

ARTICLE 13: SOLID FUEL BURNING DEVICE STANDARDS

SECTION 13.01 POLICY AND PURPOSE Adopted 11/10/88 (634)

Revised 09/26/91 (708), 09/09/99 (895), 10/25/12 (1258)

The Board of Directors of the Puget Sound Clean Air Agency (Board) declares it to be the public policy of the Agency to control and reduce air pollution caused by solid fuel burning devices such as wood stoves, pellet stoves, and fireplaces. It is the Agency's policy to educate the public about the health effects of wood stove emissions and cleaner heating alternatives. It is the intent of this regulation to secure and maintain levels of air quality that protect human health and to comply with the requirements of the state and federal Clean Air Acts.

The Board encourages cities, towns and counties within its jurisdiction to enhance public education and assist in the enforcement of this Regulation during declared air quality episodes and periods of impaired air quality.

SECTION 13.02 DEFINITIONS Adopted 09/23/04 (1036)

Revised 09/22/05 (1057), 10/25/12 (1258), 09/28/23 (1469)

When used herein:

- (a) Adequate Source of Heat means a heating system designed to maintain seventy degrees Fahrenheit at a point three feet above the floor in each normally inhabited room. If any part of the heating system has been disconnected, damaged, or is otherwise nonfunctional, the Agency shall base the assessment of the adequacy of the design on the system's capability prior to the disconnection, damage, improper maintenance, malfunction, or occurrence that rendered the system nonfunctional.
- (b) AGENCY means the Puget Sound Clean Air Agency.
- (c) Certified Wood Stove means a wood stove that:
 - (1) has been determined by Ecology to meet Washington emission performance standards, pursuant to RCW 70A.15.3530 and WAC 173-433-100; or
 - (2) 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; or
 - (3) meets the "Oregon Department of Environmental Quality Phase 2" emissions standards contained in Subsections (2) and (3) of Section 340-21-115, and is certified in accordance with "Oregon Administrative Rules, Chapter 340, Division 21 - Woodstove Certification" dated November 1984.

- (d) Coal-only heater means an enclosed, coal burning appliance capable of and intended for residential space heating, domestic water heating, or indoor cooking and has all of the following characteristics:
 - (1) An opening for emptying ash which is located near the bottom or the side of the appliance;
 - (2) A system which admits air primarily up and through the fuel bed;
 - (3) A grate or other similar device for shaking or disturbing the fuel bed or power driven mechanical stoker; and
 - (4) The model is listed by a nationally recognized safety testing laboratory for use of coal only, except for coal ignition purposes.
- (e) Ecology means the Washington State Department of Ecology.
- (f) EPA means the United States Environmental Protection Agency.
- (g) Fine particulate or PM_{2.5} means particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers.
- (h) Fireplace means any permanently installed masonry fireplace or any factory-built metal solid fuel burning device designed to be used with an open combustion chamber and without features to control the air to fuel ratio.
- (i) Nonaffected pellet stove means a pellet stove that has an air-to-fuel ratio equal to or greater than 35.0 to 1.0 when tested by an accredited laboratory in accordance with methods and procedures specified by the EPA in "40 CFR 60 Appendix A, Test Method 28A - Measurement of Air to Fuel Ratio and Minimum Achievable Burn Rates for Wood-Fired Appliances" as amended through July 1, 1990.
- (j) Nonattainment area means a geographical area designated by EPA at 40 C.F.R. Part 81 as exceeding a National Ambient Air Quality Standard for a given criteria pollutant. An area is nonattainment only for the pollutants for which the area has been designated nonattainment.
- (k) PM₁₀ means particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers.
- (l) PROPERLY SEASONED FUEL WOOD means untreated wood or untreated lumber with moisture content of 20% or less, wet basis, or 25% or less, dry basis.
- (m) Solid Fuel Burning Device or 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 which has a heat input less than one million British thermal units per hour. This includes, but is not limited to,

devices used for aesthetic or space-heating purposes in a private residence or commercial establishment.

- (n) **SUBSTANTIALLY REMODELED** means any alteration or restoration of a building exceeding sixty percent of the appraised value of such building within a twelve-month period.
- (o) **TACOMA, WASHINGTON Fine Particulate Nonattainment Area** means the area of Pierce County that is designated by EPA as not meeting the 2006 federal 24-hr fine particulate National Ambient Air Quality Standard and described in 40 CFR 81.348. This area is also known as the Tacoma, Pierce County Nonattainment Area.
- (p) **Treated wood** means wood or lumber of any species that has been chemically impregnated, painted, or similarly modified to prevent weathering and deterioration.
- (q) **Wood stove or 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 CFR 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990:
 - (1) An air-to-fuel ratio in the combustion chamber averaging less than 35.0, as determined by EPA Reference Method 28A;
 - (2) A useable firebox volume of less than twenty cubic feet;
 - (3) A minimum burn rate less than 5 kg/hr as determined by EPA Reference Method 28; and
 - (4) 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.

