

Date: February 21, 2007

To: Board of Directors  
Puget Sound Clean Air Agency

Subject: Resolution No. 1112 – Amending Regulation I, Sections 8.09, 8.10 and 8.11, and Adopting Regulation I, Section 8.13 (Outdoor Burning)

Honorable Members:

### **Background**

In accordance with RCW 70.94.743, agency Regulation I, Sections 8.09, 8.10, and 8.11 have prohibited residential burning and land clearing burning in the Urban Growth Areas (UGAs) and former carbon monoxide non-attainment areas of King, Pierce, and Snohomish Counties since 1994. In addition, since 2000, Regulation I, Section 8.12 has prohibited residential burning and land clearing burning in the Kitsap County UGA and other areas in Kitsap County with reasonable alternatives to burning.

In addition to the bans on residential burning and land clearing burning based on UGA and non-attainment area boundaries, RCW 70.94.745(6) requires the agency to prohibit residential burning and land clearing burning in areas outside the UGAs and non-attainment areas when the agency has determined that an alternate technology or method of disposing of the organic refuse is available, reasonably economical, and less harmful to the environment than burning. To implement the requirements of RCW 70.94.745(6), the Department of Ecology (Ecology) adopted WAC 173-425-040(5), establishing the process for making this determination.

During June, July, and August 2007, the staff analyzed the availability of alternatives to outdoor burning in each county and briefed the Board on the analysis in the September and October 2007 Board meetings. We concluded that reasonable alternatives for land clearing and residential burning are available in King, Pierce, and Snohomish counties. We concluded reasonable alternatives are not currently available in Kitsap County and additional waste disposal capacity was needed.

Based on this analysis, the Board authorized the staff to begin rulemaking to propose phasing out land clearing and residential burning in King, Pierce, and Snohomish Counties. The staff was also directed to continue to work with Kitsap County to develop additional waste disposal capacity and report back to the Board at a future date.

During October and November 2007, staff developed proposed regulatory amendments that would result in prohibiting land clearing burning in King, Pierce and Snohomish counties beginning July 1, 2008, and residential burning, beginning July 1, 2010. The proposed rulemaking documents were complete in December 2007 and posted on the Agency web site. The proposed rule change was filed with the Code Reviser on January 22, 2008.

## Reasons For the Proposal

There are three main reasons for the proposed rule amendments: wood smoke is a health hazard, the policy of the Legislature is to reduce outdoor burning to the greatest extent practical, and Ecology regulations require prohibiting outdoor burning when reasonable alternatives are available and economical.

1. Wood smoke is a health hazard. This proposal is designed to address adverse short-term health effects experienced by individual citizens due to exposure from smoke from outdoor fires on a neighboring property.

According to the Washington State Departments of Health and Ecology, wood smoke is made up of a mixture of gases and fine particles produced when wood burns. The concern addressed in this proposal is short-term health effects to an individual due to exposure from smoke from an outdoor fire conducted on a neighbor's property. This is not a regional air quality issue.

Eye and respiratory tract irritation are common short term effects of breathing smoke. The young, the elderly, and people with cardiovascular (heart disease and stroke) and/or persons with respiratory problems such as asthma or chronic obstructive pulmonary disease (COPD) are especially susceptible to health problems from smoke and should take special precautions to avoid breathing wood smoke.

Attached as Appendix A are three documents that describe the health hazards from wood smoke. Two are produced by the Washington State Department of Health (Smoke Fact Sheet and Wildfire Smoke Guide), and one by the Washington State Department of Ecology (Health Effects of Wood Smoke).

2. Based on the determination that wood smoke is a health hazard, it is the policy of the Washington State Legislature to reduce outdoor burning to the greatest extent practical.

The policy of the Legislature is stated in several sections of the state Clean Air Act (Act), quoted below (emphasis added in bold).

### RCW 70.94.011, Declaration of public policies and purpose

It is declared to be the public policy to preserve, protect, and enhance the air quality for current and future generations. Air is an essential resource that must be protected from harmful levels of pollution. Improving air quality is a matter of statewide concern and is in the public interest. **It is the intent of this chapter to secure and maintain levels of air quality that protect human health and safety, including the most sensitive members of the population,** to comply with the requirements of the federal clean air act, to prevent injury to plant, animal life, and property, **to foster the comfort and convenience of Washington's inhabitants,** to promote the economic and social development of the state, and to facilitate the enjoyment of the natural attractions of the state.

