

WOOD PROCESSING INDUSTRY CODE OF PRACTICE

INFORMATION UPDATE – POLICY INTENTIONS PAPER

POLICY RESPONSE TO PUBLIC COMMENTS

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Wood Processing Industry Code of Practice

1. Introduction

The Ministry of Environment (the Ministry) is currently considering establishment of a code of practice for the wood processing industry, in consultation with industry representatives, provincial ministries and other stakeholders.

1.1 Background to the consultation process

A policy intentions paper was posted for public review and comment on the ministry's website (<http://www2.gov.bc.ca/gov/content/environment/waste-management/industrial-waste/pulp-paper-wood-manufacturing/wood-processing>) from September 25 through November 9, 2015. The policy intentions paper provided information regarding related legislation, and identified consultation issues for discussion to build understanding about the subject and provide a structure for comments and feedback.

1.2 Purpose of the *Compilation of Public Comment* document and Policy Response

A public response document has been prepared for the Ministry of Environment by C. Rankin & Associates, who was contracted by the ministry to independently receive, compile and review comments. 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, have been reviewed and carefully considered by the ministry in developing the code of practice.

The resulting policy update provided in this document reflects a revised policy vision in response to the considerations brought forward in the public consultation process. The primary policy areas under revision include:

- Facility size thresholds for entering into the code;
- Air quality dispersion modelling requirements;
- Defined standard limits for select air and effluent discharges;
- Use of a qualified professional and development of a site-specific Environmental Management Plan.

Each of these considerations, and the updated policy vision are described in the relevant sections below.

2. Policy Proposal and Response to Public Comment

The Ministry is currently in the process of consulting on the development of a code of practice for the wood processing sector. The code would be established under the *Environmental Management Act* (EMA) and would replace individually issued permits as the primary instrument for regulating discharges to the environment related to wood processing.

In a recently released [Intentions Paper](#) (Sept 2015) the Ministry proposed that the management of waste discharges related to wood processing be managed through three primary mechanisms within the code:

- (1) entry threshold of 35 million board feet (MMFBM) of lumber annually,
- (2) defined standard limits for select air and effluent discharges,
- (3) air quality (AQ) dispersion modelling would generally be required for operations that are planning to add emission sources, or modify an existing source (emissions increase $\geq 10\%$),
- (4) non-emissions related management requirements would be addressed through an Environmental Management Plan (EMP), developed by a qualified professional.

Government and industry stakeholder groups suggested that the proposed policies for items (1) 35 MMFBM threshold, (3) AQ modelling and (4) EMP requirements need additional review to ensure that concerns raised through the public consultation process are adequately addressed prior to implementation of the code. No substantive concerns were brought forward related to item (2), which is now considered by the Ministry to be confirmed policy direction.

3. 35 MMFBM Entry Threshold

The original policy intent as described in the Sept 2015 Intentions Paper was that the proposed code will apply to all primary wood processing facilities producing greater than **35 million board feet** of lumber annually, as well as select secondary wood processing facilities

3.1) Summary of public comment – 35 MMFBM threshold

A summary of public comments related to the 35 MMFBM threshold are provided below:

- The 35 MMFBM threshold is too low – the administrative and cost burden of developing an Environmental Management Plan for one small operation will unduly drive the costs up. This is fine for a corporate operator who can write the costs over a massive volume and has the people resources to support the requirement. Not so for a 35 MMFBM producer. **We suggest the threshold be moved to 50 MMFBM.** (emphasis added)
- Facilities under 35 million board feet. Why should they have a different set of rules?
- The 35 MMFBM is far too low. Granted, half our members have gone out of business and the other half are operating at reduced capacity primarily due to the SLA 2006 related taxation of our US bound products by the Governments of BC and Canada ... but that tax is now off. Subject to fiber availability, the survivors hope to be able to restore their businesses to previous operating levels and suggest that the 35 MMFBM is arbitrary and **should at least be doubled to 70 or 75 MMFBM.** (emphasis added)

