

OPEN BURNING SMOKE CONTROL REGULATION

INTENTIONS PAPER #2 – JULY 2010

SUMMARY OF PUBLIC COMMENTS

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By: C. Rankin & Associates
Victoria, B.C.

Open Burning Smoke Control Regulation (OBSCR) Intentions Paper #2 – Summary of Public Comments

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Public comments

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Open Burning Smoke Control Regulation Consultation

1. Introduction

Note: subsequent to release of the Intentions Paper, ministry reorganization resulted in the Ministry of Environment assuming full responsibility for development and implementation of the Open Burning Smoke Control Regulation (and dissolution of the Ministry of Healthy Living and Sport). Ministries with reorganized functions and names also include the Ministry of Agriculture and the Ministry of Natural Resource Operations and the Ministry of Forests, Mines and Lands.

References to “the ministries” (of Environment and Healthy Living & Sport) in the text of response form questions and responses have not been changed, although the Ministry of Environment is now leading the review and revision process – with participation of the Ministry of Agriculture and Ministry Natural Resource Operations on the government review team.

The Ministry of Environment (“the ministry”) is undertaking a review process and intend to revise the Open Burning Smoke Control Regulation (OBSCR) under the *Environmental Management Act* (EMA). The ministry presented current intentions for revising the OBSCR in a policy intentions paper for consultation posted in July 2010 with a response form outlining discussion areas and questions. This summary of public comments documents the comments received in response to the intentions paper.

1.1 Background to the consultation process

The OBSCR was introduced in 1993 with the intention of regulating the open burning of land clearing debris and burning in areas of high population density. The OBSCR includes requirements for burn operators to take measures to limit impacts on nearby homes, schools and hospitals, and to ensure that atmospheric conditions are favourable to smoke dispersion prior to initiating an open burn. Revisions to the regulation are being proposed based on recommendations made in a 2004 audit of the regulation, new information about health effects of low levels of smoke and to improve the effectiveness of the regulation in protecting population centers from the impacts of smoke on health.

In 2008 the Ministry of Environment published an intentions paper outlining proposed changes and invited stakeholders to provide feedback and suggestions. Over 100 submissions were received in response to this intentions paper. In 2009, the review team formed a stakeholder reference group to provide further input regarding the regulatory review. The intentions presented in the July 2010 intentions paper reflected input heard during this process, as well as previous consultation comments.

The intentions paper was posted for public review and comment on the Ministry of Environment website July 2010 through October 2010. The intentions paper provided background information and identified consultation issues for discussion to build understanding about the subject and provide a structure for comments and feedback.

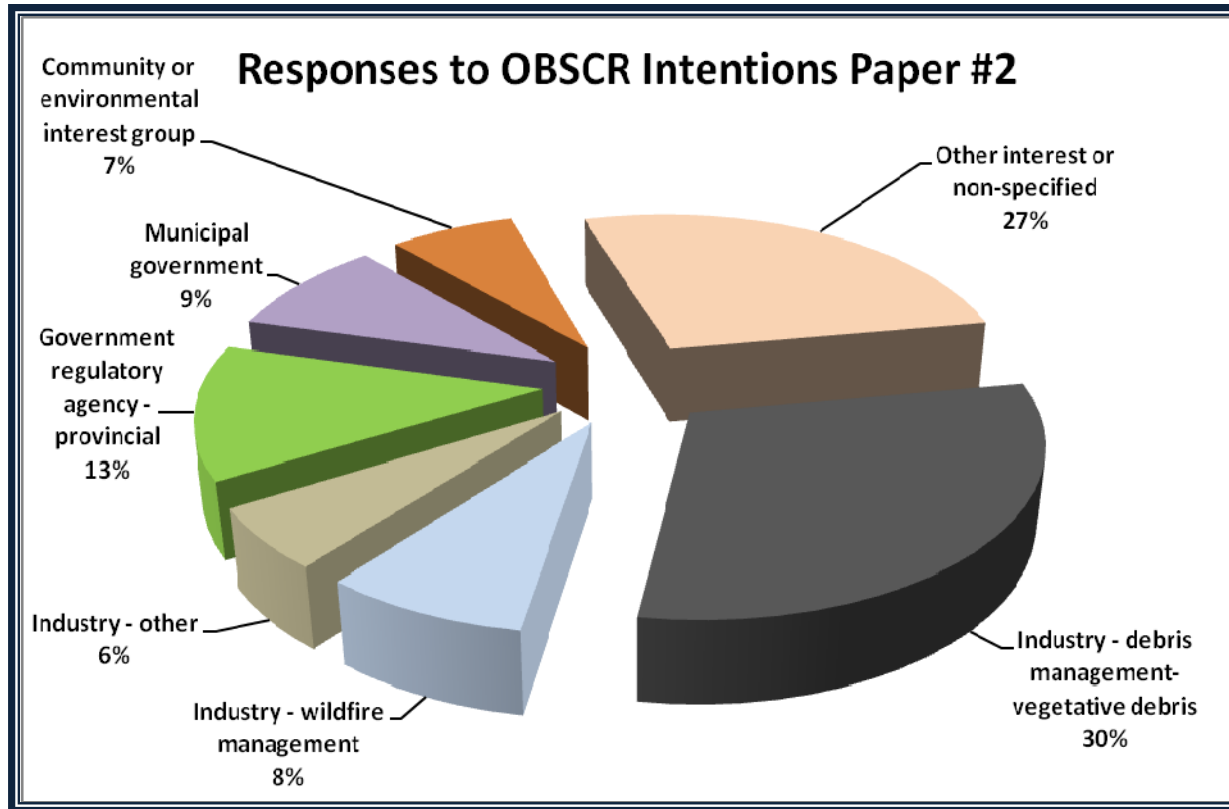
1.2 Purpose and format of the *Summary of Public Comments* document

This document has been prepared for the Ministry of Environment by C. Rankin & Associates, contracted by the ministry to independently receive, compile and review comments. The summary of public comment is arranged by topic as presented in the intentions paper. Direct excerpts from submissions are included in quotation marks (“ ”). Square brackets ([]) indicate inferred or contextual terms.

The complete set of responses received through the consultation process has been compiled and passed to the ministry for detailed review and consideration. All comments and references submitted through this process, through independent submissions and through direct consultations with stakeholders, will be reviewed and carefully considered by the ministry in developing the regulation.

1.3 Description of responses received

Close to 100 responses to the intentions paper were received (by e-mail, fax and attached file), and have been reviewed for this summary of stakeholder comments. Many of the responses were made by provincial or regional associations on behalf of their members. About half of respondents who identified their interest worked in an industry or sector that involved debris management, wildfire management or management of vegetative debris. About 20% of respondents worked for provincial or municipal government (including health authorities, provincial ministries and municipal representatives). The summary does not include any comments or responses from staff of the Ministry of Environment or the (former) Ministry of Healthy Living and Sport.



Many substantive comments were received addressing questions in the response form, as well as providing additional comments in submissions or supplemental materials. Respondents often outlined concerns relevant to their activity or interest – such as the importance of reducing wild-fire hazard or protecting air quality – while making specific suggestions or recommendations for changes to the Open Burning Smoke Control Regulation. A number of respondents noted the changes to intentions since 2008, the work of the government review team and the acknowledgment of concerns raised through the consultation process – and expressed a desire for ongoing engagement to ensure that any regulatory changes are operationally practical and effective in achieving smoke management and reduction objectives. Respondents also commented that many parties affected by the regulation are not aware of the intentions – and that widespread awareness and understanding of alternatives to burning, as well as smoke management practices, would be essential as the review process moves forward.

Respondents commonly expressed support for the goal of “reducing or minimizing impacts to human health and safety by reducing air pollution from open burning” – while differing in support for listed objectives such as “reducing the amount of material burned.” At one end of the spectrum of responses were respondents who felt that “no open burning of land clearing [or other] debris should be allowed” particularly in situations that exposed human populations at risk. In contrast, other respondents felt that the existing regulations provide sufficient direction to burn operators.

