



DEPARTMENT OF
ECOLOGY
State of Washington

State Implementation Plan Revision

Updates to the Solid Fuel Burning Devices Rule

*Chapter 173-433 of the Washington
Administrative Code*

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State Implementation Plan Revision

Updates to Solid Fuel Burning Devices, Chapter 173-433 of the Washington Administrative Code

by

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Purpose

Ecology revised Solid Fuel Burning Devices, Chapter 173-433 of the Washington Administrative Code (WAC). We are submitting the updated rule to the Environmental Protection Agency (EPA) for inclusion in the Washington State Implementation Plan with the following exceptions:

- WAC 173-433-130, General Emissions Standards
- WAC 173-433-170, Retail Sales Fee
- WAC 173-433-200, Regulatory Actions and Penalties

Ecology is not submitting WAC 173-433-130, General Emission Standards or WAC 173-433-170, Retail Sales Fee for inclusion in the SIP. Ecology is submitting WAC 173-433-200, Regulatory Actions and Penalties to demonstrate adequate enforcement authority to implement the rule. However, rules describing agency enforcement authority are not put into the SIP to avoid potential conflict with the EPA's independent authorities.

The updated rule helps to reduce Washington's wood smoke emissions. Including the revised Solid Fuel Burning Devices rule in the SIP will:

- Provide the main strategy in the maintenance plan for the Tacoma-Pierce County Nonattainment Area. The maintenance plan outlines how Washington will ensure that the area continues to meet the national ambient air quality standard for fine particles.
- Help reduce levels of fine particle pollution in other areas of Washington.

What's New?

Ecology incorporated changes to Revised Code of Washington (RCW) 70.94.473 and 70.94.477. Additionally, Ecology made changes to improve the clarity of the rule language and for housekeeping purposes. The changes include the following:

- Added definitions from the RCW and added a definition for *impaired air quality burn ban*
- Rewrote section 140 – Criteria for impaired air quality burn bans. The changes incorporate lower trigger levels for calling impaired air quality burn bans and other changes to RCW 70.94.473
- To improve clarity, edited section 150 – Restrictions on operation of solid fuel burning devices
- Added a new section 155 – Criteria for prohibiting solid fuel burning devices that are not certified. The section incorporates changes to RCW 70.94.477

The changes in other sections of the rule involved housekeeping to improve clarity of the language. The red-line strike out version of the rule language shows these changes.

What would Ecology like EPA to do with this SIP revision?

Ecology proposes that EPA approve the updated rule, Solid Fuel Burning Devices – Chapter 173-433 WAC into the SIP, with the following exceptions:

- WAC 173-433-130, General Emissions Standards
- WAC 173-433-170, Retail Sales Fee
- WAC 173-433-200, Regulatory Actions and Penalties

Even though the SIP will not include WAC 173-433-200, Regulatory Actions and Penalties, Ecology is providing this provision to EPA. This demonstrates that Ecology has adequate enforcement authority to implement the rule. However, rules describing agency enforcement authority are not put into the SIP to avoid potential conflict with the EPA's independent authorities.

Public Involvement

Ecology held a public comment period concurrently with the public comment period for the rule-making process. Ecology accepted comments from October 2, 2013 through November 15, 2013. Ecology held consecutive public hearings on November 7, 2013. At the first hearing Ecology invited comments on the proposed rule. At the second hearing Ecology invited comments on the proposal to incorporate the proposed rule updates into Washington's State Implementation Plan.

Ecology documented the public involvement process in the Concise Explanatory Statement prepared for the concurrent rule making process. The Administrative Procedure Act requires agencies to prepare a Concise Explanatory Statement (CES) for rule making. The CES (Ecology publication number 13-02-036) includes the following documentation of public involvement for this SIP revision:

- Ecology's response to comments
- Copies of written comments
- Transcript of the November 7, 2013 hearings
- Certification of Hearing
- Affidavits of publication of the Notice for Opportunity for Public Comment in newspapers
- Ecology News Release on the public comment period and public hearing
- Rule Proposal and SIP Revision notice

Detailed Discussion of Changes

Section 030 - Definitions

Ecology added the following definitions from RCW 70.94.473 and 70.94.477:

- Area at risk for nonattainment
- Jurisdictional health department
- “Prohibit the use” or “prohibition”

Ecology added a definition for “local air authority.” We used the definition from another air quality rule, Outdoor Burning, Chapter 173-425 WAC. This definition clarifies that a “local air authority” is the same as the definition of “authority” in the Washington Clean Air Act, Chapter 70.94 RCW with the added words “local air” for clarity.

Ecology added a definition for “impaired air quality burn ban.” We used the definition of “impaired air quality” from other Washington laws and rules. We added the words “burn ban” for clarity.

Section 140 – Criteria for impaired air quality burn bans

Added lower trigger levels

Ecology added lower trigger levels for stage 1 impaired air quality burn bans in areas at risk for nonattainment.

Removed PM₁₀ trigger levels

Ecology removed PM₁₀ trigger levels for calling impaired air quality burn bans because PM_{2.5} trigger levels are more protective. PM_{2.5} trigger levels are sufficiently low that Ecology would have already called an impaired air quality burn ban by the time PM₁₀ levels reach their trigger levels.