It is further the intent of this chapter to protect the public welfare, to preserve visibility, to protect scenic, aesthetic, historic, and cultural values, and **to prevent air pollution problems that interfere with the enjoyment of life, property, or**

natural attractions.

Because of the extent of the air pollution problem the legislature finds it necessary to return areas with poor air quality to levels adequate to protect health and the environment as expeditiously as possible but no later than December 31, 1995. Further, it is the intent of this chapter to prevent any areas of the state with acceptable air quality from reaching air contaminant levels that are not protective of human health and the environment.

The legislature recognizes that air pollution control projects may affect other environmental media. In selecting air pollution control strategies state and local agencies shall support those strategies that lessen the negative environmental impact of the project on all environmental media, including air, water, and land.

The legislature further recognizes that energy efficiency and energy conservation can help to reduce air pollution and shall therefore be considered when making decisions on air pollution control strategies and projects.

It is the policy of the state that the costs of protecting the air resource and operating state and local air pollution control programs shall be shared as equitably as possible among all sources whose emissions cause air pollution.

It is also declared as public policy that regional air pollution control programs are to be encouraged and supported to the extent practicable as essential instruments for the securing and maintenance of appropriate levels of air quality.

**To these ends it is the purpose of this chapter** to safeguard the public interest through an intensive, progressive, and coordinated statewide program of air pollution prevention and control, to provide for an appropriate distribution of responsibilities, and to encourage coordination and cooperation between the state, regional, and local units of government, to improve cooperation between state and federal government, public and private organizations, and the concerned individual, as well as **to provide for the use of all known, available, and reasonable methods to reduce, prevent, and control air pollution.**

The legislature recognizes that the problems and effects of air pollution cross political boundaries, are frequently regional or interjurisdictional in nature, and are dependent upon the existence of human activity in areas having common topography and weather conditions conducive to the buildup of air contaminants. In addition, the legislature recognizes that air pollution levels are aggravated and compounded by increased population, and its consequences. These changes often result in increasingly serious problems for the public and the environment.

The legislature further recognizes that air emissions from thousands of small individual sources are major contributors to air pollution in many regions of the state. As the population of a region grows, small sources may contribute an increasing proportion of that region's total air emissions. It is declared to be the policy of the state to achieve significant reductions in emissions from those small sources whose aggregate emissions constitute a significant contribution to air

pollution in a particular region.

It is the intent of the legislature that air pollution goals be incorporated in the missions and actions of state agencies.

RCW 70.94.743, Outdoor Burning – Areas where prohibited – Exceptions – Use for management of storm or flood-related debris – Silvicultural burning

**(1) Consistent with the policy of the state to reduce outdoor burning to the greatest extent practical:**

(a) Outdoor burning shall not be allowed in any area of the state where federal or state ambient air quality standards are exceeded for pollutants emitted by outdoor burning.

(b) Outdoor burning shall not be allowed in any urban growth area as defined by RCW [36.70A.030](#), or any city of the state having a population greater than ten thousand people if such cities are threatened to exceed state or federal air quality standards, and alternative disposal practices consistent with good solid waste management are reasonably available or practices eliminating production of organic refuse are reasonably available. In no event shall such burning be allowed after December 31, 2000, except that within the urban growth areas for cities having a population of less than five thousand people, that are neither within nor contiguous with any nonattainment or maintenance area designated under the federal clean air act, in no event shall such burning be allowed after December 31, 2006.

(c) Notwithstanding any other provision of this section, outdoor burning may be allowed for the exclusive purpose of managing storm or flood-related debris. The decision to allow burning shall be made by the entity with permitting jurisdiction as determined under RCW [70.94.660](#) or [70.94.755](#). If outdoor burning is allowed in areas subject to (a) or (b) of this subsection, a permit shall be required, and a fee may be collected to cover the expenses of administering and enforcing the permit. All conditions and restrictions pursuant to RCW [70.94.750\(1\)](#) and [70.94.775](#) apply to outdoor burning allowed under this section.