The intentions paper outlined a proposed approach to smoke control and the regulation of open burning – involving identification of “primary” and “secondary” smoke sensitivity zones for the province and specified standards for each of the zones. Most respondents expressed support for the approach, with many noting that primary smoke sensitivity zones should take into account geographic and meteorological factors (such as valleys and prevailing winds) and not only population density. Many respondents who live and/or operate in what would be considered primary smoke sensitivity zones (such as woodlot and community forest licensees and ranchers) expressed concern that potential restrictions on burning could be unfeasible for operational or economic reasons. Other common concerns were that the proposed approach is “too prescriptive” and that potential exemptions (or differing regulations) could lead to confusion (in what parties would be able to burn and under what conditions) and/or difficulty in enforcement.

Many respondents expressed support for developing and using “smoke management plans” to guide specific practices in identified areas. Respondents had differing perceptions and recommendations regarding the content and process for developing and approving plans – with some respondents referring to “burn management plans” developed for wildfire and fuel hazard management and others referencing multi-stakeholder “airshed management” planning processes. Respondents also commonly highlighted the importance of custom venting forecasting in reducing exposure to smoke from open burns. Other common topics raised by respondents included: the role of moisture content and curing in reducing smoke from burns; development and use of “best management practices” guidelines (as supporting documents rather than explicit regulatory direction); the use of air curtain incinerators in managing vegetative debris from land and resource use; the need to develop cost-effective and widely accessible alternatives to burning (particularly near populated areas of the province); and the importance of practical, clear and consistent rules for open burning – in both remote and populated parts of British Columbia.

Public Comments

1. Goal and objectives guiding proposed revisions

Note: subsequent to release of the Intentions Paper, ministry reorganization resulted in the Ministry of Environment assuming full responsibility for development and implementation of the Open Burning Smoke Control Regulation (and dissolution of the Ministry of Healthy Living and Sport). Ministries with reorganized functions and names also include the Ministry of Agriculture and the Ministry of Forests, Mines and Lands.

References to “the ministries” (of Environment and Healthy Living & Sport) in the text of response form questions and responses have not been changed, although the Ministry of Environment is now leading the review and revision process – with participation of the Ministry of Agriculture and Ministry of Forests, Mines and Lands on the government review team.

The overall goal of the review process and proposed revisions to the regulation is to *reduce or minimize impacts to human health and safety by reducing air pollution from open burning*. The ministries used a set of objectives to assess potential changes and guide revisions of the regulation set out in section 3.1 of the intentions paper.

Response Form Question 1.1: Do you have any comments or suggestions regarding the goal and objectives and their use by the ministries in guiding proposed revisions to the regulation?

Many respondents provided extensive and detailed comments relating to this question. Commonly, respondents expressed support for the overall goal of reducing the impacts of smoke from controlled burning to human health. However, respondents differed in their perception of whether the proposed intentions supported this goal. Some respondents felt that the ministries should be attempting to “minimize” risks to human health, with several recommending, for example, that “open burning should not be allowed.” Other respondents commented that “what is in place is more than adequate” or that “the ministries are over-estimating the effect [of open burning] on human health in under-populated areas of the province.” Several respondents commented that the ministries proposed intentions would restrict forest fuel management activities and/or place an “undue burden” on the forest sector.

A number of respondents expressed concerns or provided suggestions regarding the objectives listed in the intentions paper. Specific comments included: “[our organization is] glad to see recognition of... open burning as a resource/land management tool, at least until more viable alternatives are realized”; “the overall regulatory approach as outlined in the paper is highly prescriptive... these... are likely to increase costs for industry while failing to meet the tests of equity and consistency”; “many of the objectives in the intentions paper are [better characterized as] strategies and [furthermore] don’t necessarily support the overall objective[goal]”; and “the stated objective ‘to reduce the amount of material burned’ causes [our organization] significant concern”.

Additional specific comments included:

- “ [The goal and objectives] would be strengthened by increasing the amount of air quality monitoring...in the Primary Smoke Sensitivity zones”;
- “Increased adherence to the regulation (as a result of the proposed changes) should be included as an objective”;
- “I’m not convinced that [the objective of ‘clear regulatory direction’] is possible at this point while appeasing all the competing interests”;
- “I strongly feel that education and enforcement of existing regulations would be adequate to meet the goal”;
- “My preference is to state clearly that no burning of land clearing debris would be allowed in a primary smoke sensitivity area”;
- “These values must be balanced with protection of communities and the potential use of prescribed fire to reduce risk posed by wildfires”;
- “There should be an incentive based approach to develop alternative mechanisms for debris disposal that is released in conjunction with OBSCR changes”;
- “[The intentions paper] does not recognize the effort that many companies and organizations have expended to minimize the release of smoke during burning operations and the subsequent reduction of impacts from smoke”;
- “[The ministries should] complete a financial analysis of impact on the forest industry [prior to implementing proposed intentions].”

2. Proposed approach to smoke control and the regulation of open burning

The ministries intend to revise the regulation to establish a comprehensive province-wide framework of two “smoke sensitivity zones” based on risk to populations – with the two zones each having specified and consistent standards for parties considering the open burning of vegetative debris. The regulation will also provide a process for the creation of locally flexible smoke management plans (see intentions paper sections 3.2)

Response Form Question 2.1: Do you have any comments regarding the proposed approach to smoke control and the regulation of open burning?

Many respondents expressed “recognition of” or “support for” the proposed approach to smoke control and the regulation of open burning, commenting, for example, that “the comprehensive framework of two zones [and] particularly the principle of protecting urban areas is very sensible and practical.” Some respondents requested or recommended clarification or modification of the criteria used to delineate smoke sensitivity zones. For example, respondents recommended: “the use of meteorological and geographic information... in determining sensitivity zone boundaries”; “sub-zone designations which apply to small area based tenures and landowners who only burn relatively small amounts of debris under optimum conditions”; “[consideration of] variables such as the risks in the interface zones, the performance of existing burn operators, the existence of alternative uses for the biomass”; “[a clear] benchmark against

which higher or lower risk can be adjudicated against”; and “[a defined] process for amending the zones.”

Several respondents felt that the province is “too complex” and/or “too mountainous” for a two-zone smoke sensitivity system. A number of respondents commented that any “primary smoke sensitivity zone” should encompass 90% (or more) of the province’s population. Other respondents recommended “government structure OBSCR to mirror [the Forest and Range Practices Act] FRPA... in a results-based regime [with] default practice requirements as well as the option to develop a plan outlining how a burn operator could achieve the stated results.”

Divergent comments were received regarding the use of “locally flexible smoke management plans.” Many respondents expressed support for the concept, while others commented (for example) that “there should not be any ‘local flexibility’ allowed in smoke management plans in primary smoke management zones.”

3. Definitions and scope of the regulation

The ministries intend to amend definitions in the Open Burning Smoke Control Regulation (OBSCR) so that they are consistent with the *Wildfire Act* and regulations and to include open burning of wood waste at log sorts and forwarding facilities under the regulation (see intentions paper 3.3)

Response Form Question 3.1: Do you have any comments regarding the ministries’ intention to revise definitions in the regulation to support consistency with the Wildfire Act and its regulations (i.e., “Category 2” and “Category 3” open fires based on size and burn materials)?

Almost all respondents who commented on this topic expressed support for consistency and clarity in definitions.

Specific comments or recommendations included:

- “We recommend that all open burning of debris that has originated from forestry activities be regulated under the *Wildfire Act*”;
- “Regardless of who produced the smoke, the OBSCR [should] apply equally to the forest, the domestic or the agriculture sector”;
- “Moisture content, seasoning and the burnability of the material is more important than the size of a burn and the size of the material [in terms of] the amount of smoke produced”;
- “The defining line between category 2 and category 3 fires seems vague...there is no definition of the area over which the piles are stacked or [the] distance between stacks”;
- “Small piles less than 1 m x 1 m should not be in the same category as a 3 m x 3 m pile”;
- “No maximum fire size exists for category 3 fires, a maximum fire size should be set for smoke control purposes, particularly in primary smoke sensitivity zones”;
- “Need to be CLEAR on the types of burning that the OBSCR will apply to...will it apply to backyard burning category 2 fires? Will it apply to garbage burning (of ‘prohibited materials’)?”;

- “The exemption section is unclear – still a grey area when it comes to backyard burning”;
- “Where any backyard debris is piled by hand – the regulation should not affect private owned land”;
- “If the terms ‘slash fire’ and [/or] ‘broadcast burn’ are to be used, best to clarify the difference if any”; and
- “The current definition of a Resource Management Fire needs to be expanded and amended to include all fires being conducted for the purposes of either hazard abatement or silviculture treatments and are conducted on some form of licence administered by the Ministry of Forests – burn plans could then be developed with that agency.”