Western Washington example

The SIP revision for the Thurston County, WA second 10-year limited maintenance plan for PM₁₀ developed a model for correlating PM_{2.5} and PM₁₀ monitoring data. The winter model that describes this relationship is:

$$PM_{2.5} = 0.9446 (PM_{10}) - 3.053$$

To exceed the former PM₁₀ trigger level for a stage 1 impaired air quality burn ban (75 µg/m³), the PM_{2.5} level would have to reach 68 µg/m³. PM_{2.5} levels hit the trigger level for a stage 1 impaired air quality burn ban when levels are forecasted to reach or go above 30 µg/m³ for counties with at least one area at risk for nonattainment and 35 µg/m³ for the rest of the state of Washington.

$$0.9446 * 75 - 3.053 = 67.8$$

To exceed the former PM₁₀ trigger level for a stage 2 impaired air quality burn ban (90 µg/m³), the PM_{2.5} level would have to reach 82 µg/m³. For a stage 2 impaired air quality burn ban, a monitor would have to measure PM_{2.5} levels above the trigger level of 25 µg/m³.

$$0.9446 * 90 - 3.053 = 81.9$$

Eastern Washington examples

Ecology established a correlation between PM₁₀ and PM_{2.5} for Spokane and Yakima. Figure 1 shows a plot of coinciding daily averages of FRM PM₁₀ data and FRM PM_{2.5} data by season. The heating season is October through March and Nonwinter is April to September. Ecology collected the Spokane data from April 2009 to July 2012. Ecology collected the Yakima data from February 2007 through December 2012.

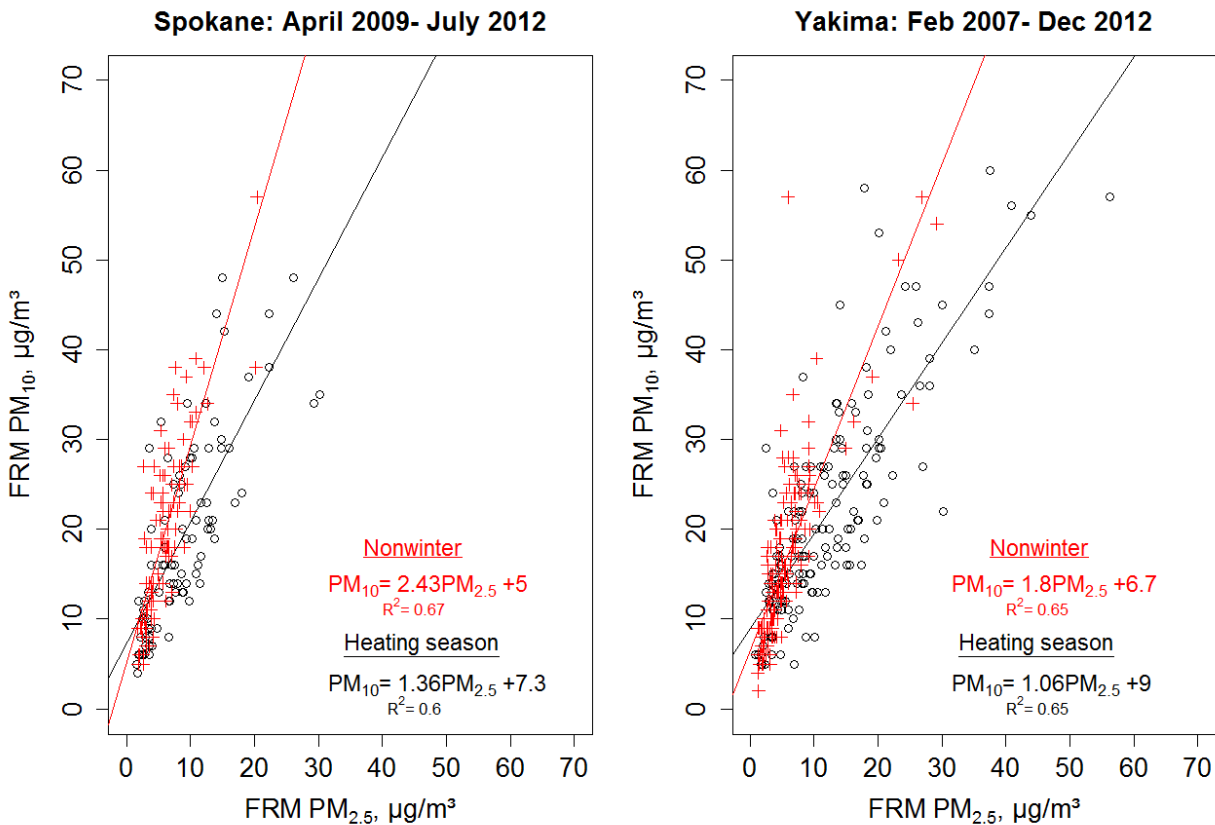


Figure 1: Spokane and Yakima Seasonal PM_{2.5} to PM₁₀ Correlation

During the heating season the relationship between PM_{2.5} and PM₁₀ in Spokane is:

$$PM_{10} = 1.36PM_{2.5} + 7.3$$

To exceed the former PM₁₀ trigger level for a stage 1 impaired air quality burn ban (75 µg/m³), the PM_{2.5} level would have to reach 50 µg/m³. PM_{2.5} levels hit the trigger level for a stage 1 impaired air quality burn ban when levels are forecasted to reach or go above 30 µg/m³ for counties with at least one area at risk for nonattainment and 35 µg/m³ for the rest of the state of Washington.

