

Organic Matter Recycling Regulation Policy Intentions Paper for Consultation

1. Introduction

The Ministry of Environment intends to revise the Organic Matter Recycling Regulation (OMRR), of the *Environmental Management Act* (EMA) and *Health Act*. The regulation governs the construction and operation of composting facilities, and the production, distribution, storage, sale and use or land application of biosolids and compost.¹ The review process and proposed revisions discussed in this intentions paper follow direction in the regulation for the ministry to “evaluate the management of the regulation within three years of [it] coming into force to determine if any modifications are appropriate.”²

The process for the review consists of five phases:

1. **Scoping** – including a review of advances in science, law and the management of organic matter since the regulation was enacted in 2002.
2. **Policy Intentions Paper for Consultation** (intentions paper) – outlining the ministry’s proposed revisions for the regulation and any outstanding issues or questions.
3. **Consultation** – with affected stakeholders and the general public, using the intentions paper and response forms posted on the ministry website, and other means as required.
4. **Drafting** – preparation of legal language for consideration by the Minister and Lieutenant Governor-in-Council.
5. **Implementation** – training of ministry staff and external stakeholders, development of guidelines and/or best management practices.

The purpose of this intentions paper is to seek responses and comments from stakeholders and the public on the proposed revisions for the Organic Matter Recycling Regulation.

¹ The terms “biosolid” and “compost” are defined in the regulation and discussed in further detail in section 3 of this intentions paper.

² OMRR section 32.

This intentions paper provides a summary of the ministry’s mandate and objectives, background information summarizing the provisions of OMRR, proposed revisions to the regulation and information on the development of best management practices and assuring compliance. The final section of the intentions paper describes the avenues for providing comment on proposed revisions to the regulation.

The intentions paper and response form for providing comments to the ministry, as well as further information and links to related legislation, are posted on the ministry’s website. The information can be accessed by clicking on the address below, or from the Ministry of Environment homepage, by following the Environmental Protection Division and Environmental Management Branch links. See: www.env.gov.bc.ca/epdiv/ema_codes_of_practice/index. Additional information can also be found at: www.env.gov.bc.ca/epd/epdpa/mpp/omrreg.

2. Ministry and Government Goals

The Ministry of Environment provides leadership in environmental management through innovative legislation and programs, compliance activities and shared stewardship initiatives. The ministry’s mandate is to protect human health and safety, and maintain and restore the diversity of native species, ecosystems and habitats. The ministry’s core business areas include environmental protection, stewardship and compliance, in support of the government’s goals.³

The development and enactment of the *Environmental Management Act* and its associated regulations facilitates implementation of outcome-based regulations that provide clear roles for governments and stakeholders, consistent performance standards, updated fee structures, decreased remedial and legal

³ The ministry continues to support the government’s objectives – to lead the world in sustainable management, with the best air and water quality, and the best fisheries management, bar none; to lead the way in North America in healthy living and physical fitness; and to create more jobs per capita than anywhere else in Canada (see www.bcbudget.gov.bc.ca/2006/sp/env).

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costs, and a greater focus on those not in compliance with regulatory requirements.

The composting and recycling of organic matter under the Organic Matter Recycling Regulation helps to divert material from disposal and supports the ministry's performance measure of reducing municipal solid waste disposal.

3. Background Information

The Organic Matter Recycling Regulation (OMRR) provides a comprehensive set of standards for the composting and land application of a range of organic materials (listed in a schedule of the regulation). The regulation was developed by the ministry to provide clear and effective guidance for local governments and other compost and biosolids producers, to protect drinking water sources (in particular), and to provide an opportunity to beneficially use specified organic material (as an alternative to chemical fertilizers). OMRR was developed with the input and support of local governments, recycling groups and industry sectors such as agriculture and forestry, as well as the active participation of the environment committee of Medical Health Officers (MHOs). The regulation was enacted jointly under the *Health Act* and *Environmental Management Act*, and contains provisions for MHOs to review, and direct or deny, the land application of managed organic matter.

OMRR defines five types of organic matter: class A and B compost; class A and B biosolids; and biosolids growing medium. "Biosolids" are treated sewage sludge that has been processed to reduce pathogens and vector attraction.⁴ Organic matter suitable for composting under the regulation includes animal bedding, biosolids, brewery and winery wastes, domestic septic tank sludge, fish and hatchery wastes, food waste, manure, milk processing waste and whey, plant matter derived from processing plants, poultry carcasses, untreated and unprocessed wood residuals, and yard waste.

⁴ "Biosolids" are defined under the regulation as "stabilized municipal sewage sludge resulting from a municipal treatment process or septage treatment process which has been sufficiently treated to reduce pathogen densities and vector attraction to allow the sludge to be beneficially recycled."

The regulation does not apply to the composting of agricultural wastes (such as farm animal manures, mushroom medium and agricultural vegetation waste) on farms – which is governed under the Agricultural Waste Control Regulation (BC Reg 131/92) or the operation of a mushroom composting facility – which is governed under the Mushroom Composting Pollution Prevention Regulation (BC Reg 413/98).