- The proposed mill capacity threshold for which the Code will apply is too low. We feel that many smaller single site facilities will not benefit from this Code and will incur a substantial cost burden.
- Increase the threshold for which the Code of Practice would apply to mills producing **over 75 million board feet** (emphasis added). Even with the increased threshold, there are still a few single facility mills that possess all the attributes of a small operator and consideration should be given for those mills to be included in a small operator framework mentioned below.
- Allow mills that are under the threshold to opt into the Code of Practice if it presents a benefit to their operations over the current permit system.
- Develop a small operator framework once the larger operator Code of Practice is implemented. Development of this small operator framework should involve the ILMA from an early stage as we feel we represent a good cross section of smaller mills (much like the currently contemplated Code of Practice engaged larger companies early on).

3.2) Policy Update – Proposal to increase the threshold to 50MMFBM:

Based on the stakeholder feedback provided during the comment response period, the ministry is proposing to increase the entry threshold into the code to **50 MMFBM**. The rationale for the updated threshold includes:

- Responsive to the concerns of the wood processing sector;
- Still meets to the overall policy objectives of capturing the majority of wood processing facilities under the code;
- A small operator module may still be considered for a future date to capture those facilities producing less than the 50 MMFBM thresholds;
- The cost and administrative concerns related to the development of an EMP was one of the primary points of concern surrounding the 35 MMFBM threshold. Section 5.2 below provides a policy alternative to the site-specific EMP that should alleviate any outstanding cost and administrative concerns expressed by small operators in the comment response summary.

4. Air Quality Dispersion Modelling Requirements

The Sept 2015 intentions paper (page 6) describes the original policy vision for when AQ dispersion modelling would be required:

- **New facilities** would be required to conduct air quality dispersion modelling, with consideration to B.C.'s air quality objectives and standards, prior to registration under the code.
- **Existing facilities** that are planning to add new emission sources, or modify an existing source (emissions increase $\geq 10\%$) may be required to conduct modelling, based on considerations such as:
 - the percentage increase in facility discharge of contaminants of concern (PM^{2.5});

- the proposed emission increase is at a facility where current emission levels are a known concern, and/or
- ambient air quality objectives and other airshed-specific considerations.

It was proposed that, based on modelling results, the facility may then be required to meet emission limits that are more stringent than those listed in Table 1 or otherwise mitigate the associated risk (e.g. install baghouse technology instead of cyclones). The determination on how best to mitigate the risk would be left to the discretion of a qualified professional, in the context of the EMP.

4.1) Summary of Public/Working Group Comment – Air Quality Modelling Requirements

A summary of public comments related to air quality modelling requirements are provided below. Feedback from ministry staff and the industry working group related to air quality modelling has also been captured:

- We believe there is an opportunity to review Air Quality Modelling requirements, particularly the approach to Screening-Level Modelling, to streamline the process.
- We recommend that the Ministry work with industry to review the modelling framework to identify an alternate approach.
- We support the inclusion of exemptions from air quality modelling for remote locations, protecting human health and safety, and emissions trading programs.
- A better approach is to have certain circumstances trigger versus an across the board requirement unless you meet an exemption criteria.
- Currently a greater than 10% increase in authorized emissions (Reflective of Section 14 (4) of the Environmental Management Act: Where an increase of greater than 10% of authorized emission within a permit triggers the need for an amendment) of all specifically authorized contaminants for a facility could trigger modeling. This is rather arbitrary and some better metric needs to be determined. ‘Significance’ could be assessed against an existing source emission inventory where one has been conducted for an airshed or it could be assessed relative to current emissions from the facility.
- General summary of comments from ministry staff (verbal and written):
 - Under the proposed code, there is no ‘approval point’ (permit/authorization). As such, the process lacks a decision-point by which a decision-maker could impose additional requirements if modelling results raise concerns.
 - The Intentions Paper describes a process where the independent QP would make a determination on whether or not to install more stringent control technology without the advice/requirement from ministry staff. This would be challenging to implement effectively and would not provide consistency or certainty for the sector, for local resident groups, or for ministry staff.

