



The ministry intends to establish a Code of Practice for the wood processing industry in B.C. under provisions of the Waste Discharge Regulation (WDR) of the *Environmental Management Act (EMA)*.

A. 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.

A code of practice (code) is a legally binding and enforceable set of rules that must be followed; it sets out the environmental protection measures and other actions that are required of the industry by the ministry. The code would be established under the *Environmental Management Act (EMA)* and the Waste Discharge Regulation (WDR), and would replace individually issued air and effluent permits as the primary instrument for regulating specified discharges to the environment related to primary wood processing.¹

The purpose of this intentions paper is to seek feedback from stakeholders and the general public on the ministry’s proposed approach to the code, and to provide opportunity for consultation in accordance with the ministry’s [review process](#). Comments and feedback will be reviewed by the ministry and used to inform further work in establishing the wood processing industry code of practice.

The wood processing industry is a mature, established sector, with waste discharges having common characteristics and common environmental

Ministry Goals and Values

- Provide a clear, equitable results-based regulatory framework
- Ensure effective protection and management of B.C.’s air, land & water
- Promote environmentally responsible economic development
- Use scientific expertise to inform and lead environmental management
- Recognize the value and importance of the B.C. wood processing sector

concerns. As such, requirements for controlling or mitigating these discharges can be readily standardized through a code of practice. This “permit by rule” approach has been applied to the wood processing industry in other North American jurisdictions, including Oregon, Texas, and Alberta.

Key Points

- 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.
- The proposed code will **reduce administrative burden** for both government and industry.
- The proposed code will establish clear and consistent **limits** for air emissions, to encourage the protection the environment and human health.
- The proposed code will require development and implementation of an **environmental management plan** for all registered operations, prepared and approved by a qualified professional.
- Registered operations will use an **online system to report** emissions, effluents and other required environmental management activities.
- All **impacted permit holders** will be automatically registered under the code with their **previously permitted** discharge limits, for a transition period of ten years. This transition period will provide time for facilities to meet code limits.
- Any facility installing **new discharge sources**, or modifying an existing source (emissions increase > 10%) must meet code standards for those discharges upon installation.

¹ Under Section 31 of the EMA, Metro Vancouver Regional District has authority to manage air emissions within the region. Air emissions from wood processing located within Metro Vancouver fall under this authority.

Related Legislation

The proposed code will not exempt facilities from meeting all applicable requirements of other provincial and federal agencies and of local government laws, bylaws and zoning, including any consultation or notification requirements. Pertinent considerations include:

- Metro Vancouver has authority to manage air emissions within its jurisdiction.
- Contaminated sites and hazardous wastes are addressed under other specific regulations.
- Greenhouse Gas (GHG) emissions are currently addressed under *Greenhouse Gas Reduction (Cap and Trade) Act*.
- Sanitary effluent is currently addressed under the provincial Municipal Wastewater Regulation or the Sewerage System Regulation.
- Solid waste management (refuse disposal) is currently addressed by specific permits and, for new landfills, by a code of practice for industrial non-hazardous waste landfills.²
- Open burning of wood residue, including burning at log sorting and forwarding operations, will be regulated separately, through the Open Burning Smoke Control Regulation.
- Direct discharge to surface water or ground subsurface may continue to require separate authorization under the *Environmental Management Act* (except beneficial reuse of reclaimed water).
- The use of beehive burners and unmodified silo burners is being phased out by December 2016 in accordance with the Wood Residue Burner and Incinerator Regulation.
- The *Environmental Assessment Act* Reviewable Projects Regulation defines thresholds under which forest product industries are required to obtain or amend an Environmental Assessment Certification.

Contents of this Intentions Paper

A. Introduction

Related Legislation

B. Application of the Proposed Code

1. Out of Scope
2. A Phased Approach

C. Proposed Approach

1. Registration
 - a. Existing Facilities
 - b. New Facilities/ Facilities Increasing Emissions
 - c. Out of Scope
2. Environmental Management Plan
3. Discharge Sources
 - a. Air Emissions
 - b. Liquid Effluent
4. Proposed Discharge Limits
 - a. Air Emission Standards
 - b. Effluent Discharge Limits
5. Air Quality Modelling Requirements
 - a. Modelling Framework
 - b. Exemptions to Modelling Requirements
6. Monitoring, Analysis and Reporting
 - a. Thermal Energy Systems
 - b. Pneumatic Systems/Cyclones
 - c. Sampling and Analysis of Other Discharges
 - d. Record Keeping and Reporting
7. Recognition of Existing Permits
8. Annual Fees

D. Ministry's Approach to Compliance

E. Implementation

F. Providing Comment

² With the exception of ash from burning of marine immersed wood, which is addressed through the Guideline for Emissions from Biomass-Fired Electrical Power Generation.

