proposal. Reasonably available control technology and fugitive dust control requirements already apply to existing facilities.
	c) Projected reporting, recordkeeping and other administrative activities required by small businesses for compliance with the proposed rule, including costs of professional services	No new reporting, recordkeeping or other administrative activities are required for small businesses.
	d) The equipment, supplies, labor and increased administration required by small businesses for compliance with the proposed rule	Home heating retailers and installers will not face new requirements for equipment, supplies, labor or administration unless there is a need to account for the added woodstove replacements. This effect would be indirect and offset by positive economic benefits of increased sales.
	e) A description of the manner in which LRAPA involved small businesses in the development of this rulemaking	Currently, there are no small businesses in Oakridge that sell, install or maintain wood heating devices. The proposed plan and strategies are based on recommendations from the Oakridge Advisory Committee, which included representatives from local government, the electric utility, Oakridge/Westfir residents, and LRAPA's board of directors and advisory committee. The advisory committee members prepared strategies upon which LRAPA based the plan and rules. In the process, various committee members discussed and agreed on the economic and job impact of each strategy. As a whole, members of the committee were highly interested in maintaining a viable economy in Oakridge and improving the livability of the

	community. The meetings were open to the public, and LRAPA heard from the public at most meetings.
Impacts on large business (all businesses that are not "small businesses" under ORS183.310(10))	Existing industry: There are no major existing industrial sources within the affected area. New and expanding industry: Currently, new and expanding industrial sources within the Oakridge Nonattainment Area with emissions greater than 10 tons per year of $PM_{2.5}$ are required to install the most stringent level of pollution control equipment, known as Lowest Achievable Emission Rate, and to provide emission offsets. Oakridge first became subject to more stringent requirements for $PM_{2.5}$ in 2009, when EPA designated the Oakridge area as nonattainment for $PM_{2.5}$. Any new or expanding industrial source in Oakridge must install Lowest Achievable Emission Rate controls, obtain emission offsets (i.e. offset their emission increases with equal emission reductions from other sources) and model their emissions to demonstrate that the proposed increase from their facility will not jeopardize compliance with health standards. Costs for Lowest Achievable Emission Rate controls vary widely depending on the type of process being controlled, and the associated cost of modeling analysis can range from $4,000 to $6,000 per model run. These potential costs, however, are all existing costs resulting from existing requirements. This proposed attainment plan does not impose any new additional costs for new source review.
Impacts on local government	LRAPA funds the local air quality program with a combination of DEQ grant funds and local funds. This rulemaking will likely result in some direct negative economic impacts to the city government through the implementation and enforcement of the ordinance. LRAPA plans to continue spending between $5,000 and $6,000 annually to help implement the air quality program. There may be additional costs to implement the strategies added in this new plan that could include implementing contingency strategies for residential wood burning.
Impacts on state agencies other than LRAPA and DEQ	**Oregon Department of Transportation** DEQ is requesting EPA provide an adequacy finding that waives the need for a Regional Conformity Determination. Should this waiver be granted, it will streamline the workload for ODOT because a regional conformity analysis will not be required. **Oregon Department of Forestry** This rulemaking does not change the smoke management requirement of Oregon Department of Forestry.
Impacts on LRAPA and DEQ	LRAPA and DEQ are using existing staff resources to conduct the rulemaking and to oversee implementation of the plan strategies and continued monitoring of the area. If the area fails to reach attainment, LRAPA will use existing LRAPA staff resources to help implement the contingency measures and revisit the attainment plan.

	LRAPA assumes a natural attrition rate of uncertified woodstoves as a base. LRAPA also assumes an overall increase in certified woodstoves, pellet stoves and fireplaces will be at a slow pace proportional to population growth. The attainment plan is expected to accelerate the attrition of uncertified woodstoves, via the various emission reduction strategies. LRAPA assumes the traditional rates for the cost of a new appliance and energy costs. The cost of a new woodstove completely installed ranges between $3,000 and $6,000. The cost of a similar gas appliance is similar to a woodstove. The cost of an electric heat pump installed ranges from $4,500 to $10,000. Electric rates are based on Lane Electric Co-op's residential rates at $80.00 per thousand kwh. LRAPA assumes the wood products industries and other sources of $PM_{2.5}$ emissions will not see growth in the future. Economic trends over the last 10 to 20 years support this assumption. According to the Oregon Employment Department, manufacturing jobs will grow at a substantially slower rate than nonmanufacturing sectors of the economy in Oakridge.
Housing costs	LRAPA has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.
Administrative rule advisory committee	LRAPA relied on recommendations from its Oakridge Advisory Committee. The committee included representation from a wide range of community interests. All advisory committee members were approved by LRAPA. The committee helped develop this plan.