Response Form Question 3.2: Do you have any comments regarding the ministries’ intention to amend the OBSCR to include open burning of wood waste at log sort and forwarding facilities?

Divergent comments were received in response to this question. Some respondents expressed support for the intention, commenting, for example, that it “makes sense to include [burning of wood waste log sort and forwarding facilities in the regulation].” Other respondents questioned the intention, commenting, for example, that “I don’t see the point in singling out specific activities” or that “the rationale for the... additional requirements [for log sort facilities]... is not clear.”

Several respondents commented that “there is no industry [or market] yet for the debris” and/or that restrictive requirements on burning (such as requiring the use of forced air technology or restricting the number of burns in a year) would not be effective in meeting smoke management objectives or practical to implement. One respondent noted that “there are prescribed hazard abatement and assessment requirements and timeperiods for these facilities in the Wildfire Regulation and it will be important to ensure that the new OBSCR will allow these prescribed activities to be achieved.” Another respondent requested that the ministries “consider... exceptions for the burning of reservoir woody debris that are consistent with the exceptions proposed for log sorts and forwarding facilities (e.g. open burning does not need to occur on the same parcel of land from which the debris originated) – this would avoid the need for individual authorizations (where the conditions for burning stipulated under the Regulation are employed).”

Response Form Question 3.3: Do you have any additional comments or suggestions for the ministries with respect to scope of the regulation and/or definitions contained in the regulation?

Many respondents reiterated previously noted suggestions or comments. For example, several respondents commented that definitions in the regulation should “align with” or “be complementary to” other legislation related to wildfire management and/or forest or agricultural practices. Respondents also suggested that the ministries responsible for the OBSCR work with the Ministry of Forests and Range and engage forest licensees with any changes to the regulation.

Additional specific comments included:

- “Clearer definition of vegetative debris [is needed]”;
- “Recognize that there are other parties besides forest licensees who may have a legal obligation for fire hazard abatement as a result of their activities”;
- “Any outdoor burning should be the very last resort not the first”;
- “I am adamantly opposed to exempting... the burning of leaves, foliage, weeds, crops or stubble for agricultural purposes...in our area...the exemption (a) causes an extensive amount of smoke, and (b) is viewed by others with ‘burn piles’ as a license to burn as well”;
- “Resource management open fires for agricultural burning are the least efficient fires and create the worst smoke pollution”;
- “Industrial users should be identified separately from farmers and rural residential landowners – this legislation should not apply to rural residents as they only burn their small plots of land once in their lifetime”; and
- “Be absolutely clear on what types of burning is not covered by the OBSCR and still needs to be managed at the local government level.”

4. Open burning sensitivity zones

The ministries are proposing to amend the regulation to enable establishment of two smoke sensitivity zones based on population density and associated buffer areas – with provisions for further delineation of locally specific smoke management guidance through development of smoke management plans (see intentions paper sections 3.4 and 3.6 D).

Response Form Question 4.1: Do you have any comments regarding the ministries’ intention to establish two smoke sensitivity zones across the province – with the provision for additional locally specific smoke management guidance through development of smoke management plans?

Responses to this question fell into three groupings. The most predominate grouping supported the intention noting, for example, that two smoke sensitivity zones “make sense” or “are appropriate” [in meeting the OBSCR regulatory goal and objectives]. A second (and common) grouping of respondents felt that no smoke management zonation was necessary, often commenting that existing regulations and/or smoke management plans are sufficient and appropriate tools. A more limited grouping of respondents expressed support for three smoke management zones (as was proposed in the initial intentions paper) or a more nuanced gradation of zones for smoke management. A number of respondents also questioned the use of or the rationale for “buffer zones” within the primary smoke sensitivity zone. Other respondents expressed concern about tenures or activities, such as community forests or woodlots, that would or could be located within primary smoke sensitivity zones – and the potential restriction of burning on those tenures.

A number of respondents commented on smoke management plans in relation to this question. Several respondents recommended that the plans be “enforceable” and others suggested formal links or reference to “airshed management plans” and/or “burn plans” in the regulation. A number of respondents also recommended that the regulation should enable “locally specific smoke management plans” in both primary and secondary smoke sensitivity zones.

Response Form Question 4.2: Do you have any comments regarding the ministries' intention to use population density as the driving criterion for establishing smoke sensitivity zones?

Many respondents commented that population density is an "appropriate" or "useful" criterion as an initial or primary factor for establishing smoke sensitivity zones. Respondents commonly recommended refinements to this criterion however, commenting for example that : "it would be useful to include topographical considerations"; "density [alone] does not reflect potential population exposures" or "airshed boundaries... [and] prevailing winds should also be considered."

A number of respondents commented on the proposed density of 200 people/km² for delineating between the two smoke sensitivity zones. One respondent, for example, commented that "[this figure] is not very protective...an attempt should be made to include up to 90% of the [province's] population within the primary smoke sensitivity zone - realistically, this would likely only shift 5% of the land mass from secondary to primary smoke sensitivity zone."

Several respondents commented that it would be difficult to establish and/or change zone boundaries based exclusively on population density. Some respondents recommended using municipal boundaries. Others suggested, for example, "mirror[ing] interface areas as outlined in the Wildfire Act."

Response Form Question 4.3: Do you have any comments regarding the ministries' use of buffer areas around population centres to identify and map primary smoke sensitivity zones?

The term and proposed "10 km buffer area" around population centres for identifying and mapping primary smoke sensitivity zones raised strong and divergent comment among respondents. Some respondents felt that "buffer zones" are "too arbitrary" or "overly cautious" and/or that "rules when developed for specific zones should apply [only] to those zones and not be extended to surrounding 'buffers'." Others commented, for example, that "sensitivity zones should take prevailing weather and wind conditions [and topography] into account." Several respondents in contrast expressed "strong" or "full" support for the ministries' intentions commenting, for example, that "this [measure] will assist in preventing subsidiary smoke emissions from reaching persons in a primary smoke sensitivity area" or "will potentially increase the clarity of the information presented to burn operators." A number of respondents suggested that a clear rationale (for the buffer area) needs to be presented by the ministries and one recommended that "the term 'buffer area' should only appear as background information...as it leads to confusion."

Response Form Question 4.4: Do you have any comments regarding the mapping and updating of zone boundaries and/or suggestions regarding accessibility and effective use of smoke sensitivity zone maps?

Respondents commonly emphasized the importance of locally accurate and accessible maps of smoke sensitivity zones – available at a scale and in a format that is useful to interested parties (including tenure holders, burn operators and community interests).

Additional specific comments included:

- “Maps should be mailed...to each ranching and farming family...in advance of the burning season...and available on the computer as well”;
- “The updating process should include a provisions for small group[ings] of relatively high density populations to apply to be included in primary smoke sensitivity zones”;
- “It must be the Crown’s responsibility to create, maintain, update and make smoke sensitivity maps available electronically.”

5. Use of air curtain incinerators and forced air assistance

The ministries wish to encourage the use of air curtain incinerators as this technology can substantively reduce emissions when used properly. The ministries intend to revise the regulation to require use of forced air assistance in log sorts, and to authorize use of air curtain incinerators and forced air assistance in specified situations – in accordance with specified standards and requirements. Use of air curtain burners in these situations would not be “required” however, would enable a “relaxation” of rules, such as setback distances, for open burning. The ministries also intend to establish standards for air curtain incinerators and forced air assisted devices (see intentions paper sections 3.5 and 3.6).

Response Form Question 5.1: Do you have any comments regarding the ministries’ intention to require the use of forced air assistance in log sorts – with provision for use of alternative devices (i.e., blower fans) in locations where use of air curtain incinerators is not possible?

Respondents were sharply divided in their comments on this topic. Those in favour of the intention often noted that forced assistance technology may not be feasible in all situations – such as water access only operations or “woodlots... due to small openings and [the] dispersed nature of slash piles.” Other respondents however, commented, for example, that “air curtain technology is the best available...and should be encouraged where repetitive processes are in place [including] agricultural generators with annual clippings.”