B. Application of the Proposed Code

The proposed code would apply to the following wood processing activities, as defined in Schedule 2 of the Waste Discharge Regulation (WDR):

- **Wood manufacturing (primary)**—establishments producing greater than **35 million board feet** of lumber or lumber products annually, including (not limited to) dimensional lumber, shingles and shakes;
- **Wood processing (secondary)**³— limited subset of establishments listed under the Wood Processing (secondary) category is currently being considered for inclusion in the code, including finger jointing, prefabricated buildings and furniture; and
- **Veneer peeling.**⁴

1. Out of Scope

The proposed code is not intended to capture facilities using resins or adhesives (e.g., OSB, MDF, plywood). These activities will continue to be regulated under a site-specific permit.

2. A Phased Approach

Although the code is currently targeted at wood processing facilities producing greater than 35 MMfbm (million board-feet of lumber), it is anticipated that additional “sector modules” will be added to the code at a later date to incorporate wood processing activities not included in the current scope of this intentions paper. Public review of the proposed modules will follow the ministry’s public review process and is beyond the scope of this intentions paper.

Examples of modules under consideration include:

- A small operator module, targeted at facilities that fall below the 35 MMfbm production threshold; and

- A pellet plant module (following review and consultation with industry regarding emerging emissions technology).

Key Environmental Considerations

There are several common parameters and issues related to the wood processing industry, including management of:

- ▶ Total Particulate Matter (TPM) including PM₁₀, PM_{2.5} and condensable PM;
- ▶ Nuisance odour and fugitive dust;
- ▶ Raw and residual wood fibre storage; and
- ▶ Log yard and process wastewater and effluent.

C. Proposed Approach

The ministry’s overarching goal in establishing a wood processing code of practice is to provide a clear, common and equitable regulatory framework for B.C.’s wood processing industry, while also encouraging the use of best achievable technology for waste discharges related to wood processing.

Key components for the proposed code include:

- Standardized particulate and opacity limits for air emissions;
- Development and implementation of a site-specific Environmental Management Plan;
- Clear and consistent requirements, for ease of verifying compliance;
- Air quality modelling requirements for most new or expanding facilities;
- Consistent monitoring and reporting requirements for industry; and
- A 10-year transition/phase-in process for existing permitted facilities.

³ A limited subset of establishments listed under the wood processing (secondary) category is currently being considered for inclusion in the code. The proposed code is not intended to capture facilities using resins or adhesives (e.g., OSB, MDF, plywood)

⁴ Veneer is currently listed as a schedule 1 activity under the WDR. Inclusion of veneer in the code would be contingent on amendments to the WDR to include veneer as a schedule 2 activity.

1. Registration

The ministry will require that all wood processing facilities producing greater than 35 MMfbm annually are registered with the ministry.

a. Existing Facilities

- Existing facilities will be automatically registered under the code; existing permits would be retired (for information on the transition process for existing permit holders, see section 7).
- Veneer plants⁵ that are integrated with lumber mills producing over 35 MMfbm of lumber annually will be automatically registered under the code; existing permits would be retired.

b. New and Facilities Increasing Emissions

- New facilities that produce more than 35 MMfbm of lumber annually will be required to register under the code prior to commencing production.
- Facilities installing new discharge sources, or modifying an existing source (emissions increase ≥ 10%) will be required to update the registration information prior to discharging from those sources.

c. Out of Scope (no registration, maintain permit)

- Any facilities not captured under the code will continue to be regulated under site-specific permit.

2. Environmental Management Plan

Under the proposed code, operators would be required to develop and implement an environmental management plan. Implementation of the plan would be required at the time of registration for new facilities, and within 36 months of registration for existing facilities. Under this approach, an operator would be required to:

- Submit a plan summary for public web-posting;
- Review and update the plan at consistent intervals and as necessary;
- Keep a current copy of the plan on site;

- Provide a copy of the plan to the ministry on request;
- Implement the plan; and
- Periodically conduct internal reviews evaluating compliance with the plan.

Plan Contents

Site-specific information in the plan would have to be prepared and approved by a Qualified Person (QP).⁶ For more information on the roles, responsibilities and accountabilities of qualified persons, please see the ministry webpage describing the [role of qualified persons in the natural resource sector](#).