$$PM_{2.5} = (PM_{10} - 7.3)/1.36$$

$$(75 - 7.3)/1.36 = 49.8$$

To exceed the former PM₁₀ trigger level for a stage 2 impaired air quality burn ban (90 µg/m³), the PM_{2.5} level would have to reach 61 µg/m³. For a stage 2 impaired air quality burn ban, a monitor would have to measure PM_{2.5} levels above the trigger level of 25 µg/m³.

$$(90 - 7.3)/1.36 = 60.8$$

The heating season model that describes the relationship in Yakima is:

$$PM_{10} = 1.06PM_{2.5} + 9.0$$

To exceed the former PM₁₀ trigger level for a stage 1 impaired air quality burn ban (75 µg/m³), the PM_{2.5} level would have to reach 62 µg/m³. PM_{2.5} levels hit the trigger level for a stage 1 impaired air quality burn ban when levels are forecasted to reach or go above 30 µg/m³ for counties with at least one area at risk for nonattainment and 35 µg/m³ for the rest of the state of Washington.

$$PM_{2.5} = (PM_{10} - 9)/1.06$$

$$(75 - 9)/1.06 = 62.3$$

To exceed the former PM₁₀ trigger level for a stage 2 impaired air quality burn ban (90 µg/m³), the PM_{2.5} level would have to reach 76 µg/m³. For a stage 2 impaired air quality burn ban, a monitor would have to measure PM_{2.5} levels above the trigger level of 25 µg/m³.

$$(90 - 9)/1.06 = 76.4$$

Removed carbon monoxide trigger levels

Ecology removed carbon monoxide trigger levels for calling residential wood stove burn bans. Historically, the violation of the carbon monoxide standards came from concentrated urban traffic congestion. Transportation control measures and cleaner cars have solved the problem.

Ecology did include carbon monoxide trigger levels as part of a package of reasonably available control measures in our carbon monoxide maintenance plans. However, we did not take an emissions reduction credit. The maintenance plans indicate we needed additional information to determine if trigger levels would produce a measurable reduction. Ecology has not called a residential wood stove burn ban based on carbon monoxide levels since the approval of those maintenance plans. When approving Washington’s maintenance plans for carbon monoxide areas, EPA only specifically approved transportation control measures. They did not specifically approve carbon monoxide trigger levels for calling residential wood stove burn bans.

Figure 2 shows that the carbon monoxide levels at the Spokane monitoring site are very low. Levels have declined from 1997 to 2007 and have remained flat since 2007.

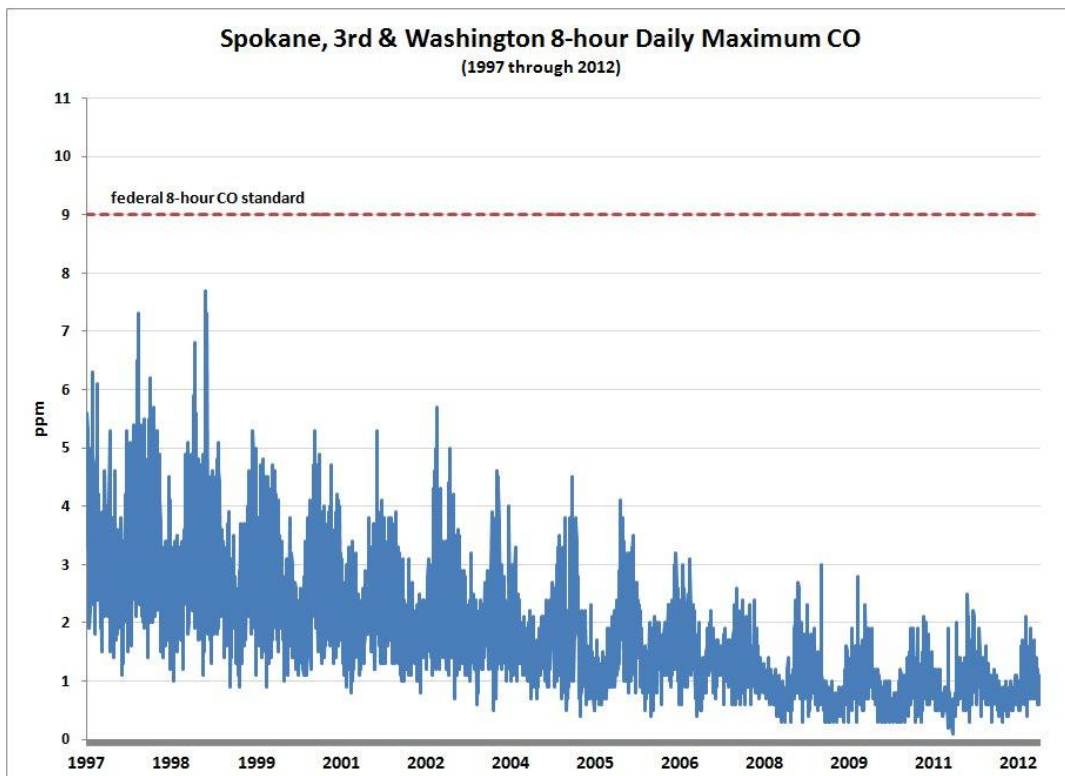


Figure 2: 8-hour Daily Maximum Carbon Monoxide Levels at Spokane, 3rd & Washington

For the reasons above, Ecology proposes including the version of Chapter 173-433 WAC that does not include carbon monoxide trigger levels. In the unlikely case that a carbon monoxide maintenance area approaches levels near the carbon monoxide standard, Ecology would revise the rule to re-include the carbon monoxide trigger levels.