Those expressing reservations or opposition to the intention felt that the provision would be “overly prescriptive,” “impractical” and/or “not cost-effective.” One respondent, for example, commented that “mandated use [of forced air assistance technology in many situations] will result in higher costs and poor performance for burn operators – any discussion of [this] technology should be limited to guidance documents.”

Response Form Question 5.2: Do you have any comments regarding the ministries’ intention to authorize the use of air curtain incinerators and forced air assistance in specified situations (e.g., when within a specified distance of schools, care facilities or hospitals)?

Comments received in response to this question echoed those received for question 5.1 (above). Respondents in favour of the intention noted that “when [the technology is] used properly, particulate emissions can be very low compared to open air burning” or that “there is a time and place for these.” Many other respondents however, expressed reservations commenting, for example: “[mobile air curtain burners] are a very slow and costly way to deal with only a relatively small [proportion] of total material to be burned”; “the regulation should focus on results, not a prescriptive approach that mandates the use of a particular piece of technology”; and “air curtain burners are unaffordable and impractical for a small tenure holder/ landowner.”

Additional specific comments included:

- “At certain times businesses, residences, or school grounds may not be occupied and the stated setbacks may be unnecessary...we suggest that the [regulation] include... the concept of ‘occupied’ for facilities requiring a setback”;
- “A good alternative for land developers to have available...however, the operators need to be certified...chipping/hogging is likely a better alternative but there is a limited market for the material”;
- “The major impact of smoke on residents in a valley is not determined by the proximity of burning but by meteorological conditions”; and
- “With an adequate blower fan to assist in burning these small volumes, the distance from residences and businesses should be 150 not 500 meters.”

Response Form Question 5.3: Do you have any comments or suggestions for the ministries regarding appropriate standards for air curtain incinerators and forced air assisted devices and inclusion of standards in the regulation?

A limited number of comments were received in response to this question. Examples of comments included “must be economically and logistically feasible”; “do not include in the regulation”; “make it so!”; “the results should be communicated not the methodology”; and “international standards, if they exist, should be used.”

Response Form Question 5.4: Do you have any comments or suggestions for the ministries regarding implementation of operator training and/or certification in use of air curtain incinerators?

Respondents echoed previous comments on this topic. Those who expressed concern or opposition to the intention commented that operator training or certification would be inappropriate or unnecessary. Respondents who supported the use of forced air assistance under provisions of the OBSCR however, commented, for example, that “operator competency will be extremely important to maintain air quality while using air curtain incinerators” and expressed support for operator training.

6. Rules governing open burning

The ministries are proposing to establish sets of rules (specific to open burning as defined in the regulation) for specified smoke sensitivity zones (see intentions paper section 3.6).

A. General rules (applicable in all zones)

Response Form Question 6.1: Do you have any comments or suggestions regarding the materials that should be allowed to be burned under terms of the regulation?

Responses to this question followed three general themes. First, many respondents commented that only vegetative materials (and not construction wastes, “garbage” and/or materials that “give off toxic emissions”) should be allowed to be burned. Second, several respondents commented that the regulation should support or encourage the seasoning or curing of materials prior to any burning, commenting, for example that “how material is piled and how long it has cured will have a greater impact on how much smoke is produced.” Third, a number of respondents commented that the regulation should discourage open burning and promote consideration of alternatives such as chipping, grinding and/or composting.

Several respondents commented on “agricultural” or “field” burning. Most respondents who commented on this topic recommended inclusion of agricultural burning and/or “of better field burning practices” in the regulation. One respondent who expressed a contrary view noted that “farmers typically use wood from land clearing that has value but need a reasonable method to dispose of the remaining debris...restrictions [on current agricultural practices] would limit the viability of open burning as an ongoing management tool...and regular crop management practices related to pest and disease control.”

Response Form Question 6.2: Do you have any comments regarding the proposed setback distances for burning form residences, businesses, school grounds, hospitals and community care facilities if air curtain incineration is used – 150 m from residences and businesses, and 500 m from school grounds, hospitals and care facilities?

Responses were divergent on this topic, with respondents who supported the proposed setback distances noting the importance of minimizing the impacts of smoke on human health and/or the importance of provision for further setbacks if deemed needed (e.g., weather and/or venting conditions). Many respondents however, expressed concern that the proposed setback distances are “too restrictive” with several respondents requesting a rationale from the ministries regarding the proposed distances. Concerns and recommendations raised by respondents included:

- “Add flexibility around schools on non-school days”;
- “A setback of 500 m from even a single residence will severely reduce the owner/manager’s ability to cost effectively abate forest fuel hazard adjacent to residential areas”;
- “Setbacks...should be tied to results, not prescriptive measures”;
- “Current distances have worked well to date for woodlots”; and
- “There [should] be no setback criterion in low population [less than 5000 persons per km²] areas of the province.”

Response Form Question 6.3: Do you have any comments regarding the proposed set back distances for burning from residences, businesses, school grounds, hospitals and community care facilities if air curtain incineration is not used – 500 m from residences and businesses, and 1000 m from school grounds, hospitals and care facilities?

Many responses to this question repeated comments provided to the previous question (6.2). Specific concerns or comments raised by respondents included: the potential for restricting fuel hazard abatement treatments; “onerous” setback requirements in low population areas of the province; and the importance of situation-specific wind and weather conditions in establishing appropriate setback distances. Other respondents expressed concerns that the proposed setback distances were “still way too close” or that “tighter restrictions [are needed] for primary smoke sensitivity zones.”

Response Form Question 6.4: Do you have any comments regarding requiring open burning to occur on land from which the debris originated (with the exception of debris from log sorts and forwarding facilities)?

Many of the respondents who commented on this topic questioned the rationale for the proposed intention. For example, several respondents asked: “as long as the material gets disposed of in a safe way without smoke in a critical zone, why should the regulation say anything about this?” Several respondents noted that moving material could be necessary to meet setback distances and would support burning or other use of vegetative material that reduces production of smoke. Some respondents recommended establishment of “drop points” for vegetative materials with facilities (such as an air curtain burner) for low smoke burning or use in wood pellet production. Others commented that in many situations “transportation is not economically feasible.” One respondent recommended a “quick [e.g., on-line] process to get permits...[that would allow] moving [of] material to another site for disposal.”

Response Form Question 6.5: Do you have any comments or suggestions regarding provisions for woodlot and community forest tenures where setback distances (including air curtain incinerator setback distances) cannot be met (allowing: (1) transport of the debris to fibre utilization facilities in the area; or (2) transport and open burning of the debris at another location within the tenure where setbacks can be met)?

Respondents to this question commonly repeated concerns that woodlots and community forests are often located in urban interface areas with associated fuel hazard abatement needs and that transportation of debris is “not economically feasible for woodlots.” Several respondents commented that the two options outlined in the intentions paper are “not enough [and would impose] a significant cost on those tenures.” A number of respondents asked why the provisions would apply only to selected activities or tenure holders, recommending instead that “all tenures be treated equally.” Other suggestions from respondents included: “establishing a debris drop-off site in a secondary smoke sensitivity area where a curtain burner is permanently in place”; and “encourag[ing] the transport of fibre to fibre utilization facilities such as cogen operations.”

Response Form Question 6.6: Do you have any comments or suggestions regarding the record keeping requirements that are proposed by the ministries (for Category 3 fires, records would be required to be held for at least one year following a burn and would include registration information, venting forecast and weather conditions, volume and source of debris burned and applicable training certification requirements?

Divergent groupings of comments were received in response to this question. One grouping commented (for example) that “the in-depth record keeping is too onerous and will add little if any value.” Several respondents suggested that existing sources (such as burn permits and venting forecasts) could be used for information. A second grouping of respondents supported record keeping requirements, commenting, for example, that the proposed intention “should not pose a hardship in most cases” or that “[this] is a great idea if it can be implemented.”