SECTION 13.03 OPACITY STANDARDS Adopted 12/08/94 (808) Renumbered 09/23/04 (1036); Revised 10/25/12 (1258)

- (a) A person shall 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.
- (b) **Test method and procedures.** Methods and procedures specified by the EPA in "40 CFR 60 Appendix A reference method 9 –Visual Determinations of the Opacity of Emissions from Stationary Sources" as amended through July 1,

1990, shall be used to determine compliance with subsection (a) of this section.

- (c) Enforcement. Smoke visible from a chimney, flue or exhaust duct in excess of the opacity standard shall constitute prima facie evidence of unlawful operation of a solid fuel burning device. This presumption may be refuted by demonstration that the smoke was not caused by a solid fuel burning device. The provisions of this section shall not apply during the starting of a new fire for a period not to exceed twenty minutes in any four-hour period.

SECTION 13.04 ALLOWED AND PROHIBITED FUEL TYPES

Adopted 10/25/12 (1258)

- (a) A person shall cause or allow only the following materials to be burned in a solid fuel burning device:
 - (1) Properly seasoned fuel wood; or
 - (2) An amount of paper necessary for starting a fire; or
 - (3) Wood pellets; or
 - (4) Biomass fire logs intended for burning in a wood stove or fireplace; or
 - (5) Coal with sulfur content less than 1.0% by weight burned in a coal-only heater.
- (b) All other materials are prohibited from being burned in a solid fuel burning device, including, but not limited to: garbage; pallets; treated lumber; fencing; treated wood; plastic and plastic products; rubber products; animal carcasses; asphaltic products; waste petroleum products; paints and chemicals; paper (other than an amount necessary to start a fire); or any substance that emits dense smoke or obnoxious odors.

SECTION 13.05 RESTRICTIONS ON OPERATION OF SOLID FUEL BURNING DEVICES

Adopted 10/25/12 (1258)

Revised 09/28/23 (1469)

- (a) No person in a residence or commercial establishment shall operate a solid fuel burning device under any of the following conditions:
 - (1) Whenever the Agency has declared the first stage of impaired air quality for a geographical area in accordance with RCW 70A.15.3580(1)(b)(i) or (ii), unless an exemption for the residence or commercial building has been obtained from the Agency pursuant to subsection (d) of this section or the solid fuel burning device is one of the following:

- (A) A nonaffected pellet stove; or
 - (B) A wood stove certified and labeled by the EPA under "40 CFR 60 Subpart AAA - Standards of Performance for Residential Wood Heaters" as amended through July 1, 1990; or
 - (C) A wood stove meeting the "Oregon Department of Environmental Quality Phase 2" emission 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; or
 - (D) A solid fuel burning device approved by Ecology as meeting the standards in RCW 70A.15.3530(1)(a)-(b).
- (2) Whenever the Agency has declared the second stage of impaired air quality for a geographical area in accordance with RCW 70A.15.3580(1)(c)(i), (ii), or (iii) unless an exemption for the residence or commercial building has been obtained from the Agency pursuant to subsection (d) of this section.
- (b) Whenever a first stage of impaired air quality is declared under subsection (a)(1):
- (1) New solid fuel shall be withheld from any solid fuel burning device already in operation for the duration of the first stage of impaired air quality if that device is restricted from operating under subsection (a)(1) of this section during the first stage of impaired air quality;
 - (2) Smoke visible from a chimney, flue, or exhaust duct after three hours has elapsed from the declaration of a first stage of impaired air quality shall constitute prima facie evidence of unlawful operation of a solid fuel burning device if that solid fuel burning device is restricted from operating during a first stage of impaired air quality. This presumption may be refuted by demonstration that the smoke was not caused by a solid fuel burning device.
- (c) Whenever a second stage of impaired air quality is declared under subsection (a)(2):
- (1) New solid fuel shall be withheld from any solid fuel burning device already in operation for the duration of the second stage of impaired air quality if that device is restricted from operating under subsection (a)(2) of this section during the second stage of impaired air quality.