Removed references to monitoring methods and requirements

Monitoring requirements are included in Ambient Air Quality Standards, Chapter 173-476 WAC. Ecology submitted this chapter to EPA for inclusion in the SIP in December 2013.

Section 150 – Restrictions on operation of solid fuel burning devices

Ecology edited section 150 to clarify which solid fuel burning devices are restricted during impaired air quality burn bans and air pollution episodes. We also moved the subsections related to the prohibition of uncertified wood stoves to a new section, 155.

New Section 155 – Criteria for prohibiting solid fuel burning devices that are not certified

Ecology incorporated changes to RCW 70.94.477.

Redline Strike Out Version of Rule Language

AMENDATORY SECTION

WAC 173-433-010 Purpose. This chapter, promulgated under chapters 43.21A and 70.94 RCW, establishes the following for solid fuel burning devices:

- Emission standards~~((~~7~~))~~);
- Certification standards and procedures~~((~~7~~-curtailment rules, and))~~);
- Fuel restrictions ~~((for solid fuel burning devices))~~);
- Operation restrictions during impaired air quality burn bans; and
- Criteria for prohibiting the use of solid fuel burning devices that are not certified.

Existing Section - No change

WAC 173-433-020 Applicability. The provisions of this chapter apply to solid fuel burning devices in all areas of the state of Washington.

AMENDATORY SECTION

WAC 173-433-030 Definitions. The definitions of terms contained in chapter 173-400 WAC are incorporated by reference. Unless a different meaning is clearly required by context, the following words and phrases as used in this chapter(~~(, shall)~~) have the following meanings:

(1) "Adequate source of heat" means the ability to maintain seventy degrees Fahrenheit at a point three feet above the floor in all normally inhabited areas of a dwelling.

(2) "Area at risk for nonattainment" means an area where the three-year average of the annual ninety-eighth percentile of twenty-four hour PM-2.5 levels is greater than twenty-nine micrograms per cubic meter based on monitoring data for 2008-2010. Ecology processed all statewide data according to methods defined in 40 C.F.R. Part 50 Appendix N and determined that the following areas are areas at risk for nonattainment:

- Darrington;
- Marysville;
- Tacoma-Pierce County Nonattainment Area as described in

40 C.F.R. 81.348;

- Yakima.

(3) "Certified" means that a woodstove meets emission performance standards when tested by an accredited independent laboratory and labeled according to procedures specified by the EPA in "40 C.F.R. 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990.

~~((3))~~ (4) "Coal-only heater" means an enclosed, coal burning appliance capable of and intended for residential space heating, domestic water heating, or indoor cooking, which has all of the following characteristics:

(a) An opening for emptying ash which is located near the bottom or the side of the appliance;

(b) A system which admits air primarily up and through the fuel bed;

(c) A grate or other similar device for shaking or disturbing the fuel bed or power driven mechanical stoker; and

(d) The model is listed by a nationally recognized safety testing laboratory for use of coal only, except for coal ignition purposes.

~~((4))~~ (5) "EPA" means United States Environmental Protection Agency.

~~((5) "New woodstove" means a woodstove that has not been sold at retail, bargained, exchanged, or given away for the first time by the manufacturer, the manufacturer's dealer or agency, or a retailer, and has not been so used as to become what is commonly known as "second hand" within the ordinary meaning of that term.))~~

(6) "Impaired air quality burn ban" means a condition where both of the following exist:

- Air quality has degraded or will soon degrade as described in WAC 173-433-140;
- Ecology or the local air authority restricts solid fuel burning device emissions to prevent air quality from worsening, or limit the time with poor air quality.

Ecology or the local air authority declares impaired air quality burn bans according to the criteria in WAC 173-433-140.

(7) "Jurisdictional health department" means a city, county, city-county, or district public health department.

(8) "Local air authority" means an air pollution control authority activated under chapter 70.94 RCW that has jurisdiction over the subject source.

(9) "Nonaffected pellet stove" means that a pellet stove has an air-to-fuel ratio equal to or greater than 35.0 when tested by an accredited laboratory in accordance with methods and procedures specified by the EPA in "40 C.F.R. 60 Appendix A, REFERENCE METHOD 28A - MEASUREMENT OF AIR TO FUEL RATIO AND MINIMUM ACHIEVABLE BURN RATES FOR WOOD-FIRED APPLIANCES" as amended through July 1, 1990.

~~((7))~~ (10) "Prohibit the use" or "prohibition" may include requiring disclosure of an uncertified device, removal of an uncertified device, or rendering an uncertified device inoperable. Except as provided in RCW 64.06.020, such prohibition may not include time of sale obligation on the seller or buyer of real estate as part of a real estate transaction.