(d)(i) Outdoor burning that is normal, necessary, and customary to ongoing agricultural activities, that is consistent with agricultural burning authorized under RCW [70.94.650](#) and [70.94.656](#), is allowed within the urban growth area as defined in (b) of this subsection if the burning is not conducted during air quality episodes, or where a determination of impaired air quality has been made as provided in RCW [70.94.473](#), and the agricultural activities preceded the designation as an urban growth area.

(ii) Outdoor burning of cultivated orchard trees, whether or not agricultural crops will be replanted on the land, shall be allowed as an ongoing agricultural activity under this section if a local horticultural pest and disease board formed under chapter [15.09](#) RCW, an extension office agent with Washington State University that has horticultural experience, or an entomologist employed by the department of agriculture, has determined in writing that burning is an appropriate method to prevent or control the spread of horticultural pests or diseases.

(2) "Outdoor burning" means the combustion of material of any type in an open

fire or in an outdoor container without providing for the control of combustion or the control of emissions from the combustion.

(3) This section shall not apply to silvicultural burning used to improve or maintain fire dependent ecosystems for rare plants or animals within state, federal, and private natural area preserves, natural resource conservation areas, parks, and other wildlife areas.

RCW 70.94.745, Limited Outdoor Burning – Program- Exceptions

(1) It shall be the responsibility and duty of the department of natural resources, department of ecology, department of agriculture, fire districts, and local air pollution control authorities to establish, through regulations, ordinances, or policy, a limited burning permit program.

(2) The permit program shall apply to residential and land clearing burning in the following areas:

(a) In the nonurban areas of any county with an unincorporated population of greater than fifty thousand; and

(b) In any city and urban growth area that is not otherwise prohibited from burning pursuant to RCW [70.94.743](#).

(3) The permit program shall apply only to land clearing burning in the nonurban areas of any county with an unincorporated population of less than fifty thousand.

(4) The permit program may be limited to a general permit by rule, or by verbal, written, or electronic approval by the permitting entity.

(5) Notwithstanding any other provision of this section, neither a permit nor the payment of a fee shall be required for outdoor burning for the purpose of disposal of tumbleweeds blown by wind. Such burning shall not be conducted during an air pollution episode or any stage of impaired air quality declared under \*RCW [70.94.714](#). This subsection (5) shall only apply within counties with a population less than two hundred fifty thousand.

**(6) Burning shall be prohibited in an area when an alternate technology or method of disposing of the organic refuse is available, reasonably economical, and less harmful to the environment. It is the policy of this state to foster and encourage development of alternate methods or technology for disposing of or reducing the amount of organic refuse.**

(7) Incidental agricultural burning must be allowed without applying for any permit and without the payment of any fee if:

(a) The burning is incidental to commercial agricultural activities;

(b) The operator notifies the local fire department within the area where the burning is to be conducted;

(c) The burning does not occur during an air pollution episode or any stage of impaired air quality declared under RCW [70.94.715](#); and

(d) Only the following items are burned:

- (i) Orchard prunings;
- (ii) Organic debris along fence lines or irrigation or drainage ditches; or
- (iii) Organic debris blown by wind.

(8) As used in this section, "nonurban areas" are unincorporated areas within a county that is not designated as an urban growth area under chapter [36.70A](#) RCW.

(9) Nothing in this section shall require fire districts to enforce air quality requirements related to outdoor burning, unless the fire district enters into an agreement with the department of ecology, department of natural resources, a local air pollution control authority, or other appropriate entity to provide such enforcement.

3. Based on the statutory direction from the Legislature, Ecology has adopted statewide outdoor burning regulations that prohibit outdoor burning under certain conditions.