Additional specific comments included:

- “Information on burn duration, as well as type of materials/debris burned should also be included”;
- “Why is this required for a year? Any issues with smoke will be almost immediate and enforcement will need to act immediately?”;
- “We would prefer that these requirements were also in place for category 2 fires in the primary smoke sensitivity zones”;
- “Get operators to keep records for two years – this will ensure any overlap between annual versus fiscal years and associated study or statistical analysis”;
- “Currently there is a proposed requirement for burn operators to confirm the actual volume of debris that was open burned – this is a critical aspect for the province’s emissions inventory – actual volumes of fuels in a pile are difficult to accurately assess – the OBSCR needs to define a standard base volume per pile, and then develop a means to estimate the total debris volume”;
- “Keeping records of category 3 fires ‘on site’ is not practical where a burn operator’s office is ‘off site’ ”; and
- “Web accessible venting forecasts should be exempt.”

Response Form Question 6.7: Do you have any comments or suggestions regarding reporting requirements for operators who conduct open burning (for Category 3 fires, burn operators would be required to update information in their Burn Registration Number after the burn has been conducted?

Most of the comments received in response to this question related to the burn number registration process. Some respondents felt that the proposed intention of reporting when a fire is complete would be “unnecessary” or would “necessitate another call to the provincial forest fire reporting centre, effectively doubling the number of calls [to the centre].” Respondents also suggested means for the government (rather than burn operators) to maintain the information such as a “web-based reporting process” or a “single window” approach involving the Ministry of Forests and Range, working with other ministries. One respondent suggested a “registry of burn violators.” Some respondents noted also that reporting and record keeping requirements

may be “too onerous” for small burns and/or that government effort should be focused on “enforcement” rather than administrative costs.

B. Open burning in a primary smoke sensitivity zone

Response Form Question 6.8: Do you have any comments or suggestions regarding the provisions (smoke release period and venting requirements) proposed by the ministries for open burning in a primary smoke sensitivity zone?

A significant number of substantive comments were received in response to this question. Several respondents provided detailed alternatives for defining smoke release periods and smoke management practices intended to limit emissions in primary smoke sensitivity zones. A number of respondents commented that the proposed intentions are “overly prescriptive” or “too restrictive” and would not necessarily “achieve government’s desired results [for minimizing risks to human health associated with smoke from open burns].” Concerns raised by respondents included: the restricted timeframe for burning (based on limited windows of good venting conditions) that could concentrate the number of burns in an area to a limited number of days in a season; the increased potential of burns not being completed in a season (adding to forest fuel and risk of wildfires); the cost of air incineration; the difficulties and increased smoke caused by having to extinguish unfinished burns within a one day or other fixed time period.

Specific comments included:

- “The ministries should put a limit on the latest a pile can be lit in a day”;
- “The proposed regulation relies heavily on venting as the means to minimize the impacts of smoke release... other important factors include fuel moisture, weather conditions and wind direction...burning earlier in the year...when fuels are dry results in complete consumption of fuel and less smoke”;
- “Open burning should NOT be allowed without the use of air curtain incinerators in primary smoke sensitivity zones unless the burning is required for wildfire protection”;
- “[The ministries’ intentions] reduce the owner/ manager’s ability to complete abatement programs...forcing [a manager] to burn when venting permits but other conditions [may be] less favourable – this could result in an increase in smoke release and potential impacts”;
- “A requirement for using an ‘air curtain incinerator’ (forced air burner) would counter-balance the removal of the current regulation restrictions on the number of burns per year and the time between burns... by providing longer burn times when using an air curtain burner, this should help offset the added costs of requiring such a method for burning”;
- “Each case will have to be considered on its merits”;
- “If you have provisions that must be met, MOE must provide the staff to enforce [them]”;
- “It would be good practice to impose temporary bans on all open burning during (and for up to 48 hours after) an air advisory”;
- “There should be none [i.e., no open burning allowed]”;
- “The chances of achieving the standard (95% burned in one day – smoke gone in 2 days) are not realistic”;

- “The main concern for the primary zone should be the condition during the ignition day... the venting indices for ‘day of’ and ‘day after’ the burn are most relevant”; and
- “The MOFR may have to examine the use of more resource management open fires (RMOF) in these areas [primary smoke sensitivity zones] to facilitate their goals and objectives around forest health and silvicultural needs – RMOFs require the development of a burn plan for smoke management and are exempt from the OBSCR – if this [provision] is not abused by MOFR, it could be a useful tool.”

Response Form Question 6.9: Do you have any comments or suggestions regarding the exceptions to allow open burning in a primary smoke sensitivity zone and the planning and oversight that must accompany those burns?

Specific comments in response to this question included:

- “What is being contemplated as ‘other specified circumstances’ where an exemption may be authorized?”;
- “Exceptions should be at a minimum...exemptions are not desirable”;
- “Need to clarify and expand [direction] around ‘community wildfire protection program’ – this needs to be tied to approvals from MFR Land and Fire Centre Managers”;
- “There is also a fear that exemptions may not be granted [for such things as community wildfire protection plans]”; and
- “How difficult will it be to get an exemption? ”

C. Open burning in a secondary smoke sensitivity zone

Response Form Question 6.10: Do you have any comments or suggestions regarding the provisions (smoke release period and venting requirements) proposed by the ministries for open burning in a secondary smoke sensitivity zone?

This question generated fewer detailed comments than questions related to open burning in a primary smoke sensitivity zone. Several respondents commented that the intentions “look OK” or “are reasonable” – with some respondents adding caveats such as “so long as the boundaries of the smoke sensitivity zones are applied as proposed” or “as always wind and weather will dictate [the effectiveness of smoke management].” Some respondents felt that “considering the lower risk of this zone... the requirements are too restrictive” or that “should be no restrictions on the duration period of the burn.” One respondent found that the intentions paper was not clear “if extinguishment is expected in secondary smoke sensitivity zones” recommending that “mandatory extinguishment should be [required] only immediately in advance of a hazardous fire weather index developing.” A number of respondents commented also that “options [should be available] to operate under... an approved/ recognized smoke management plan” or that “the provisions are adequate as a default option for those not using smoke management plans.”

D. Smoke management plans

Response Form Question 6.11: Do you have any comments or suggestions regarding inclusion of provisions under the regulation that would enable development and use of smoke management plans for open burning?

Most respondents who commented on this question expressed support for the use of smoke management plans to guide burn management practices in specified areas. Supportive comments included: “an excellent idea”; “encouraging to see”; “a valuable option”; “a key component of a results based approach to smoke management” and “a laudable goal.” Some respondents however, expressed concerns, such as “this only works for Industry and not for the rural landowners.” Respondents had differing suggestions regarding the detail and purpose of a smoke management plan and on how plans should be developed – for example: “smoke management plans should be results based and be developed by a qualified professional under the *Forest and Range Practices Act*”; “a management plan should not be used to circumvent the default rules for smoke sensitivity zones specified in the regulation”; “in an area as diverse as the Okanagan-Shuswap Forest District it will be a very long process to develop and implement a plan”; “these plans should be approved for a minimum five year period and contain the strategies and methodologies necessary to achieve the results set by government for the plan area”; and “smoke management plans should stem from airshed management plans and groups where such exist – and this should be integral to the regulation.”

Additional comments included:

- “Templates for smoke management plans [should be] available before any changes [are made] to the OBSCR”;
- “Include primary smoke sensitivity zones in and their buffers in the smoke management plans”;
- “Include higher ‘best management practices’ (such as better quality piles, length of curing, ignition timing and such practices that help to minimize the impacts of smoke by promoting better combustion”;
- “Smoke management plans [should] be consistent across the province”; and
- “These plans must be flexible [so] that licensees can develop their own plans without being burdened by having to secure other stakeholder signatures to their plans.”

Response Form Question 6.12: Do you have any comments or suggestions regarding the process that would be used for developing, and the parties that should be involved in preparing and finalizing, smoke management plans?

Respondents provided a range of suggestions regarding the process for developing and finalizing smoke management plans. Several respondents recommended that plans not be “Forest District wide” in scale as geography and conditions vary too widely over such large areas. Several respondents recommended “a professional reliance approach” – with plans developed by a professional (similar to provisions under the *Forest and Range Practices Act*) with a requirement for approval only when the plan covers “interface areas or the primary smoke sensitivity zones

contemplated in the intentions paper. "Some respondents noted that smaller operators or tenure holders do not have the resources to develop complex plans so "government should allow for single operator smoke management plans" or that "there is no need for a smoke management plan for small operators."