4.2) Policy Update – Eliminate mandatory air quality modelling (add criteria for reduced PM limit)

Under the current permit-based model for sawmill air discharges, when air quality dispersion modelling indicates a potential for PM to be in excess of the air quality objective or standards, the statutory decision maker (SDM) will generally impose a more stringent control technology (i.e. baghouse vs. cyclone) to minimize the impact of the discharge. As such, the Ministry would like to propose an alternative to air quality monitoring requirements that mirrors this approach rather than the requirement for air quality modelling .

Under the updated policy proposal, there will be no mandatory air quality dispersion modelling required under the code.

In lieu of mandatory air quality modelling, facilities will be required to meet a total particulate limit of 50 mg/m³ for the applicable new or modified source if all of the following criteria apply (see diagram 1 below):

- The facility will be adding new emission sources, or modifying an existing source, which will result in a PM emissions increase > 10%, **and**,
- The percentage increase is from a dry wood or combustion source (e.g. sanders, planers), **and**
- The new or modified source (i.e. stack) is set back less than 500 m from the nearest property line of any schools, hospitals or community care facilities.

The policy intention behind implementing these three criteria is that these are the contributing factors which most commonly trigger a requirement to conduct air quality dispersion modelling, and subsequently more stringent control technology (e.g. baghouse over cyclone).

If a facility plans to expand or modify operations in an area where there are residences nearby, it is recommended as a best practice that the operator and their qualified professional aim to minimize/mitigate the potential impacts on public health through the use of more stringent control technology or offsets. However, only specific receptors such as schools, hospitals and community care facilities are proposed as criteria for a reduced PM emission limit under the code.