Ecology has adopted regulations to implement the statutory provisions regarding outdoor burning, WAC 173-425. The most relevant regulation with respect to the proposed rule change is WAC 173-425-040:

**WAC 173-425-040 Areas where certain types of outdoor burning are prohibited.**

**(1) Nonattainment areas.** Residential burning and land clearing burning may not be allowed in any areas of the state that exceed federal or state ambient air quality standards for pollutants emitted by outdoor burning. These areas are limited to all nonattainment areas and former nonattainment areas for carbon monoxide, particulate matter (PM-10 and PM2.5), sulfur dioxide, nitrogen dioxide, and lead. However, ecology may, in cooperation with any local air authority having jurisdiction, authorize the omission of parts of a nonattainment area if ambient air quality standards for the pollutants that caused the area to be designated nonattainment have not been exceeded in those parts, and outdoor burning in those parts has not contributed, and is not expected to contribute, significantly to exceedances of the standards in the nonattainment area. (RCW 70.94.743 (1)(a))

**(2) Urban growth areas.** Residential burning and land clearing burning may not be allowed in any urban growth areas after December 31, 2000, except as follows: Residential burning and land clearing burning may be allowed in the following types of urban growth areas until December 31, 2006: (RCW 70.94.743 (1)(b))

(a) Urban growth areas for incorporated cities having a population of less than five thousand people that are neither within nor contiguous with any area identified in subsection (1) of this section; and

(b) Urban growth areas that do not include an incorporated city.

**(3) Cities over 10,000.** Residential burning and land clearing burning may not be allowed in any cities having a population greater than ten thousand people after December 31, 2000. Cities having this population must be identified by using the most current population estimates available for each city. (RCW 70.94.743 (1)(b))

(4) **High density areas.** Land clearing burning may not be allowed in any area having a general population density of one thousand or more persons per square mile after December 31, 2000, if the area is contiguous with any area where land clearing burning has already been, or must be, prohibited by that date under subsection (1), (2), or (3) of this section, and it may not be allowed in any other areas having this density after December 31, 2006. All areas having this density must be identified by using the most current population data available for each census block group and dividing by the land area of the block group in square miles. (RCW 70.94.750(2))

(5) **Areas with a reasonable alternative to burning.** Residential burning, land clearing burning, storm or flood debris burning, tumbleweed burning, weed abatement fires, and other outdoor burning of organic refuse may not be allowed in any area of the state (including any areas or parts of areas identified in subsections (1) through (4) of this section) when a reasonable alternative to burning is found to exist in the area for that type of burning. (RCW 70.94.745(6))

By December 31, 2000, and at least every third year after that, each local air authority, and ecology in cooperation with counties, must determine whether any areas within their jurisdiction where a type of burning listed in this subsection is allowed (except other outdoor burning of organic refuse) have a reasonable alternative to burning. Determinations for other outdoor burning of organic refuse must be made on a permit-by-permit basis by applying the criteria in (a) and (b) of this subsection. A reasonable alternative exists for any area where the answers to both of the following questions are "Yes" for the specified type of burning: Provided, that parts of an area may be excluded for the purpose of defining practical boundaries for the area.

(a) **Available and reasonably economical.** Is the area served by:

- (i) A county or municipally-sponsored service for recycling (i.e. composting) of the organic refuse (e.g. natural vegetation); or
- (ii) Any other method for disposing of the organic refuse (such as a public or private chipping or chipper rental service, an energy recovery or incineration facility, or a solid waste drop box, transfer station, or landfill) that is located within a reasonable distance and will accept the type and volume of organic refuse at a cost that is less than or equivalent to the median of all county tipping fees in the state for disposal of municipal solid waste?

(b) **Less harmful to the environment.** Is any available and reasonably economical alternative method for disposing of the organic refuse less harmful to the environment than outdoor burning according to the following hierarchy?:

Less Harmful	Waste Reduction
	Recycling
	Energy Recovery or Incineration
	Landfill Disposal
More Harmful	Outdoor Burning

### **Staff Activities During January 2008**

During January 2008, staff held five public workshops regarding the proposal. The purpose of the workshops was to give people in areas affected by the proposed burn ban boundary

expansions an opportunity to ask questions, learn about alternatives to burning, and provide written comments for the record on the proposed rule change.