Brian Finneran	Brian Finneran	8-15-12
Prepared by	Printed name	Date
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Approved by DEQ Budget Office	Printed name	Date

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Land Use Evaluation Statement

Rulemaking Proposal
for
Oakridge $PM_{2.5}$ Attainment Plan

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1. Explain the purpose of the proposed rules.

The Lane Regional Air Protection Agency along with the Oregon Department of Environmental Quality is proposing to adopt an air quality attainment plan and associated rule amendments for the Oakridge area, to meet federal public health standards for particulate matter 2.5 micrometers and less ($PM_{2.5}$). These rules and the attainment plan are an amendment to Oregon's Air Quality State Implementation Plan. The attainment plan specifies how the community will meet the particulate standard by the federal Clean Air Act deadline of December 2014, including who will conduct the work, and when and how it will be done.

The attainment plan, based on recommendations from Oakridge's Advisory Committee, is a comprehensive mixture of emission reduction strategies consisting of local ordinances, LRAPA regulations, DEQ regulations, and non-regulatory elements including incentives and education. The plan contains additional strategies recommended by the local advisory committee that, while not needed for NAAQS compliance, will benefit air quality in general. The plan also provides contingency measures to meet the $PM_{2.5}$ standard should the community fail to reduce particulate emissions by the 2014 deadline. The proposed attainment plan will aid the state and the community in controlling emissions to ensure clean air in Oakridge.

Since residential wood burning emissions comprise most of the harmful particulate emissions in Oakridge, most of the proposed particulate reductions will come from enhancements to the community's woodstove curtailment program, implemented through local ordinances. Other attainment strategies include continuing the program of replacing polluting uncertified woodstoves, a public awareness and education program, agreements to limit forest burning and LRAPA rules requiring reasonably available controls to reduce particulate from industrial sources.

If the attainment plan fails to achieve the federal standard by December 2014, additional regulations in the contingency plan will further reduce particulate emissions from wood burning. These strategies include: a stricter opacity limit, revising the current 40% opacity limit to a more restrictive 20% limit, as has been done in some other northwest communities; a stricter green-yellow-red advisory program, with more yellow and red advisory days each winter; and further restrictions on the city woodstove curtailment exemptions (for sole source, economic hardship).

2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination Program?

Yes X_ No

a. If yes, identify existing program/rule/activity:

Supporting rules for the Oakridge $PM_{2.5}$ plan include amendments to Title 29. The $PM_{2.5}$ plan identifies the boundaries of the nonattainment area in which existing permitted sources are required to provide reasonably available control technology (RACT) and new major sources are required to provide lowest achievable emission rate (LAER) and offsets.

b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?

Yes X No_ (if no, explain):

The proposed rules will affect the existing LRAPA stationary source permitting programs that are considered land use programs. Air quality permit programs require new sources to provide a Land Use Compatibility Statement from the local government when applying for a permit. This ensures that the source is an approved use for the property where it is located. Existing permittees have provided Land Use Compatibility Statements, which are on file with LRAPA. The proposed rules would not change land use procedures in the air quality permitting program.

c. If no, apply the following criteria to the proposed rules.
Not applicable.

In the space below, state if the proposed rules are considered programs affecting land use. State the criteria and reasons for the determination.
Not applicable.

3. If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures DEQ will use to ensure compliance and compatibility.

LRAPA has reviewed the proposed rules and determined that no procedures in addition to those already in the rules are needed to ensure compliance with statewide land use goals. The rules are not expected to significantly affect or conflict with existing or future land uses under local comprehensive plans or regulations. LRAPA has concluded that the rules affect Goal 6 and that the rules directly advance the objectives of this goal.