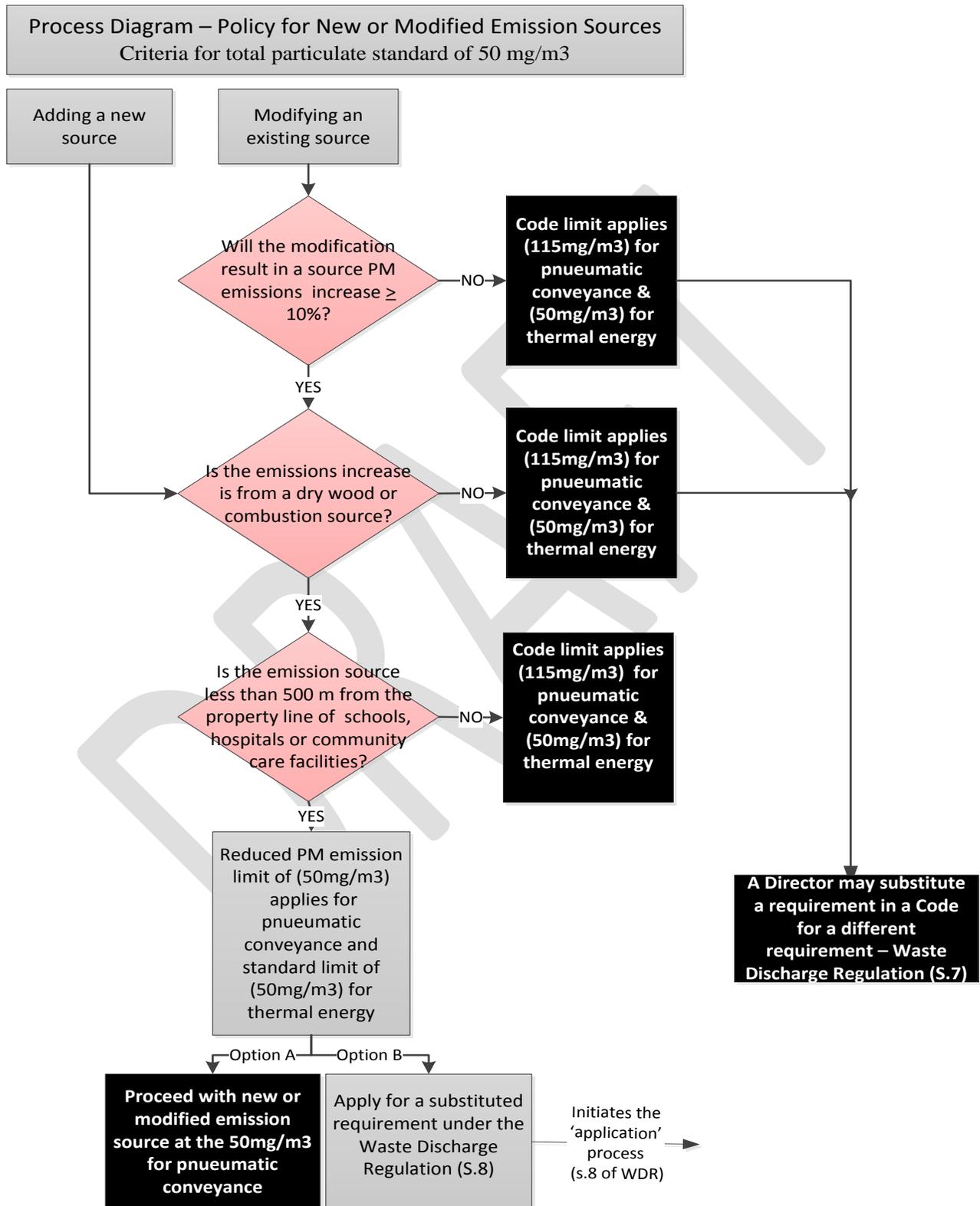
4.3) Exemption/substitution option

The proposed code of practice would be established under the *Environmental Management Act* (EMA) and the Waste Discharge Regulation (WDR).

Section 8 of the WDR provides a mechanism for facility operators to apply for a 'substituted requirement' through application to the Director. Consequently, even if all of the above-listed criteria from s.4.2.2 apply, an operator may still apply for an exemption to the 50 mg/m³ limit through under the s.8 of the WDR, as described in diagram 1 on the following page.

Section 7 of the WDR provides a mechanism for the minister or director to substitute a different requirement for a requirement contained in a code of practice if, in the individual case, the minister or the director considers that the substitution is necessary to protect the public or the environment, or the intent of the code of practice is met by the substituted requirement.

Diagram 1: Policy Alternative to Air Quality Dispersion Modelling: New or Modified Emission Sources



5. Environmental Management Plan

The Sept 2015 intentions paper describes the original policy vision for an Environmental Management Plan , as summarized below:

- the code will identify all potential discharge sources and, for a specified subset of those sources, set out prescribed discharge limits.
- For emission sources that do not have a discharge limit prescribed in the code, the operational controls and management actions in place to minimize discharge from each source will be identified in an **Environmental Management Plan** .
- The EMP would have to be prepared and approved by a Qualified Person (QP).
- Implementation of the EMP would be required at the time of registration for new facilities, and within 36 months of registration for existing facilities.
- The EMP may be part of an existing environmental management system (EMS) such as ISO 14001, provided that all aspects and requirements identified in the code are considered and procedures established for those aspects that are applicable at the site.
- The EMP would address a range of considerations, including
 - Pollution Abatement Equipment;
 - Liquid Effluent Management;
 - Storage and Pile Management;
 - Air Quality Guidelines;
 - Odour and Dust;
 - Roles and Responsibilities;
 - Public Complaints;
 - Reclaimed Water (log yard runoff, conditioning ponds);
 - Compliance Contingency Planning
 - Monitoring Procedures; and MMFBM,
 - Site Map.

5.1) Summary of Public Comment – Environmental Management Plan

A summary of public comments related to preparing and maintaining the EMP are provided below.