(11) "Retailer" means any person engaged in the sale of solid fuel burning devices directly to the public. A contractor who sells dwellings with solid fuel burning devices installed or a mail order outlet which sells solid fuel burning devices

directly to the public is considered to be a solid fuel burning device retailer.

~~((8))~~ (12) "Seasoned wood" means wood of any species that has been sufficiently dried so as to contain twenty percent or less moisture by weight.

~~((9))~~ (13) "Solid fuel burning device" (same as solid fuel heating device) means a device that burns wood, coal, or any other nongaseous or nonliquid fuels, and includes any device burning any solid fuel except those prohibited by WAC 173-433-120. This also includes devices used for aesthetic or space-heating purposes in a private residence or commercial establishment, which has a heat input less than one million British thermal units per hour.

~~((10))~~ (14) "Treated wood" means wood of any species that has been chemically impregnated, painted, or similarly modified to prevent weathering and deterioration.

~~((11))~~ (15) "Woodstove" (same as "wood heater") means an enclosed solid fuel burning device capable of and intended for residential space heating and domestic water heating that meets the following criteria contained in "40 C.F.R. 60 Subpart AAA -

Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990:

(a) An air-to-fuel ratio in the combustion chamber averaging less than 35.0, as determined by EPA Reference Method 28A;

(b) A useable firebox volume of less than twenty cubic feet;

(c) A minimum burn rate less than 5 kg/hr as determined by EPA Reference Method 28;

(d) A maximum weight of 800 kg, excluding fixtures and devices that are normally sold separately, such as flue pipe, chimney, and masonry components not integral to the appliance.

Any combination of parts, typically consisting of but not limited to: Doors, legs, flue pipe collars, brackets, bolts and other hardware, when manufactured for the purpose of being assembled, with or without additional owner supplied parts, into a woodstove, is considered a woodstove.

AMENDATORY SECTION

WAC 173-433-100 Emission performance standards. (1)

Woodstoves. (~~On or before January 1, 1995, a person shall not advertise to sell, offer to sell, sell, bargain, exchange, or give away a new woodstove in Washington unless it has been tested to determine its emission performance and heating efficiency and certified and labeled in accordance with procedures and criteria specified in "40 C.F.R. 60 Subpart AAA Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990. After January 1, 1995,~~) Woodstove sales (~~shall~~) must comply with the requirements of subsection (3) of this section, Solid fuel burning devices.

(2) **Fireplaces.** (~~After January 1, 1997,~~) A person (~~shall~~) must not advertise to sell, offer to sell, sell, bargain, exchange, or give away a factory built fireplace unless it meets the 1990 (~~United States Environmental Protection Agency~~) EPA standards for woodstoves or equivalent standard that may be established by the state building code council by rule. Subsection (3) of this section (~~shall~~) does not apply to

fireplaces, including factory built fireplaces, and masonry fireplaces.

(3) **Solid fuel burning devices.** (~~(After January 1, 1995,)~~)

A person (~~(shall)~~) must not advertise to sell, offer to sell, sell, bargain, exchange, or give away a solid fuel burning device in Washington unless it has been certified and labeled in accordance with procedures and criteria specified in "40 C.F.R. 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990, and meets the following particulate air contaminant emission standards and the test methodology of the (~~(United States Environmental Protection Agency)~~) EPA in effect on January 1, 1991, or an equivalent standard under any test methodology adopted by the (~~(United States Environmental Protection Agency)~~) EPA subsequent to such date:

(a) Two and one-half grams per hour for catalytic woodstoves; and

(b) Four and one-half grams per hour for all other solid fuel burning devices.

(c) For purposes of this subsection, "equivalent" (~~shall~~) means the emissions limits specified in this subsection multiplied by a statistically reliable conversion factor determined by ecology that relates the emission test results from the methodology established by the (~~United States Environmental Protection Agency~~) EPA prior to May 15, 1991, to the test results from the methodology subsequently adopted by that agency.

AMENDATORY SECTION

WAC 173-433-110 Opacity standards. (1) Statewide opacity standard.

(a) A person (~~shall~~) must not cause or allow emission of a smoke plume from any solid fuel burning device to exceed an average of twenty percent opacity for six consecutive minutes in any one-hour period.

~~((2) Statewide opacity standard. An)) (b) A local air authority (~~shall~~) must not adopt or enforce an opacity level for solid fuel burning devices that is more stringent than the statewide standard.~~

~~((3))~~ (2) **Test method and procedures.** Methods and procedures specified by the EPA in "40 C.F.R. 60 Appendix A reference method 9 - VISUAL DETERMINATION OF THE OPACITY OF EMISSIONS FROM STATIONARY SOURCES" as amended through July 1, 1990, ~~((shall))~~ must be used to determine compliance with subsection (1) of this section.

~~((4))~~ (3) **Enforcement.** Smoke visible from a chimney, flue or exhaust duct in excess of the opacity standard ~~((shall))~~ constitutes prima facie evidence of unlawful operation of an applicable solid fuel burning device. This presumption may be refuted by demonstration that the smoke was not caused by an applicable solid fuel burning device. The provisions of this requirement shall:

(a) Be enforceable on a complaint basis.