- (2) Smoke visible from a chimney, flue, or exhaust duct after three hours has elapsed from the declaration of a second stage of impaired air quality shall constitute prima facie evidence of unlawful operation of a solid fuel burning device if that solid fuel burning device is restricted from operating during a second stage of impaired air quality. This presumption may be refuted by demonstration that the smoke was not caused by a solid fuel burning device.
- (d) Any person desiring an exemption from the Agency for the purposes of subsections (a)(1) or (2) of this section shall apply to the Agency using procedures specified by the Agency.
 - (1) The following are eligible for exemption:
 - (A) A residence or commercial building that has no adequate source of heat other than a solid fuel burning device and the building was neither constructed nor substantially remodeled after July 1, 1992.
 - (B) A residence or commercial building that has no adequate source of heat other than a solid fuel heating device and the building:
 - i. was constructed or substantially remodeled after July 1, 1992; and
 - ii. is outside an urban growth area, as defined in RCW 36.70A; and
 - iii. is outside an area designated by EPA as a PM2.5 or PM10 particulate nonattainment area.
 - (2) Exemptions shall be valid for a period determined by the Agency. Exemptions may be renewed using procedures specified by the Agency, provided the applicant meets the applicable requirements at the time of exemption renewal. Exemptions may be revoked if the Agency determines the residence or commercial building for which the exemption was approved no longer qualifies for an exemption.

SECTION 13.06 EMISSION PERFORMANCE STANDARDS

Adopted 10/25/12 (1258)

- (a) Solid fuel burning devices. A person shall not advertise to sell, offer to sell, sell, bargain, exchange, give away, or install a solid fuel burning device unless it meets both subsections (1) and (2):
 - (1) It has been certified and labeled in accordance with procedures and criteria specified in "40 CFR 60 Subpart AAA - Standards of

Performance for Residential Wood Heaters" as amended through July 1, 1990; and

- (2) It meets the following particulate air contaminant emission standards and the test methodology of EPA in effect on January 1, 1991, or an equivalent standard under any test methodology adopted by 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.
- (3) For purposes of subsection (a)(2) of this section, "equivalent" shall mean the emissions limits specified in subsection (a)(2) multiplied by a statistically reliable conversion factor determined by Ecology that relates the emission test results from the methodology established by the EPA prior to May 15, 1991, to the test results from the methodology subsequently adopted by EPA.
- (b) Fireplaces. A person shall not advertise to sell, offer to sell, sell, bargain, exchange, give away, or install a factory-built fireplace unless it meets the 1990 EPA standards for wood stoves or an equivalent standard that may be established by the state building code council by rule.
- (c) Subsection (a) of this section shall not apply to fireplaces, including factory-built fireplaces and masonry fireplaces.

SECTION 13.07 PROHIBITIONS ON WOOD STOVES THAT ARE NOT CERTIFIED WOOD STOVES

Adopted 10/25/12 (1258)

Revised 09/28/23 (1469)

- (a) Subsections (a)(1) – (a)(4) of this section shall be effective January 1, 2015 and apply only to PM_{2.5} nonattainment areas or areas where required by EPA.
 - (1) Any person who owns or is responsible for a wood stove that is both (a) not a certified wood stove and (b) is located in the Tacoma, Washington fine particulate nonattainment area must remove and dispose of it or render it permanently inoperable by September 30, 2015.
 - (2) Any person who owns or is responsible for a coal-only heater located in the Tacoma, Washington fine particulate nonattainment area must remove and dispose of it or render it permanently inoperable by September 30, 2015.
 - (3) Subsection (a)(1) of section does not apply to:

- (A) A person in a residence or commercial establishment that does not have an adequate source of heat without burning wood; or
 - (B) A person with a shop or garage that is detached from the main residence or commercial establishment that does not have an adequate source of heat in the detached shop or garage without burning wood.
- (4) The owner or person responsible for removing or rendering permanently inoperable a wood stove under subsection (a)(1) of this section or a coal-only heater under subsection (a)(2) of this section must provide documentation of the removal and disposal or rendering permanently inoperable to the Agency using the Agency's procedures within 30 days of the removal or rendering permanently inoperable.
- (b) PM10. Subsection (b) of this section is established for the sole purpose of a contingency measure for PM10 nonattainment and maintenance areas. If the EPA makes written findings that: (1) an area has failed to attain or maintain the National Ambient Air Quality Standard for PM10, and (2) in consultation with Ecology and the Agency, finds that the emissions from solid fuel burning devices are a contributing factor to such failure to attain or maintain the standard, the use of wood stoves not meeting the standards set forth in RCW 70A.15.3530 shall be prohibited within the area determined by the Agency to have contributed to the violation. This provision shall take effect one year after such a determination.