- Requirement for a qualified professional is helpful but still too broad – is an RPF qualified? This requirement should be made as flexible as possible and some basic training and criteria provided by government.
- The intentions paper is still too broad to truly understand the true burden that this process will create – need more details.
- The Environmental Management Plan concept represents a new method for ILMA companies to manage potential environmental impacts. The Paper makes reference to the need for the EMP to address many items that may not be covered under existing permits at ILMA sites (usually decades old), such as log yard management, log sprinkler systems, and fugitive dust. The ILMA fully supports the highest standard in environmental practice. However, we need to ensure that the impacts and costs of the new requirements do not place constraints on our operation over and above what we face today, while achieving that high standard. Smaller companies do not possess the in-house expertise to develop an EMP, and will need to hire consultants to develop, implement and monitor the EMP. The cost of hiring a QP for this purpose represents a significant burden to smaller companies.
- The Ministry proposes a new requirement that operators develop and implement an environmental management plan where site specific information will be prepared and

approved by a Qualified Person (QP). The details of the proposed plan are not specified but the potential cost and administrative burden created by this new requirement is a significant concern. The reasons for requiring plan preparation and approval by a QP are not provided but we do not believe this is a workable approach.

- We recommend that the Ministry work with the industry to identify a more streamlined approach to environmental management plans, or a completely different approach, that does not depend on costly expertise where it is not needed.

A summary of public comments related to contents the EMP are provided below.

- There remains extreme concern re increased costs in general and the potential requirement to hire consultants in particular, but the members will trust your words that when the small family owned and operated wood processors turn comes, that this will be addressed.
- General concern over the nuances of small, single mill operations not being reflected in the proposed code – For instance many of our mills have been in the same location for many many decades and one just celebrated their 100year anniversary. The town has essentially grown up around them and many have residential subdivisions surrounding them. Some of the bullets in the intentions paper around water run-off, nuisance odor and fugitive dust are of particular concern.
- There are many reservations being expressed for smaller single mill companies. Comments range from:
 - Unknowns around elements of the Environmental Management Plan and QPs (cost and availability).
 - Availability of QPs in remote areas – have not had access in many cases.
 - Cost of creating/maintaining EMP (one member was quoted \$10K just to do a gap analysis of where they were at today to get to the code) and the continued need for QPs to monitor against the EMP. These smaller companies do not have the internal resources.
 - The availability of QPs to work with the smaller companies is a concern. ILMA company experience suggests that QPs who possess the necessary experience will be difficult to find, and will likely prioritize work for larger companies. Our isolation from the necessary sources of QPs has proven in the past to be very costly to our small member companies.

5.2) Policy Update – Develop a generic ‘Operational Plan’ option to mitigate cost/capacity concerns

Industry stakeholders have indicated that the development of a site-specific EMP will represent a substantial cost burden for the small/medium sized facilities. Additionally, the EMP has been identified by some parties as putting additional requirements on operators than are currently required under permit. ¹

¹ Modern wood processing discharge permits already include comparable requirements to those being contemplated under an EMP; however, older permits may not have prescribed requirements for all activities under the EMP.

As an alternative to the model proposed in the Sept 2015 Intentions Paper, several stakeholder groups have shown interest in having the Ministry develop certain management criteria in a standardized plan, which could be attached to the Code of Practice as a schedule. The operators could then select whether to:

- a) use the standardized plan in the code schedule for their management activities (no QP approvals required), or
- b) use a qualified person to create a site-specific plan.

Including the option for a facility to adopt the standardized plan would alleviate the cost and time burden for the operation, while still maintaining a variety of flexible management options. As the wood processing industry has relatively common waste discharge characteristics and environmental concerns, development of standardized management requirements would serve in a majority of cases to control and/or mitigate these discharges without of the need for a site-specific EMP.

The code will clearly identify that there remains an option to have a QP develop a site-specific plan. This will be particularly valuable for operations that have an environmental management system such as ISO 14001, provided that all aspects and requirements identified in the code are considered.

The Ministry is developing a draft standardized operational plan that can be used for further consultation with the wood processing stakeholders and the general public. A standardized 'Operational Plan' is intended to provide a strong framework that can be used almost unchanged to address those environmental aspects that are common to wood processing facilities.

A draft of the proposed generic 'Operational Plan' is attached as Appendix A. It is anticipated that the standardized plan will be included in the Code of Practice as a schedule of management activities. Operations that elect to implement a QP-approved site-specific plan would be exempted from the management requirements in the schedule. Operational plan activities revised from the original EMP proposal to include the following:

- general commitments to environmental management;
- fugitive dust management;
- emission control and maintenance for point sources;
- emission control from miscellaneous sources;
- storm water runoff control measures;
- process liquid effluent treatment options;
- liquid discharge monitoring and documenting; and,
- site plan.