(b) Not apply during the starting of a new fire for a period not to exceed twenty minutes in any four-hour period.

~~((5))~~ (4) **Education.** Any person or retailer providing information on the operation of solid fuel burning devices, such as brochures, demonstrations, and public education programs, should include information that opacity levels of ten percent or less are attainable through proper operation.

AMENDATORY SECTION

WAC 173-433-120 Prohibited fuel types. A person (~~shall~~) must not cause or allow any of the following materials to be burned in a solid fuel burning device:

- (1) Garbage;
- (2) Treated wood;
- (3) Plastic and plastic products;
- (4) Rubber products;
- (5) Animal carcasses;
- (6) Asphaltic products;
- (7) Waste petroleum products;
- (8) Paints and chemicals; or
- (9) Any substance which normally emits dense smoke or obnoxious odors other than paper to start the fire, properly seasoned fuel wood, or coal with sulfur content less than 1.0% by weight burned in a coal-only heater.

AMENDATORY SECTION

WAC 173-433-140 ((Impaired air quality)) Criteria for impaired air quality burn bans. ((Impaired air quality shall be determined by ecology or an authority in accordance with the following criteria:

(1) "First stage impaired air quality" — the first stage indicates the presence of:

(a) Particulate matter ten microns and smaller in diameter (PM_{10}) at or above an ambient level of seventy-five micrograms per cubic meter; or

(b) Carbon monoxide at or above an ambient level of eight parts of contaminant per million parts of air by volume (ppm).

(2) "Second stage impaired air quality" — the second stage indicates the presence of particulate matter ten microns and smaller in diameter (PM_{10}) at or above an ambient level of one hundred five micrograms per cubic meter.

(3) On or after July 1, 1995, if an authority has geographically limited the use of solid fuel burning devices as specified under WAC 173-433-150(6), a single stage of impaired air quality will apply within the geographical area defined by

~~the authority. A single stage of impaired air quality indicates the presence of:~~

~~(a) Particulate matter ten microns and smaller in diameter (PM_{10}) at or above an ambient level of ninety micrograms per cubic meter; or~~

~~(b) Carbon monoxide at or above an ambient level of eight parts of contaminant ppm.~~

~~(4) Acceptable ambient air quality measurement methods.~~

~~(a) Particulate matter ten microns and smaller in diameter (PM_{10}).~~

~~(i) Procedures specified by the EPA in "40 C.F.R. 50, APPENDIX J - REFERENCE METHOD FOR THE DETERMINATION OF PARTICULATE MATTER AS PM_{10} IN THE ATMOSPHERE" as amended through July 1, 1990, shall be used to gather reference ambient PM_{10} data on a twenty four hour average.~~

~~(ii) More timely ambient PM_{10} measurement methods may be utilized to evaluate air quality impairment if accepted and approved by ecology. Any alternative method for evaluating air quality impairment for the purpose of curtailing solid fuel burning device use must be done at the same location and in parallel to the reference method, and must be related to the~~

~~reference method by a mathematical relationship with a correlation coefficient of no less than 0.85.~~

~~(b) Carbon monoxide (CO) must be measured on an eight-hour average in accordance with procedures specified by the EPA in "~~

~~C.F.R. 50, APPENDIX C REFERENCE METHOD FOR THE DETERMINATION OF CARBON MONOXIDE IN THE~~

~~ATMOSPHERE (NON-DISPURSIVE INFRARED PHOTOMETRY)" as amended through July 1,~~

~~1990.~~

~~(c) All monitors used to measure PM₁₀ for evaluation of air quality impairment due to solid fuel burning device use must be sited in accordance with EPA siting criteria in or near affected residential areas.)~~ Ecology or a local air authority may call an impaired air quality burn ban as follows:

(1) Stage 1 impaired air quality burn ban:

(a) Ecology or the local air authority may call a stage 1 impaired air quality burn ban when they predict that the twenty-four hour average of PM-2.5 levels will reach or exceed thirty-five micrograms per cubic meter within forty-eight hours.

(b) Pierce, Snohomish, and Yakima counties each contain at least one area at risk for nonattainment. In these counties, the local air authority may call a stage 1 impaired air quality burn

ban when they predict that the twenty-four hour average of PM-2.5 levels will reach or exceed thirty micrograms per cubic meter within seventy-two hours.

(2) Stage 2 impaired air quality burn ban:

(a) Ecology or the local air authority may call a stage 2 impaired air quality burn ban when all of the following conditions exist:

(i) A stage 1 impaired air quality burn ban is already in effect and has not reduced the trend of rising PM-2.5 levels adequately.

(ii) The twenty-four hour average of PM-2.5 levels have already reached or exceeded twenty-five micrograms per cubic meter.

(iii) Ecology or the local air authority expects that PM-2.5 levels will remain above twenty-five micrograms per cubic meter for twenty-four hours or more from the time PM-2.5 levels reached the trigger in (a)(ii) of this subsection.

(b) Ecology or the local air authority may call a stage 2 impaired air quality burn ban without calling a stage 1 impaired air quality burn ban when all of the following conditions exist:

(i) The twenty-four hour average of PM-2.5 levels have reached or exceeded twenty-five micrograms per cubic meter.

(ii) PM-2.5 levels have risen rapidly.