Guidance documents to provide assistance in preparing an environmental management plan will be developed by the ministry. The ministry is proposing that a plan would address a range of considerations, including:

- Pollution Abatement Equipment & Controls;
- Liquid Effluent Management;
- Storage and Pile Management;
- Air Quality Guidelines;
- Odour and Dust;
- Compliance Contingency Planning;
- Roles and Responsibilities;
- Public Complaints;
- Reclaimed Water (log yard runoff, conditioning ponds);
- Monitoring Procedures; and
- Site Map.

The Environmental Management Plan 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.

⁶ Defined as: a person who: (a) is registered in British Columbia with the appropriate professional association, acts under that association's code of ethics, and is subject to disciplinary action by the professional association; and/or (b) through suitable combination of education, experience, accreditation and knowledge, may be reasonably relied upon to provide advice within his/her area of experience as it relates to this code of practice.

⁵ Veneer plants captured under the code will be limited to those facilities that do not use glues/adhesives.

3. Discharge Sources

The code will identify all potential discharge **sources** and, for a specified subset of those sources, set out prescribed **discharge limits** (see section 4 for a summary of proposed limits).

For 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 have to be identified in the Environmental Management Plan.

Applicable discharge sources include air emissions and liquid effluent sources.

a. Air Emissions

- Conveyance systems (pneumatic, chain and belt);
- Thermal energy units;
- Kilns and dryers;
- Fugitive dust sources;
- Building dust removal systems; and
- Miscellaneous sources (e.g., standby generators, maintenance shop vents, conditioning chests).

b. Liquid Effluent

- Mill site and log storage runoff;
- Boiler blowdown;
- Kiln condensate;
- Scrubber and Wet Electrostatic Precipitator (WESP) waste water;
- Vehicle and equipment wash water;
- Log ponds, log yard storage pile irrigation; and
- Road watering.

4. Proposed Discharge Limits

The discharge limits proposed in tables 1 and 2 are based on continuous improvement and “best achievable technology” principles. All operations registered under the code must comply with the discharge limits specified in the code for that particular discharge source.

New facilities will be required to meet the code’s discharge standards on registration.

Existing facilities that are transitioning from a permit-based authorization to the code would be required to implement the code’s discharge standards within ten years from enactment of the code (or upon installation of new/modified emission sources, as described in section 7).

The ministry is open to considering alternatives that reduce cumulative emissions within a particular air shed (e.g., offsets, emissions trading, or economic incentives). The ministry is also seeking comments and suggestions regarding appropriate approaches to alternatives for reducing cumulative emissions.

a. Air Emission Standards

Table 1 summarizes the proposed air emission standards⁷ for total particulate from:

- **Thermal Energy Systems**—wood-fired energy recovery systems and wood residue incinerators, including electrical power generation systems, thermal oil systems and bio-fuel systems; and
- **Pneumatic Conveyance Systems**—wood fibre or wood dust that is transferred through air blower systems.

Table 1: Proposed Air Emission Standards

Discharge Source/ System	Total Particulate
Thermal Energy Systems	50 mg/m ³ ≤10% opacity
Pneumatic Conveyance (all other)	115 mg/m ³ ≤10% opacity
Fugitive Emissions	No visible emissions beyond facility boundaries

⁷ Air emissions would be measured in terms of the mass of particulate matter in a given volume of air (mg/m³) at standard conditions, and by opacity. Opacity is the degree to which the transmission of light is reduced as viewed through the plume (usually stated as a percentage). Field opacity measurements can be taken either by a trained observer or by instrumentation, in accordance with the current British Columbia Field Sampling Manual.

b. Effluent Discharge Limits

Industrial process discharges of most potential concern involve hydrocarbons (e.g., oil, grease and fuel products) and process condensate. Hydrocarbon contaminated effluents could include, for example, maintenance shop effluent and spillage from equipment fuelling facilities. In all cases, the management and control of these discharges must be identified in the environmental management plan, and approved by a QP. Additionally, prescribed discharge limits are proposed for vehicle and equipment wash water.

Table 2: Proposed Effluent Discharge Limits

Discharge Source	Limit
Equipment & Vehicle Wash Water	15 mg/l hydrocarbons (at point of discharge)

5. Air Quality Modelling Requirements⁸

New facilities must conduct air quality dispersion modelling, with consideration to B.C.’s air quality objectives and standards, prior to registration under the code.⁹

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

a. Modelling Framework

There are three broad classes of modelling: screening, refined and advanced. For facilities that trigger the

modelling requirement, the initial level of modelling required would be at the **screening** level.