6. Summary and Next Steps

Table 1 below summarizes the proposed policy changes and rationale for summary review.

Sept 2015 Intentions Paper	Current Policy Proposal	Summary Rationale
<p style="text-align: center;">35 MMFBM code entry threshold</p>	<p style="text-align: center;">50 MMFBM code entry threshold</p>	<p>Responsive to the concerns of the small operators;</p> <p>Meets to the policy objective of capturing the majority of wood processing facilities in the code;</p> <p>A small operator module may still be considered for a future date to capture <50 MMFBM facilities.</p> <p>The updated proposal on EMP requirements should further alleviate the cost/administrative concerns for smaller operators.</p>
<p>AQ Modelling Required in certain circumstance; QP determination of alternative control technology as required.</p>	<p>No Modelling Required in certain circumstances a reduced PM limit of 50mg/m³ will be required</p>	<p>Provides more consistency and certainty for the sector, for local resident groups, or for ministry staff.</p> <p>Captures the contributing factors which most commonly trigger a requirement for more stringent control technology (e.g. baghouse over cyclone), while bypassing the modelling requirement.</p> <p>Ensures more stringent control technology is used when PM may impact air quality near sensitive receptors.</p> <p>Alleviates the costs associated with conducting AQ modelling.</p>
<p>Environmental Management Plan Developed and signed by a QP, addressing a host of additional management considerations.</p>	<p>Operational plan Ministry outlines certain management criteria in a generic plan.</p>	<p>The Ministry outlines certain management elements in a generic plan, which could be attached to the Code of Practice as a schedule. The operators could then select whether to:</p> <ul style="list-style-type: none"> a) use the code schedule for their management activities (no QP required), or b) use a qualified person to assist in developing a site-specific plan.

APPENDIX A: DRAFT Operational Plan Management Considerations

Preface:

In the Sept 2015 Wood Processing [Intentions Paper](#), the policy direction stated that a site-specific Environmental Management Plan (EMP) would be developed and approved by a Qualified Person (QP). The ministry has received feedback that this approach is cost/time prohibitive for many small and medium sized wood processors. As an alternative, several stakeholder groups have shown interest in having the Ministry develop management criteria in a generic plan (i.e. operational plan). The operational plan would be attached to the Code of Practice as a schedule. The operators could then (a) select whether to use the schedule for their management activities, **or** (b) use a QP to create a site-specific plan. As the wood processing industry has relatively common waste discharge characteristics and environmental aspects, development of standardized management elements could suffice in a majority of cases to assist in managing environmental risks associated with mill activities.

It should be noted that the considerations listed in the sample operational plan are not all encompassing with respect to regulatory obligations that may apply to primary wood processing facility operations in BC, and does not constitute a release from any other regulatory obligations under other regulations or codes.

Context:

For the purposes of this policy review, the management considerations have been listed for discussion and consultation below. Once the policy direction is confirmed, the ministry will develop a formal 'Operational Plan/Guide' that will be available for operators that choose to implement the generic Operational Plan option. Note that no additional QP review of the plan will be required.

It is appreciated that not all wood processing operations are the same and that operations may require different management options to suit their particular facility. As such, a range of possible management options are provided where applicable, depending on the facility characteristics.

STANDARDIZED OPERATIONAL PLAN CONTENTS

1) General Operational Plan Elements:

The operator will implement the following management programs or activities :

- a) Environmental and operational inspections will be regularly conducted to ensure that site specific environmental risks are being managed effectively;
- b) Employee training will be provided by the operator as required to ensure that individuals understand and have the knowledge to fulfil their environmental responsibilities;

- c) Appropriate countermeasures will be established for aspects which directly affect the environment (e.g. Standard Operating Procedures);
- d) A corrective and preventive action process will be established and corrective or preventative actions, where required, will be documented and implemented in a timely and effective fashion when a need for them is identified (such as through inspections/audits or monitoring results);
- e) Environmental emergency preparedness response plans for localized mill and mill yard spills will be developed, maintained and tested;
- f) Wood Processing facility management will conduct annual reviews of its environmental performance;
- g) Pollution abatement equipment is designed and maintained to meet the limits prescribed in the Code;
- h) Records of operating plan activities will be maintained on-site.