The workshops were held in five communities in the affected areas – January 8 in Lakebay on the Key Peninsula (Pierce County), January 10 in Graham (Pierce County), January 15 in Woodinville (King County with a draw from south Snohomish County), January 17 in Enumclaw (King County), and January 22 in Arlington (Snohomish County). About 50 people attended the workshops held in Lakebay, Graham, and Arlington. Only five people attended the Woodinville workshop and four people attended the Enumclaw workshop.

These were not public hearings, and we did not want the workshops to appear as public hearings. At each workshop, we set up tables near the entrance of the meeting room for registration and refreshments. The registration table also had fact sheets about the proposed rule change and official comment sheets people could fill out and submit for the record. We did not make formal presentations or provide a forum for people to stand up and make statements or give testimony. Instead, we set up additional tables throughout the room and encouraged people to sit down and have conversations with agency staff. We were there to listen to their concerns and answer their questions. The primary staff at these tables were the agency's Compliance Director and inspectors. Agency Communications staff worked the registration table, talked with reporters and engaged with others attending. We invited county solid waste and health representatives to attend, as well as master composters and fire officials who could provide information on health effects of and alternatives to outdoor burning. We set up tables for each of these groups, and encouraged people to walk around and engage with these partners.

## **Comments Received**

Copies of all the written comments received by the agency as of the date of this memo have been previously provided electronically to the Board and posted on the agency web site. Hard copies of all the comments received are contained in Appendix B. Also attached in Appendix B is a table we have prepared, summarizing each written comment we received through February 15, 2008 and the staff response to each comment.

After reviewing and analyzing the comments received, the staff identified the following five main themes in the comments:

1. *Adopt the amendments as proposed.*

We received numerous comments supporting the proposal. Most of these comments cited health impacts commenters had personally experienced due to smoke from their neighbors' outdoor fires. We also received support for the land clearing ban from many of the commenters who opposed the residential burning ban. They commonly contrasted problems they had witnessed from large development burns with the smaller burns they conducted on their own property.

These comments reinforced to us the need to further reduce outdoor burning to the greatest extent practical.

2. *The agency doesn't understand the issues of rural residents.*

We received a significant number of comments regarding our lack of understanding of rural issues. Many commenters pointed out the connection that rural residents have with their property and their cultural value associated with being good stewards of these rural properties.

While many of these comments were helpful in improving our understanding of rural issues, they did not address the criteria contained in WAC 173-425-040(5) regarding the alternatives to outdoor burning. Therefore, we did not incorporate them into the staff recommendation set forth later in this memo.

3. *Emissions from the alternatives to burning are greater than emissions from burning.*

We received one comment that contained emission estimates, but most of these comments were anecdotal. Appendix C contains our calculations of the emissions associated with trucking compared to burning, and chipping compared to burning. In both cases, burning produces a higher level of emissions.

These comments were helpful because they pointed out the need for the agency to conduct outreach to the rural community on the environmental impacts from outdoor burning. However, we did not agree with the comments, therefore, we did not incorporate them into the staff recommendation set forth later in this memo.

4. *The costs of the disposal alternatives to burning are not outweighed by air quality benefits from the rulemaking.*

Many commenters voiced the opinion that the cost of the proposal to rural landowners was not justified based on environmental or human health improvements.

The staff's view of these comments is that the Legislature and Ecology have made a determination that the state policy is to reduce outdoor burning to the greatest extent practical, and directed local air agencies to implement that policy. It is not the agency's role to revisit this policy determination. Since the Legislature and Ecology have already made policy choices about the balancing of interests, we did not incorporate these comments into our staff recommendation.

5. *There are no reasonable alternatives to residential burning available for large properties.*

We received numerous comments with examples of why the criteria contained in WAC 173-425-040(5) are not met for residential burning on large parcels in rural areas. Most commenters noted that large amounts of storm debris fall each winter on large wooded parcels and the options we identified as reasonable alternatives to burning for this debris were in fact not reasonable.

The main comments on the alternatives we identified are summarized below:

- a. Curbside residential yard waste pick-up
  - The amount of debris generated on a rural parcel far exceeds the capacity of curbside service (96 gallon container).
  - There are no curbs, but if there were, the "curbside" is hundreds of yards away.