- If the screening level modelling indicates no potential of contaminants to be in excess of air quality objective or standards, modelling requirements are fulfilled. No further modelling is required.
- If screening level modelling indicates a potential of contaminants to be in excess of air quality objective or standards, an operator will conduct refined or advanced modelling as described in the [Guidelines for Air Quality Dispersion Models in British Columbia](#), as determined by a QP. Based on modelling results, the facility may be required to meet emission limits that are more stringent than those listed in Table 1 or otherwise mitigate the associated risk. This would be determined by the QP in the context of the Environmental Management Plan.

Note that the proposed air quality dispersion modelling requirements would **not apply** to existing facilities, except in the case of a major expansion.

b. Exemptions to Modelling Requirements

It is expected that the code will prescribe an exemption for facilities that do not trigger the modelling requirement (as described in section 5a above). Some examples of exemption criteria being considered for inclusion in the code include remote facility locations, implementation of emission trading programs, and expansions for the purposes of protecting human health and safety (e.g., WorkSafeBC officer requirement).

An exemption to the modelling requirement may also be provided by the Director, upon application by the operator.

In infrequent circumstances, modelling may be deemed necessary by the Director even if a facility meets the prescribed exemptions. In these scenarios, the code will provide the Director with the authority to require modelling be undertaken.

The Ministry is seeking comments and suggestions regarding other appropriate conditions for exemption.

⁸ The Ministry of Environment has developed [Guidelines for Air Quality Dispersion Models in British Columbia](#).

⁹ See www.bcairquality.ca/reports/pdfs/agotable.pdf for a description of B.C.’s air quality standards and objectives, and www.bcairquality.ca/plans/national-air-quality-management-system.html for more information on air quality management.

6. Monitoring, Analysis and Reporting

a. Thermal Energy Systems

Air emissions from all registered thermal energy systems would be monitored under the proposed code. A facility operator would be required to undertake stack test monitoring and report:

- Within six months of start-up of a new or modified unit (i.e., emission source), and annually thereafter; or
- Within one year of registration for existing units, and annually thereafter.

If the system is found to exceed specified emission limits, the operator would be required to:

1. Immediately notify the ministry's regional director of environmental protection;
2. Take corrective actions; and
3. Re-monitor within two months of the failed test.

If the monitoring test results exceed emissions limits over three consecutive tests, the ministry may require additional corrective and preventative actions including requiring the non-compliant discharge source to be shut-down until able to operate within prescribed limits.

Three consecutive monitoring results below emissions limits would trigger a reduction in testing frequency to once every two years. Test results above the emission limit would revert back to the original monitoring regime of retest and then annual thereafter.

b. Pneumatic Systems/Cyclones

All pneumatic conveyance systems would have to be rated and operating at or below the code's emission standard. A facility operator would be required to regularly monitor systems through visual inspection.

c. Sampling & Analysis of Other Discharges

The proposed code would require registered facilities to sample air and effluent discharges in accordance with the operation's environmental management plan. Air emission and waste discharge water sampling and analysis must be carried out in accordance with procedures set out in the most recent applicable [provincial field sampling manuals](#).

d. Record Keeping and Reporting

The Government of British Columbia has recently committed to making government-related information and data more accessible to the public in a way that promotes transparency and accountability, through government's [Open Data Initiative](#). This initiative is intended to facilitate a participatory environment in which citizens are engaged with their government, communities and public policy issues.

Consistent with the principles of the Open Data Initiative, the ministry is exploring the following approach to record keeping and reporting under the code:

- Registrants will use an online reporting system to report emissions and discharges, in accordance with the operation's environmental management plan;
- Registrants will immediately report to the ministry and take corrective action in the event of exceedance of any limits; and
- Registrants will maintain records of all required monitoring and analysis for a period of at least ten years. Any required records would be made available for inspection by a ministry official immediately upon request.

7. Recognition of Existing Permits

When the code of practice is enacted, all existing permit holders with facilities producing more than 35 MMfbm annually will **automatically** become registered under the code with their previously permitted discharge limits.

Transition from existing permits

Based on preliminary consultation with wood processing industry representatives, the ministry is proposing the following transition (phase-in process) for operations that have emission limits identified in an existing permit that exceed the limits identified in the code.