2) Fugitive Dust Management:

The operation will suppress fugitive dust for aspects of the facility that could be potential significant sources of fugitive dust, including: log and lumber storage and handling areas, wood chip and sawdust storage areas (piles); movement of fines inventory (e.g., pneumatic and belt conveyances) and on-site unpaved service roads. The purpose for dust suppression is to both, minimize the generation of suspended dust (particulate matter) and, to reduce the potential of it being carried offsite such that it could be deemed to cause pollution or nuisance to nearby community.

Fugitive Dust Control:

For each aspect of a facility that could be a potential source of fugitive dust, the operator will consider implementing the following control measures, as applicable, to minimize the formation and off-site transport of fugitive dust:

- a) Storage of dry fines to minimize fugitive dust using methods such as enclosures, fencing, and minimizing the pile size.
- b) Conveyance (pneumatic or belt) of wood residuals such as bark, sawdust and shavings in such a way to prevent fugitive migration (e.g., covered conveyor, misting at drop points, or use of wind screens at drop points around inventory piles).
- c) Implementation of mitigation measures if visible fugitive dusts are observed with the potential to leave the facility site boundary. These measures could include one or more of the following:
 - i. Applying water or dust suppressants to heavily used vehicle travel or work areas;
 - ii. Limiting or curtailing those operations known to generate dust on windy days;

- iii. If watering or other suppressants prove to be inadequate dust control measures, consideration of other measures such as paving and sweeping.

3) Emission Control and Maintenance for Point Sources

The pollution abatement equipment, controls and emission levels from the operation's point sources should be identified in the operation's facility registration under the Code. Information to be included in the registration will include:

- Source identification (e.g.: sawmill dust cyclone, planer mill baghouse, thermal energy system, etc)
- Operating schedule (e.g.: 16hr/day, 5 day/week)
- Max PM mg/m³
- Max Flow m³/min
- Preventative maintenance (e.g.: associated with control works)
- Discharge monitoring (e.g.: visual inspection, pressure differential tracking, annual testing, etc.).

Pollution abatement equipment, controls and related emissions shall be routinely inspected to confirm equipment is operating correctly and in accordance with Code requirements. Records of inspections and corrective actions taken if required shall be maintained.

The routine inspection of emissions does not require a certified opacity reader, however, the observer should be familiar with taking visual opacity readings (see the requirements for USEPA Opacity Reading Methods 9 and 22 for reference).

4) Storm Water Runoff

For potential sources of industrial effluents and runoff that could negatively impact the local receiving environment, the operator may consider the following control options (as applicable to the facility), to minimize the generation and release of:

- floating solids (except in trace amounts),
- visible foam (except in trace amounts),
- oil and grease in amounts sufficient to create a visible film or sheen, and;
- wood extractives at levels that could be considered deleterious.

Storm Water Runoff Control Measures:

- a) Determine possible activities that could impact storm water. For example:
 - mobile equipment maintenance shops,
 - mobile equipment washing areas,
 - fuel oil storage dispensing facilities,
 - hydraulic systems,
 - bone yard (surplus equipment) storage areas,
 - woody debris, log, and chip storage,
 - wood treatment or antisapstain use/treated lumber storage areas.

- b) Identify the storm water runoff discharge points on site and manage these discharge points such that suspended solids and oil and grease are managed or treated to meet appropriate discharge levels.
 - The use of settling ponds, interceptors (including in ground oil water separators or interceptors especially for fuel dispensing areas) in ditch overflow/underflow weirs, hay bales or silt fences.
 - Regular clean-out and sloping of drainage ditches such that runoff flows easily and does not pond and come into contact with woody debris.
- c) Inspect and clean oil/water separators as per manufacturer's requirements (e.g. monthly inspections in non-winter periods with clean out of separator if sludges exceed 30 cm or the oil layer exceeds 5 cm).
- d) Regularly inspect storm water ditches and ponds for woody debris, oil sheens, suspended solids and wood extractives in areas where discharges have potential to enter surface water bodies and take appropriate corrective actions such as clean out, re-sloping and installation of silt fences, dams and tilted culverts etc..
- e) Provide reservoirs for all hydraulic systems. Consider the necessity for secondary containment and the use of environmentally friendly hydraulic oil for units immediately near sensitive water bodies.
- f) Store all hazardous liquids in areas where they will not be exposed to rain or storm water.