Some respondents commented that the intended process "seems very complex and bureaucratic" and "recommend[ed] against a multi-stakeholder process to prepare plans." Other respondents commented (for example) that "we agree with the suggested list of participating stakeholders." One respondent suggested "collecting public input at the start of the planning process and incorporating it into the plans." Other suggestions included: "preparation by the tenure holder or small group of tenure holders for areas of sufficient size, such as a management unit"; "single operator smoke management plans"; and "creation by government and interested burn operators [with] remaining interested parties given notice of the plan."

Additional comments included:

- "Of special note is the need for incorporation of First Nations [rights and interests] with the smoke management plan and the application of the OBSCR to First Nations lands – considerable tension can occur where burns are occurring in one jurisdiction and precluded in others";
- "Ensure continuity of 'approval' by someone knowledgeable in air quality such as a meteorologist and where appropriate consultation with the Medical Health Officer, not operator self- endorsement";
- "Concerned about the potential workload to MOE to involve other operators in local burn plan efforts – who would coordinate/lead this [smoke management plan process]? How would this be resourced?"; and
- "We would like to have the option to develop our own plans and have these approved by local ministerial officials who also know the local conditions."

7. Process for assessing and authorizing an open burn

The process for assessing and authorizing an open burn under the regulation is described in section 3.7 of the intentions paper.

Response Form Question 7.1: Do you have any comments regarding the information that operators should be required to provide when obtaining a Burn Registration Number and following completion of a burn?

Several respondents commented that existing information requirements – "GPS coordinates, the type and number of piles, the type of material, how long the material has been piled and the approximate volume or area to be burned" – are "sufficient" or "acceptable." A number of respondents noted that the process for assessing and authorizing a burn "should emphasize the importance of seeking alternative disposal methods" commenting, for example, that "open burning should really be considered a last resort option" and that "options [to burning] should be considered and evidence provided that they were not possible."

Additional specific comments included:

- “The municipality and/or the fire department should be advised of the intentions of the operator and approval received prior to burning”;
- “Burning on federal lands [should require a burn registration number and be reported]”;
- “Application for a burn registration numbers requires a volume of debris estimate so base the province's burn emission inventory on that number and eliminate the need for a burn operator to confirm the actual volume – less reporting!”;
- “Registering for the burn number should be made available between seven days a week from 6:00 AM to 9:00PM – currently, burn registration is only available five days a week, thereby limiting the chance of burning when conditions are good”; and
- “Authority [for authorizing a burn] resides within the *Wildfire Act* – OBSCR establishes conditions that must be met by the burn operator regarding the burn.”

Response Form Question 7.2: Do you have any comments or suggestions regarding development and utilization of a “single window” approach for accessing information about open burning regulation and practices?

Almost all respondents who commented on this question supported the development and utilization of a “single window” approach. Several respondents emphasized the importance of clear roles and responsibilities among the ministries if such an approach is to be successful, commenting, for example, that if the “approach is to work, there needs to be a single agency responsible for implementing burning, not multiple agencies.” One respondent suggested that the following information be provided: “the reference number, detailed and updated smoke sensitivity maps, Venting Index, predicted wind and weather information, as well as details of the current regulations, all in one location for efficiency and ease of use.” A respondent expressed concern that “a burn operator must be able to burn when conditions are right on a site by site basis [hence a ‘single window approach’ may not be appropriate].”

Additional specific comments included:

- “It must be made clear through the OBSCR and supporting documents that there is no application, approval or authorization to burn debris piles in either the OBSCR, or the *Wildfire Act* – it is the responsibility of the burn operator to ensure burning and venting conditions meet the requirements of the OBSCR, *Wildfire Act* and regulations and other associated legislation”;
- “Education is key, a pamphlet with information should be given out with permit”;
- “[The ‘single window’] must support dial-up internet – test it out in the Kootenays... Rural residents don't have access to high speed in this province, and therefore won't have access to your requirements if you can't make it user friendly for dial-up residents”; and
- “The municipality and/or the fire department should be advised of the intentions of the operator and approval received prior to burning.”

Response Form Question 7.3: Do you have any additional comments or suggestions for the ministries regarding the process for assessing and authorizing an open burn?

A range of specific comments were received in response to this question, including:

- “Specifically for category 3 [i.e., larger] fires could there be some language in the regulation for discretionary air quality monitoring?”;
- “[Increased field presence] something like the old days where the Ministry of Forests officer would visit the site and issue a permit – this should only be contemplated for machine piles (category 3) not for hand piles (category 2)”;
- “Burn registration numbers should not have a time limited validity – it is quite common that for poor venting indices to persist for a protracted periods of time”;
- “[Our association] recommends that all approval tests be clearly documented and communicated, including the requirement to provide a rationale should an application be rejected”;
- “Start regulating the air better with proper air quality test[ing]”;
- “There is heavy reliance upon the operator following the venting criteria – even endorsement of a smoke management plan by MOE is still highly dependent upon a competent operator following the conditions to hopefully arrive at a satisfactory outcome”;
- “I see things getting very confusing for the general public, especially if there are municipal bylaws, a smoke management plan, and primary and secondary smoke sensitivity zones within the area”;
- “The ability to conduct a test burn to determine venting suitability needs to be tightened... all smoke will go up (heat rises) but this doesn’t necessarily mean that the venting is good”;
- “MFR authorizes burns based solely on wildfire risk, although the requirement to maintain air quality is noted by the burn registration operators – it will be important to ensure the OBSCR requirements are very clearly communicated and understood so that when a burn registration number is issued, the applicant is aware of all of the air quality maintenance and reporting requirements”;
- “Burn operators should be certified to ensure that best practices are always followed for both category 2 and category 3 open burns”;
- “[Many woodlot operators] are not able to meet some of the extra cost items and need to ensure that we do not cause a wildfire especially when the smoke from such a fire is 100 times greater than a burn when proper venting exists”; and
- “We are concerned about the level of enforcement that may or may not occur, especially in the more remote areas where no one may even notice what activities are occurring.”

8. Powers and penalties

The ministries intend to add or strengthen provisions in the regulation to improve enforceability, recommended in previous reviews (see intentions paper section 3.8).

Response Form Question 8.1: Do you have any comments or suggestions for the ministries to consider with regard to powers and penalties under the regulation?

Almost all respondents who commented on this question supported effective enforcement with several, for example, commenting that “compliance and enforcement is a component of any regulation.” A number of respondents highlighted the importance of education (for example,

“of the difference between reporting wildfires and smoke concerns”). Respondents also recommended practical and appropriate enforcement penalties “scaled to the operator.”

Additional specific comments included:

- “Where an operator acts in accordance with best management practices, there should be no compliance and enforcement consequences regardless of the amount of smoke that is emitted”;
- “It will likely be unclear to the public which Ministry will implement and enforce this regulation”;
- “What Ministry or Ministries will have the authority, and will there be any ability to enforce for anything other than clearly obvious setback violations? Since venting is something predicted, will there be any sound way to enforce or issue penalty when burning conflicts with the actual venting criteria, or will this get all knotted up in the predictive aspect of venting and fall back upon proof that pollution caused harm? Will there be any proactive abilities, or will all be reactive to a situation that is too late to prevent? Does Smoke Management Plan move enforcement to another party?”;
- “Monetary penalties should only occur after verbal and written warnings established by clear, simple rules”;
- “We support the ministries consideration of improving enforceability, including the issuing of tickets for infractions – if this cannot be adequately enforced then we are concerned voluntary compliance is not going to protect public health”;
- “The current regulation and the potential for the ministry to deny burn registrations may effectively prevent forest licensees from completing their tenure obligations... additional regulatory penalties, procedures and provisions will not improve the effectiveness of open burning”;
- “It might be prudent to make the fine equivalent to the amount of employing what an alternative measure might have cost in the first instance, such as chipping, or using an air curtain incinerator”;
- “We would like to see a 1-800 number set up so that neighbours, concerned citizens, or local government officials could get in touch with the MoE to report a violation – this would be similar to the RAPP program (Report All Poachers and Polluters) – this could also help the enforcement agency focus on repeat offenders”;
- “Penalize for endangering human health – not for record keeping, etc.”;
- “There should be fines levied against municipalities who do not comply with or have by-laws which are less stringent and superseded by the province’s OBSCR”;
- “Need to be clear on which types of burns we will be enforcing the OBSCR rules on”;
- “Enforceability must be province-wide”;
- “An administrative penalty regime needs to be included as an enforcement option – prosecution can be cumbersome, time consuming and expensive for all involved – some OBSCR contraventions may occur in conjunction with *Wildfire Act* contraventions and it would be useful to deal with both contraventions through and administrative process rather than having two separate approaches.”