When the code is enacted, all applicable sawmills (and applicable integrated veneer plants) would be automatically registered and authorized under the code with their currently permitted emission limits. The existing permit will be retired. Emission limits authorized under pre-existing permits will remain in effect until the sooner of:

- **Ten years:** All existing facilities will have to meet the code's emission limits within ten years of the code's enactment; or
- **Facility emission increase** (i.e., $\geq 10\%$ increase in emission loading to the environment over 5 years): will trigger a requirement to meet the code's emissions limits for equipment associated with the increase. Such an emission increase will trigger the requirement to meet the code's limits even if the increase would not have resulted in an exceedance of previous permit limits.

If the permitted emission limits from an operation's existing permit are **more stringent** than those contained in the code, the more stringent emission limits will remain in force when the new code is enacted (and the existing permit is retired).

8. Annual Fees

The ministry is supportive of efforts to reduce air emissions associated with wood processing facilities—and is interested in comments regarding appropriate incentives (under the proposed code or by other regulatory means) to encourage reduction of air contaminant loadings in air sheds.

One approach that the ministry is considering under the proposed code is a revenue neutral fee structure based on potential-to-emit, environmental risk and reduced administrative burden.

Under this approach, fees would be determined based on potential-to-emit values for key contaminants. The maximum net discharge would be calculated on the basis of the technology registered with the ministry and maximum throughput. This should encourage facilities to continuously improve control technologies, which will lead to lower emissions and subsequently, reduced fees. Contaminants which may be considered in the formula for determining fees include:

- Total Particulate Matter;
- Sulfur Dioxide (SO₂);
- Nitrogen Oxides (NO_x);
- Carbon Monoxide (CO); and
- Total extractable hydrocarbon.

The ministry is seeking comments and suggestions regarding alternate appropriate approaches to setting and collecting fees from wood processing facilities operating under the proposed code.

D. Ministry's Approach to Compliance

The ministry follows an established [Compliance Framework](#) and [Compliance Policy and Procedures](#) when addressing compliance with Acts and regulations under its mandate. The ministry aims to set regulatory requirements that are clear, practical, achievable and enforceable to encourage the support and compliance of individuals and businesses.

The ministry works first to establish and communicate clear regulatory objectives and clear guidance to support compliance. Assessing compliance involves monitoring and verification, assessment of risks and hazards posed by non-compliance, and the specifics of each situation (e.g., history of compliance or non-compliance). A range of tools are available to respond to non-compliance, from advisories and warnings to orders, tickets and administrative monetary penalties (i.e., fines) and prosecutions.

The ministry's approach to inspections and audits will involve regular and random compliance audits and inspections, in accordance with ministry's compliance strategy and in response to identified or potential issues or concerns regarding protection of the environment or human health. Operators of wood processing facilities are required to comply with all relevant regulations including the management of hazardous wastes and reporting of spills.

E. Implementation

If the ministry determines to proceed with establishing a code of practice for the wood processing sector, staff will work with industry stakeholders and other affected parties to transition from the current permit-based model to the proposed “permit-by-rule” approach.

A range of education, awareness and training initiatives will be implemented to encourage compliance and ensure that affected parties are engaged and aware of any new requirements under the code.

The ministry supports promotion of voluntary compliance as a starting point, and will work with industry associations and other government ministries (such as the Ministry of Forests, Lands and Natural Resource Operations and the Ministry of Health) on education and awareness. Industry and public understanding of the requirements and actions being taken related to the wood processing industry are fundamental to effective compliance and enforcement of regulations. Proposed implementation timelines and milestone dates are described in figure 1 below.

F. Providing Comment

The ministry welcomes comments on the information and proposals outlined in this Intentions Paper. Comments can be provided to the ministry of Environment by email attachment or email at the address listed below. Responses received by **November 9th, 2015** will be considered by the ministry in preparing the wood processing code of practice policy framework.

The ministry has prepared a comment form, which is posted on the [ministry's website](#). Those interested are invited to submit comments to the ministry using the comment form, or by separate submission if desired.

All submissions will be treated with confidentiality by ministry staff and contractors when preparing consultation reports. Please note however that comments you provide and information that identifies you as the source of those comments may be publicly available if a Freedom of Information request is made under the *Freedom of Information and Protection of Privacy Act*.

If you have any questions or comments regarding this information contact the ministry at:

Wood.Processing.IP@gov.bc.ca

Comments to the ministry should be made on or before November 9th 2015.

Thank you for your time and comments.

Figure 1: Key Implementation Milestones