(iii) Ecology or the local air authority predicts that the twenty-four hour average of PM-2.5 levels will exceed thirty-five micrograms per cubic meter within twenty-four hours.

(iv) Weather conditions alone are highly unlikely to help decrease PM-2.5 levels sufficiently.

(c) Pierce, Snohomish, and Yakima counties each contain at least one area at risk for nonattainment. In these counties, the local air authority may call a stage 2 impaired air quality burn ban without calling a stage 1 impaired air quality burn ban when all of the following conditions exist:

(i) The twenty-four hour average of PM-2.5 levels have reached or exceeded twenty-five micrograms per cubic meter.

(ii) PM-2.5 levels have risen rapidly.

(iii) The local air authority predicts that the twenty-four hour average of PM-2.5 levels will reach or exceed thirty micrograms per cubic meter within twenty-four hours.

(iv) Weather conditions alone are highly unlikely to help decrease PM-2.5 levels sufficiently.

(3) Ecology or the local air authority may call an impaired air quality burn ban for areas smaller than a county, when and where feasible.

AMENDATORY SECTION

WAC 173-433-150 (~~(Curtailement.)~~) Restrictions on operation of solid fuel burning devices. (1) (~~(Whenever ecology or an~~

~~authority has declared the first stage of impaired air quality for a geographical area a person in a residence or commercial establishment within that geographical area with an adequate source of heat other than a solid fuel burning device shall))~~

Stage 1 impaired air quality burn ban:

(a) Except as described in (b) of this subsection, a person must not operate any solid fuel burning device((~~7~~)) during a stage 1 impaired air quality burn ban when all of the following apply:

• The solid fuel burning device is located in a residence or commercial establishment within the geographical area covered by the stage 1 impaired air quality burn ban.

• The residence or commercial establishment has an adequate source of heat other than a solid fuel burning device.

(b) A person meeting all of the conditions in (a) of this subsection must not operate any solid fuel burning device during a stage 1 impaired air quality burn ban unless the solid fuel burning device is one of the following:

~~((a))~~ (i) A nonaffected pellet stove; or

~~((b))~~ (ii) A woodstove certified and labeled by the EPA under "40 C.F.R. 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990; or

~~((c))~~ (iii) A woodstove meeting the "Oregon Department of Environmental Quality Phase 2" emissions standards contained in Subsections (2) and (3) of Section 340-21-115, and certified in accordance with "Oregon Administrative Rules, Chapter 340, Division 21 - Woodstove Certification" dated November 1984.

(c) Except as allowed by (b) of this subsection, a person already operating a solid fuel burning device when a stage 1

impaired air quality burn ban begins must withhold new solid fuel for the duration of the impaired air quality burn ban.

(2) (~~Whenever ecology or an authority has declared the second stage of impaired air quality for a geographical area a person in a residence or commercial establishment within that geographical area with an adequate source of heat other than a solid fuel burning device shall~~) **Stage 2 impaired air quality burn ban:**

(a) A person must not operate any solid fuel burning device during a stage 2 impaired air quality burn ban when all of the following apply:

- The solid fuel burning device is located in a residence or commercial establishment within the geographical area covered by the stage 2 impaired air quality burn ban.

- The residence or commercial establishment has an adequate source of heat other than a solid fuel burning device.

(b) A person already operating a solid fuel burning device when a stage 2 impaired air quality burn ban begins must withhold any new solid fuel for the duration of the stage 2 impaired air quality burn ban.

(3) (~~Whenever ecology has declared an air pollution episode at a level above forecast a person in a residence or commercial establishment within that geographical area with an adequate source of heat other than a solid fuel burning device shall~~) **Air pollution episodes.** Ecology may declare air pollution episodes as defined in chapter 173-435 WAC.

(a) A person must not operate any solid fuel burning device during alert, warning, or emergency air pollution episodes when all of the following apply:

- The solid fuel burning device is located in a residence or commercial establishment within the geographical area covered by the air pollution episode.

- The residence or commercial establishment has an adequate source of heat other than a solid fuel burning device.

(b) A person already operating a solid fuel burning device when an alert, warning, or emergency air pollution episode begins must withhold new solid fuel for the duration of the alert, warning, or emergency air pollution episode.

(4) The following matrix graphically illustrates the applicability of different types of solid fuel burning devices

to the provisions of subsections (1) through (3) of this section:

((Burn Condition)) Type of Device	Impaired Air Quality <u>Burn Ban</u>		Episode			
	First Stage	Second Stage	Forecast	Alert((Warning, or Emergency)))	<u>Warning</u>	<u>Emergency</u>
Pellet Stove (nonaffected)	OK	NO	OK	NO	<u>NO</u>	<u>NO</u>
EPA Certified Woodstove	OK	NO	OK	NO	<u>NO</u>	<u>NO</u>
DEQ Phase 2 Woodstove	OK	NO	OK	NO	<u>NO</u>	<u>NO</u>
EPA Exempted Device	NO	NO	OK	NO	<u>NO</u>	<u>NO</u>
All Other Devices	NO	NO	OK	NO	<u>NO</u>	<u>NO</u>

NOTES: "OK" indicates that a person may operate the device (~~((may be operated))~~)
 "NO" indicates that a person must withhold new fuel from the device (~~((may not be operated))~~)