If, based on inspections runoff is suspected to contain contaminants of concern with potential to negatively impact the environment, the operation will consider the following actions, as applicable:

- g) determine potential source of contaminants, evaluate options and implement appropriate source control and mitigative measures
- h) Evaluate and implement options to capture contaminated storm water for management prior to discharge if the source control and mitigation measures implemented are not sufficient. Subsequent discharge could be subject to the approval of the Ministry.
- i) Consult a QP for alternative storm water management or treatment strategies.

The above management options are general best management practice **strategies** and are by no means fully encompassing of all operations. A certain degree of expertise and diligence is necessary for operators when evaluating and managing the environmental risks of facility runoff.

5) Process Liquid Effluent Treatment

The following are potential liquid effluents and treatment/management measures.

Process liquid effluents (PLE) management options can include but are not limited to:

- a) Wet Electric Static Precipitator (WESP) waste water
 - o WESP waste water recycling where possible;
 - o potential discharges treated to meet required surface water discharge standards **or** where possible eliminated using methods such as recycling and evaporation;
 - o Addition of remaining condensed/evaporated resins or solids to dry waste fibre streams for energy use or sent for disposal at an approved facility.
- b) Kiln condensates, conditioning pond discharges and boiler blow down
 - o Kiln condensates, conditioning pond discharges and boiler blow down may require treatment to adjust pH (typical acceptable pH levels are 6.5-8.5), reduce suspended particulate (TSS), BOD, potential toxicity and dissolved contaminants such as tannins and lignins .
- c) Vehicle wash water
 - o Vehicle wash water should be treated to reduce suspended solids, oil and grease;
 - o If gravity oil water separators or interceptors are installed, soaps and detergents should be of the “quick release” type.
- d) ‘Once through’ compressor water discharges
 - o Once through compressor water discharges should be closed loop systems and/or equipped with an oil/water separator.

6) Liquid Discharge Monitoring and Documenting

- a) At least once per month during the period when there are storm water or other liquid discharges, the operation should visually inspect all areas of release to the environment on the perimeter of the facility’s developed area for potential impacts of industrial runoff on the environment including release of suspended solids, hydrocarbons or wood extractives (leachate).
- b) Records should be maintained of the perimeter inspections and actions taken to address potential concerns.

7) Site Plan

Include a Location Map and a Detailed Site and Process Aerial Plan. The detailed map should include the following:

- a) Geographic location
- b) Point sources of air emissions
- c) Potential sources of fugitive air PM emissions including chip and shaving storage piles and loadouts
- d) Bulk fuel and hydrocarbon storage areas
- e) Spill kit locations
- f) Storm water (runoff) drainage pathways, discharge or release points
- g) Storm water and/or process water controls such as interceptors, retention ponds and oil/water separators

- h) Process areas including: log storage; treated lumber storage; sawmill; planer mill; mobile shop; fueling area and tanks;
- i) Process liquid and sanitary sewage treatment systems and release points (if any)
- j) Waste storage areas (including bone yards and hazardous waste such as waste oil storage)

-End-

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Appendix B: Acronyms and Abbreviations

Acronym or Abbreviation	Definition
AQ	Air Quality
B.C./BC	British Columbia
EMA	<i>Environmental Management Act</i>
EMP	Environmental Management Plan
EMS	Environmental Management System (ISO 14001)
MMFBM	Million Board Foot Measure
MOE	Ministry of Environment
QP	Qualified Person
PM	Particulate Matter
WDR	Waste Discharge Regulation
WSBC	WorkSafeBC