9. Supporting implementation and compliance

Response Form Question 9.1: Do you have any comments on or suggestions for the ministries regarding development and use of “best management practices” or other guidelines for smoke management of open burns (see section 4.1 of the intentions paper)?

Many respondents who commented on this topic expressed support for the development and use of best management practices guidance materials in support of the regulation. Several respondents added that it is important to clearly communicate that “best management practices are not legislation but guidelines to assist practitioners.” A number also suggested that developing such guidance prior to amending the regulation would help in building support and understanding among burn operators and other interests. Several respondents commented that it would be very useful to tailor (at least some) best management practices guidance to small operators to ensure relevance and adoption among this group.

Additional specific comments and suggestions included:

- “Enforcement and education is the key – excessive regulation and penalties only will cause debris not to be disposed of increasing the hazard to Wildfire interface problems”;
- “The Vancouver Island info flip for open burning is an excellent resource item for that region; similar info flips should be designed for other regions”;
- “Currently, funding for CVF [custom venting forecasting] is not being made available by the government thereby, removing one of the best tools for smoke management the Province has available – the ministries must combine resources to ensure adequate funding is secured to provide this service across the province – shared funding through a user pay system may be an alternative”;
- “For ranchers good meteorological conditions often mean that the best burning times conflict with the best venting times – exemptions from the regulations should be made for situations when it makes sense to burn regardless of venting conditions”;
- “There should be an enforceable nuisance clause established so that anyone that is bothered by the emissions can submit a complaint”;
- “The US EPA and Canada's CSA have excellent resources in this field [as well as] the Canadian Association of Fire Chiefs”;
- “I would like to see the requirement to season or dry to <20% moisture within the regulation, but at minimum this should be placed into best management practices”;
- “There is a need to ensure consistency and clarity in the use of terminology...terms such as standards, rules, guidance and practice do not have statutory requirements and therefore, raise doubts about what exactly legal requirements are and their enforceability”;
- “Staff must monitor open burns and be able to hold operators accountable”;
- “The option of alternatives (such as composting) should be reinforced – any agency applying for a certificate should need to show how their open burning plan incorporates the BMPs.”

Response Form Question 9.2: Do you have any comments on or suggestions for the ministries regarding promoting and assuring compliance with the OBSCR and/or other regulations governing control of smoke from burning (see section 4.2 of the intentions paper)?

Many of the comments received in response to this question pointed to the overlaps, differing regulatory objectives and potential for confusion in understanding the legislation related to open burning, smoke control and wildfire management. Respondents commented, for example, that “the roles and responsibilities of each government agency (MOE, MHLS, MFR, etc.) related to OBSCR and burning, needs to be clearly documented and communicated.” One respondent commented that “the public must know who to call [for enforcement concerns] and they don’t want the run around... a lot of the public probably thinks that if it has anything to do with a fire they should call [Wildfire Management Branch of the Ministry of Forests and Range] WMB.”

Respondents pointed out aspect of the regulation which could be confusing (e.g., categorization of pile burning by the forest industry) and groups (such as “farmers, ranchers, cabin owners and rural residential citizens”) who will likely not be aware of the regulation or find it too complex. As well as effort to ensure accessible and consistent information, respondents suggested “frequent compliance reviews,” “an increase of staff for MOE,” “work[ing] closely with industry” and “promot[ing] other ways of disposal of refuse” as means for supporting compliance with the regulation.

10. Protection of human health and the environment

Response Form Question 10.1: In your view, how effectively do the ministries’ intentions and proposed amendments to the OBSCR address the goal of reducing or minimizing impacts to human health and safety by reducing air pollution from open burning?

A number of respondents who commented on this topic expressed skepticism about the effectiveness of ministries’ intentions or saw “significant gaps” in the proposed direction. The reasons for concern can be sharply divided into two groupings. First, some respondents felt that the intentions “do not [adequately] address the economic burden that will place on the forestry, ranching and development industries in B.C.” This grouping of respondents frequently pointed to operational limitations in meeting intentions (particularly in primary smoke sensitivity zones) and/or to conflicting regulatory obligations for fuel hazard abatement. The second grouping of respondents, in contrast, felt that “the overall goal of the regulation should be to minimize human health impacts (not just reduce the impacts)” and that the regulation should contain additional provisions to restrict open burning and/or mandate use of air curtain incinerators.

Specific comments and suggestions in response to this question included:

- “A more incentive based system that helps develop the utilization and value of the debris being burned needs to occur in conjunction with these proposed changes”;
- “Quite effective: the proposed amendments provide further restrictions and controls on open burning activities within the province which should result in meeting the goals and objectives of the regulation – the amendments provide further clarity on smoke sensitivity

zones, definitions, scope, restrictions, controls and opportunities for flexibility of open burning practices (under prescribed circumstances), via smoke management plans and best management practices”;

- “This is incremental improvement over the current situation – the large population based that is planned to be less protected is not acceptable and remains a large gap that needs to be closed”;
- “The use of arbitrary smoke sensitivity zones instead of developing local smoke management plans is a significant flaw in the proposed regulation”;
- “Regulation as currently written... does [not] recognize that the existing process is functional...some changes are necessary within recognized PSS zones but the current measures are far too prescriptive and with impede operations”;
- “It is absolutely essential that a uniform set of rules be applied consistently across B.C. so that the populations are protected against the hazards of wood smoke caused by the open burning of waste and wood waste – the proposed rules would appear to be very effective if implemented in full – ministers should explain to B.C. residents that open burning is no longer an option in future in the disposal of waste and green waste and municipalities and Districts must employ a green waste disposal plan”;
- “Heavier penalties for violators.”

Response Form Question 10.2: Do you have any other comments or suggestions for the ministries regarding the regulation of smoke control and open burning?

Many respondents provided substantive additional comment or supplemental information (such as examples of smoke management plans, newspaper clippings and photographs of smoke issues in different regions of the province) in addition to commenting on the questions in the response form. These comments have been compiled and transferred to the ministries for review and consideration.

Specific comments and suggestions included:

- “Prior to the implementing any regulatory changes, a sufficient transition period must be established to enable burn operators to incorporate the changes into their plans and activities”;
- “[Our organization] proposes a FRPA type structure whereby burn operators have the option of following default practice requirements or employing professional reliance through locally developed smoke management plans – default practice requirements are intended to provide clear direction for burn operators, especially those who may not be able to afford the services of professionals – alternatively, the option to create a Local Smoke Management Plan provides burn operators with the ability to innovate and to prescribe methodologies better suited to local conditions (i.e. topography, wind patterns, etc.) to achieve optimal results – we also recommend that the regulation provides for variances, exceptions and exemptions both in the default practice requirements as well as the Local Smoke Management Plans... [our organization] recommends adopting a results based approach to smoke management – all references to prescriptive measures and actions not directly linked to achieving the stated results should be eliminated”;