~~(5) ((On or after July 1, 1995, an authority may prohibit use of solid fuel burning devices within specific geographical areas:~~

~~(a) The following factors shall be considered in the exercise of this limitation:~~

~~(i) The contribution of solid fuel devices that do not meet the standards set forth in "40 C.F.R. 60 Subpart AAA Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990, to nonattainment of national ambient air quality standards;~~

~~(ii) The population density of the applicable geographical area; and~~

~~(iii) The public health effects of the use of solid fuel devices which do not meet the standards set forth in "40 C.F.R. 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990.~~

~~(b) The following solid fuel devices are exempted from this limitation:~~

~~(i) Fireplaces;~~

~~(ii) Woodstoves certified and labeled by the EPA under "40 C.F.R. 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990; or~~

~~(iii) Nonaffected pellet stoves.~~

~~(c) An authority shall allow an exemption from this subsection for low income persons who reside in the geographical area affected by this subsection.~~

~~(6) On or after July 1, 1995, whenever an authority has declared impaired air quality in accordance with criteria contained in WAC 173 433 140(3) for a geographical area defined under subsection (5) of this section, a person in a residence or commercial establishment within that geographical area shall not operate any solid fuel burning device.~~

~~(7) A person responsible for an applicable solid fuel burning device already in operation at the time an episode is declared shall withhold new solid fuel for the duration of the episode. A person responsible for an applicable solid fuel burning device already in operation at the time impaired air quality is declared shall withhold new solid fuel for the duration of the impaired air quality.)~~ Smoke visible from a chimney, flue or exhaust duct after three hours has elapsed from the declaration of the episode or impaired air quality (~~shall~~) burn ban constitutes prima facie evidence of unlawful operation of an applicable solid fuel burning device. A person may refute this presumption (~~may be refuted by~~) with a demonstration that the smoke was not caused by a solid fuel burning device.

~~((8))~~ (6) Ecology, local air authorities, health departments, fire departments, or local police forces having jurisdiction in the area may enforce compliance with the (~~above solid fuel burning device curtailment rules~~) air pollution episode or impaired air quality burn ban after three hours has elapsed from the declaration of the air pollution episode or impaired air quality burn ban.

NEW SECTION

WAC 173-433-155 Criteria for prohibiting solid fuel burning devices that are not certified. (1) After January 1, 2015, and after meeting the requirements in subsection (3) of this section, ecology or the local air authority may prohibit the use of solid fuel burning devices in a nonattainment area or an area with an approved PM-2.5 maintenance plan.

(2) Except as provided in subsection (3) of this section, the prohibition will prohibit the use of solid fuel burning devices that are not certified, even in the absence of an air quality episode or impaired air quality burn ban.

(3) Before prohibiting the use of solid fuel burning devices as allowed in subsections (1) and (2) of this section, ecology or a local air authority must:

(a) Allow exemptions from this subsection as described in RCW 70.94.477(2) and 70.94.477(6).

(b) Seek input from any city, county, or jurisdictional health department affected by the proposal to prohibit the use of solid fuel burning devices.

(c) Make the following written findings:

(i) The EPA has designated the area nonattainment for PM-2.5 or has approved a PM-2.5 maintenance plan for the area.

(ii) Emissions from solid fuel burning devices in the area are a major contributing factor for violating the national ambient air quality standard for PM-2.5.

(iii) The area has an adequately funded program to assist low-income households to secure an adequate source of heat.

(4) When both of the following are true:

- The area is in ecology's jurisdiction.
- The legislative authority of a city or county for the area formally expresses concerns with the written findings required in subsection (3)(c) of this section.

Ecology will publish all of the following on the agency web site:

(a) The reasons for prohibiting the use of solid fuel burning devices.

(b) The agency's responses to the concerns expressed by the city or county legislative authority.

(5) The responsibility for enforcement of the prohibition of the use of solid fuel burning devices resides solely with ecology or the local air authority.

(6) A city, county, or jurisdictional health department serving the area may agree to assist with enforcement activities.

(7) On or after June 7, 2012, and before January 1, 2015, ecology or the local air authority must provide assistance to households using solid fuel burning devices to reduce the emissions from those devices or change out to a lower emission device.

(8) Before the effective date of any prohibition, ecology or the local air authority must provide public education in the area regarding all of the following:

(a) How households can reduce their emissions through cleaner burning practices.

(b) The importance of respecting impaired air quality burn bans.

(c) Opportunities for assistance in obtaining a cleaner device.

(9) In an area where the EPA has approved a PM-10 maintenance plan, ecology or the local air authority may prohibit the use of solid fuel burning devices when all of the following are true:

(a) The PM-10 maintenance plan contained a prohibition on the use of solid fuel burning devices as a contingency measure.

(b) The area has violated the PM-10 national ambient air quality standard.

(c) The emissions from solid fuel burning devices are a major contributing factor to the violation of the PM-10 national ambient air quality standard.

SECTION SUBMITTED TO DEMONSTRATE ADEQUATE ENFORCEMENT AUTHORITY

WAC 173-433-200 Regulatory actions and penalties. A person in violation of this chapter may be subject to the provisions of WAC 173-400-230 Regulatory actions and WAC 173-400-240 Criminal penalties.

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