- b. On-site chipping and composting
  - We chip and compost as much as we can, but there is too much debris to compost it all.
  - Cannot compost noxious weeds and invasive plants.
- c. Leave the debris on-site
  - If left alone, the debris becomes a fire hazard.
  - Piles of brush lying around are an eyesore and attract pests.
- d. Off site drop boxes and wood waste recycling
  - Do not own a truck to haul it to the recycling facility.
  - Bringing in equipment to move the material will cause environmental damage to the property.

Based on these comments, the staff has reconsidered its previous conclusion that the criteria contained in WAC 173-425-040(5) are met for residential burning and at this point, is not ready to continue to conclude that the regulatory criteria are met for residential burning in King, Pierce, and Snohomish Counties. As explained below, staff recommends gathering additional information and working more extensively with county officials about the issues raised in the comments received about certain aspects of residential burning.

### **Process Options**

Staff has identified several options available to the Board with respect to the proposed amendments to Regulation, Article 8. The staff recommends the Board consider the rulemaking in two parts, the proposal on land clearing burning and the proposal on residential burning, because the issues related to the two are very different. Also, the Board's consideration of these options must be based on the criteria set forth in WAC 173-425-040(5) and its determination regarding whether those criteria are met or not.

Here are the four main options available at this point:

1. Approve the amendments as proposed, based on the determination that the criteria in WAC 173-425-040(5) are met with respect to both land clearing and residential burning. This would mean land clearing burning is prohibited in King, Pierce, and Snohomish Counties, effective July 1, 2008, and residential burning is prohibited in the same three counties, effective July 1, 2010.
2. Approve the amendments as proposed with respect to land clearing burning, as set forth in proposed Regulation I, Section 8.13(a), and based on the comments received, determine that the criteria in WAC 173-425-040(5) are not met with respect to residential burning. The staff suggests this as an option because based on the comments received, the view could be taken that with respect to large parcels of property located in more rural areas, it cannot be concluded that available and reasonably economical alternatives to burning exist.

Under this option, the proposed rulemaking with respect to residential burning would be withdrawn. The Board could direct staff to gather additional information and work more extensively with county officials about the issues raised in comments received about residential

burning, and then report back to the Board in several months with additional information and recommendations.

3. Approve the amendments as proposed with respect to land clearing burning, as set forth in proposed Regulation I, Section 8.13(a), and based on the comments received, determine that it is not clear that the criteria in WAC 173-425-040(5) are met with respect to residential burning, and continue the public comment period and hearing to gather additional information. Under this option, the proposed rulemaking with respect to residential burning would remain open and before the Board and the Board would need to take action on the proposal in the near future.

4. Not approve the amendments as proposed with respect to either land clearing or residential burning because the criteria in WAC 173-425-040(5) are not met. Under this option, and unless otherwise directed by the Board, taking action to not approve the proposed amendments would conclude the proposal as presented. Any future rulemaking amendments to be considered would need to be proposed through a new rulemaking process.

### **Staff Recommendation**

Based on the comments received and the staff evaluation of the criteria in WAC 173-425-040(5), the staff recommends Option 2 as described above. This is because with respect to land clearing burning, staff's initial determination was that the regulatory criteria are met, the comments received about this part of the proposal did not present any new information, and staff finds no reason to revise its initial determination.

This is in contrast to the part of the proposal concerning residential burning. Staff initially determined that the regulatory criteria as applied to residential burning were met and this led to the current rulemaking proposal. However, based on the comments received and issues raised about the availability and costs of alternatives to burning for large parcels of property located in rural areas, staff believes it is not clear that the regulatory criteria are met.

Therefore, staff recommends the Board approve the proposed amendments regarding land clearing burning and withdraw the proposal regarding residential burning. The staff also recommends that the Board direct staff to gather additional information about the issues raised in the comments about residential burning, work with county officials on these issues, and report back to the Board in October 2008 with additional information and recommendations.

Presented for Board consideration at this meeting is Resolution No. 1112, which reflects the staff recommendation as described here. If the Board decides to not take action on Resolution No. 1112 or to take another course of action, staff will prepare any appropriate resolutions for a future meeting.

Respectfully submitted,

Dennis J. McLerran  
Executive Director

Attachment  
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