- “The [proposed] revisions to the OBSCR also fail to streamline the regulatory framework by continuing to have both the *Wildfire Act* and the *Environmental Management Act* govern forest sector open burning activities”;
- “OBSCR needs to somehow tie into the goals in the new B.C. wildland fire management strategy to enable the continued use of open fire as ‘one’ tool to meet land management objectives”;
- “The ministry should be encouraging the burning of piles to reduce fire hazard and ultimately to reduce uncontrollable large smoke release events from later wildfires consuming debris piles and adjacent slash accumulations”;
- “A great deal of work needs to be done along urban interface zones province-wide – air quality concerns need to be balanced against the risk of catastrophic losses to life, property, and community values due to wildfire – not to mention the air pollution and other environmental damage that would result from a wildfire”;
- “We need to keep open burning as a land management tool to abate hazard, both within the 2km interface zone and beyond – the challenge will be to exercise this use of open fire responsibly through best management practices”;
- “When large piles of debris (such as generated at log handling facilities) are ignited, they may take a week to fully consume the materials, even with forced air technologies – it is most efficient to allow the burn to follow its natural course – should expected venting change, attempting to extinguish a debris pile in midstream to comply with a duration limit would be not only difficult, but counter-productive”;
- “Is [there] an avenue to have ‘Resource Management Burn Plans’ **recognized** and accepted in the new OBSCR, particularly in interface areas... and [to] use the South and East Vancouver Island Burn Plan venting matrix standards,... BMP’s (curing, pile quality, ignition timing, alternatives considered where viable) and smoke management considerations, [with] ventilation forecasts...?”;
- “ ‘Resource Management Burns’ are already exempt from the OBSCR and [we understand that they] will continue to be exempt in the revised OBSCR – the issue of relaxing ventilation index requirements in primary smoke sensitivity zones needs to be discussed further... the concern from our group is that if Good-Good venting is used, this may be a very TIGHT window that will push numerous open burn activities (land clearing, backyard burning plus Resource Management Burning/Community Wildfire Protection Plan-Fuel Management operations, etc. [into the same time window]”;
- “PM 2.5 is recognized as being important, yet a challenge with no easy short term fix, and alternatives to open burning continue to be somewhat limited (or not economically viable, fluctuating hog markets, etc), more time is needed before tightening open burning regulations”;
- “[Our organization] supports any management actions, including revisions to the OBSCR, that limit or reduce fine PM and believes such actions are a key element of an overall strategy to manage and improve air quality in [our city’s] airshed”;
- “The air quality monitoring network in B.C. is inadequate to ensure that these standards are met – more continuous air quality PM2.5 monitoring sites are needed across the province”;

- “The new intentions paper is weak compared to the original proposal – it will be impossible for BC to achieve its goal of ‘leading the world with the best air and water quality, and the best fisheries management, bar none’ under the proposed regulations”;
- “B.C. rural landowners must have a cost effective, efficient method of debris disposal”;
- “Small woodlot operators...shouldn’t be put in the same bracket as the major logging licensee”;
- “Woodlot licensees, many of whom are also private forest landowners, have [serious concerns] regarding the OBSCR as described in the intention paper... these licensees... have the legal obligation to dispose of waste from harvesting and road construction – many reside in wildfire interface zones and wish to manage fuel loading to safeguard nearby communities and residences – the OBSCR, as proposed, will not allow licensees to meet these objectives”;
- “We are very disappointed that open burning is still allowed in populated areas where people’s health [is] very much at risk”;
- “With the loss of the pine forests in the interior of BC... the pines on our ranches are dying... time is of the essence to harvest what is dead, what is dying and what is going to die before these trees start to decay – therefore we believe new regulations only impair our ability to harvest what is left before it becomes too degraded to market and later to get rid of the decaying timber for replanting”;
- “We are concerned about the capital/operating costs required for portable wood chippers, transportation to and operation of regional stump grinders, and the purchase of flail mowers in the agriculture industry, especially for ‘own-farm generated wood waste’... we would like to see a commitment from the administrators of the Environmental Farm Plan program that these practices, and other agricultural practices that are identified in the ‘Best Management Practices’ of the OBSCR, be eligible for EFP project funding (also by coincidence called ‘Beneficial Management Practices’) – we feel strongly that the funding solutions, in terms of new capital and operating costs imposed by the OBSCR, must be implemented prior to imposition of regulation... finally, we need a provision in the new regulation (perhaps a special permit) for extreme circumstances where a pest and disease can only be controlled by burning infested trees”;
- “[We suggest that the ministries consider and provide] financial incentives to the industry for disposing of wood waste by alternative methods... such as: a) waiving stumpage fees on waste piles that are disposed of by alternative methods; b) appraisal allowances for grinding waste piles on Forest Licenses; [and/or] c) waiving the need for secondary licenses for grinding waste piles on Small Business Sales”;
- “If the province is interested in pursuing land filling, composting, chipping and hauling waste to energy facilities then we would ask that costs (i.e., the fuel, manpower and equipment costs) associated with these potential uses be subsidized by the province”;
- “A key activity that was not mentioned in the Policy Intentions Paper is Custom Venting Forecasting – it has been used on a trial basis within B.C. and has shown very positive results – where it has been employed, negative impacts from smoke as a result of open burning have been substantially reduced – its use has also resulted in many added benefits for burn operators – these include increased certainty as to when burn operations can take place, reduced costs as a result of the improved certainty, and improved compliance with hazard abatement obligations”;

- “[Our association] also feels that the ministries need to address/consider... 1) [the] inadequate number of weather stations in B.C. to accurately record and predict weather conditions – weather stations need to be accurate in order to predict venting conditions to determine appropriate smoke release periods to minimize the production of smoke during burning – more weather stations need to be implemented and located on agriculture land in order to provide an accurate Venting Index; the current Venting Index sites do not accurately predict the varying air sheds in B.C. – a dysfunctional Venting Index system such as this only causes more smoke... 2) economic value in wood waste – developing an economic value for wood waste would be highly beneficial; if all wood waste was marketable, or a market existed for it, many smoke problems would be solved... 3) resource allocation – [our association] would like to suggest that the ministries implement some of their resources into spacing, thinning and improving the grasslands to reduce the amount of fuel in our forests – some fires are required to maintain a natural and healthy environment; therefore the ministries should consider allowing smaller fires to burn while controlling them”;
- “[There may be a situation where there is] more than one open burns in a sensitive airshed conducted by different parties all at the same time and all of them following the regulations but the cumulative smoke and PM may be unacceptably high – what is there to prevent this?... Why allow open burns without forced air assistance when we know it is the best technology? Are there requirements on how the burn pile is stacked/ constructed for best air flow? How about bio-char production as an alternative technology? It could potentially enrich the soil and sequester carbon”;
- “[We would] like to suggest that the Bulkley TSA be used as a pilot to develop and test the practices of a Local Smoke Management Plan, under the spirit and intent of the new OBSCR”;
- “Making criminals out of ranchers for piling and burning dead mountain pine beetle trees, or cabin owners for burning dead aspen trees before they blow over onto their/or their neighbour’s cabins is counterproductive”;
- “It’s unconscionable the [ministries] would permit the majority of the public who reside in the valleys where concentrations are highest due to inversions to be exposed to cancer causing effects of wood smoke”;
- “We strongly recommend that the regulation not be applied to remote locations (say >20km from population density) – we also recommend that the regulation be written with significant flexibility, to enable those that legitimately do need to emit smoke to employ local judgement and expertise for optimal burn management and air quality benefit”;
- “There must be a strong public awareness campaign... that outlines not just the implementation of the regulation but includes alternative activities/procedures being implemented by government and industry that are help to meet the goal to reduce or minimize impacts to human health and safety by reducing air pollution from open burning”;
- “Whatever changes are implemented, they are only meaningful in so far as those changes are: 1) made available to parties involved through effective communication [and] 2) made enforceable by employees in the field, be they conservation officers, air resources personnel or meteorologists... existence of rules and guidelines are ineffective, if there is no one to oversee their implementation and resulting outcomes or punishments for those who do not comply – please reconsider waste-to-energy technology [incineration of ‘garbage’]... as to technology restricted to biomass incineration, it may be a solution in some locations but it must never be allowed to develop into an opportunity to burn garbage”;

- “The intentions behind these regulations are good, but due to the inequality of the air curtain burner requirement, the result will be significant public opposition... I propose the following: 1) implement an open and meaningful consultation process, 2) eliminate the 500 metre ban on burning without air curtain incinerators, so that all rural landowners have equal opportunity to enjoy their property and to maintain its value, 3) re- institute inspections of burn piles by officials prior to burning to ensure a clean piling and curing, 4) if necessary, to finance the inspection process, implement a fee for inspection, and 5) allow for variance to the general regulations by local officials based on local a needs and conditions”;
- “What is in place is more than adequate...the proposed revisions...add another layer of...regulatory control”;
- “If you must, regulate those areas around high density populations – the outlying areas of the province... are not interested in ...[this] type of regulation”; and
- “Regional districts [are] lacking in adopting outdoor burning bylaws... the B.C. government should have provincial enforcement in all backyard burning abide to the venting index... we have a neighbour with the *highest* assessed residential property [in our region] who burns from October until May, many of them poor venting days and [there is] nothing we can do.