The Organic Matter Recycling Regulation sets out requirements for land application plans for the application of managed organic matter, including process and quality criteria, location restrictions (e.g., drinking water watersheds) and volume restrictions. The regulation also delineates requirements for storage of managed organic matter, and notification of Medical Health Officers and the Land Reserve Commission (as well as the director named in the regulation) prior to the land application of managed organic matter. Composting facility requirements in the regulation include environmental impact studies, plans and specifications, and leachate management.

OMRR sets out requirements for construction or expansion of composting facilities with a proposed or existing production capacity of 20 000 tonnes or more. A "discharger"⁵ (of organic matter intending to construct and utilize a composting facility) must have a qualified professional prepare plans and specifications for the construction and operation of a new composting facility, or, any modification of an existing composting facility that results in an increase in the annual production capacity of more than 10 percent or more than 20 000 cubic metres. The discharger must notify the director⁶ at least 90 days before beginning the operation of a composting facility and facilities must operate in compliance with the provisions of the regulation.

Schedules of the regulation specify pathogen reduction processes, vector attraction reduction and

⁵ A "discharger" is defined in the regulation as: an owner of a composting facility; an owner of a facility that produces managed organic matter for land application; or a registered owner of the land where managed organic matter is applied.

⁶ And the Land Reserve Commission if the composting facility is in an agricultural land reserve or forest reserve land.

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pathogen reduction limits. Quality criteria, sampling and analyses protocols, and record keeping requirements are also delineated. The regulation also includes tables setting out soil standards for specified metals and minerals (e.g., cobalt, selenium, arsenic, cadmium, lead, mercury and zinc) where managed organic matter has been applied.

Municipalities and regional districts in British Columbia that recycle organic matter under OMRR include Prince George, Whistler, Saanich, Salmon Arm, Kelowna, Chilliwack, District of Kent, and the Greater Vancouver, Capital and Comox-Strathcona Regional Districts. A range of private operators, in various regions of the province, also recycle organic matter under the regulation.

4. Revisions to the Regulation

The ministry is considering a number of changes to OMRR, based on advances in science, law and the management of organic matter, and to address operational issues or gaps that have been identified through implementation of the regulation. Potential changes have been grouped for clarity in this intentions paper under six headings:

- ◆ Organic matter suitable for composting (section 4.1);
- ◆ Updates based on science (section 4.2);
- ◆ First Nations consultation (section 4.3);
- ◆ Requirements for composting facilities (section 4.4);
- ◆ Requirements for production of “biosolids growing medium” (section 4.5); and
- ◆ Additional housekeeping changes (section 4.6).

4.1 Organic matter suitable for composting

OMRR sets out a list of organic matter suitable for composting and management under the regulation (schedule 12). Other organic matter may be appropriate for inclusion and regulation. The ministry is seeking comment regarding potential definition and inclusion of additional organic materials under the following categories.

A. Primary or secondary pulp or paper mill wastewater treatment residuals

Wood or paper fibre removed from a pulp or paper mill wastewater treatment plant or a spill retention pond after primary treatment (primary or secondary pulp or paper mill wastewater treatment residuals) are materials that are potentially suitable for composting.

The ministry has set out proposed intentions for a code of practice for soil enhancement using such industrial wastes under the Waste Discharge Regulation of the *Environmental Management Act*. The proposed soil amendment code of practice would authorize the **land application** of these materials as a fertilizer or soil amendment and is intended to be congruent with provisions of OMRR. Additional information regarding the proposed soil amendment code of practice is available at http://www.env.gov.bc.ca/epdiv/ema_codes_of_practice/soil_enhance.html.

Definition and inclusion of these organic materials under OMRR would allow them to be **composted** and enable consistent regulation, and reduce potentially confusing or conflicting regulatory provisions.

B. Clean wood from any source

OMRR currently includes definitions for “yard waste” and “untreated and unprocessed wood residuals.” Matter identified under these definitions, as well as clean wood from construction and demolition (or other) sources, could be suitable for composting and inclusion under OMRR in an expanded definition of “clean wood.” The ministry intends to clarify and consolidate the definition for this category of organic matter as “clean wood.”

The definition could also be revised to include the composting of wood treated with environmentally-friendly preservatives.

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C. *Unstabilized sewage sludge*

OMRR currently allows composting of unstabilized domestic septic tank sludge within provisions of the regulation, however, does not enable composting of other unstabilized (i.e., untreated) domestic sewage sludge. The composting process can include pathogen and vector reduction processes that would stabilize the sludge. Addition of this material to the definition of organic matter suitable for composting could provide further opportunities for recycling (and reduction of discharged waste).

D. *Animal carcasses*

OMRR currently allows composting of fish wastes, hatchery wastes, and poultry carcasses. The Agricultural Waste Control Regulation (AWCR), however, allows composting and burial of mortalities (livestock, poultry or farmed game). Addition of a definition of “animal carcasses” under OMRR that includes livestock and farmed game would provide consistency between the regulations. This would also allow OMRR to be harmonized with draft regulations being developed by the Canadian Food Inspection Agency (CFIA) for the management of certain types of bovine wastes.

E. *Paper and cardboard*

OMRR presently does not contain provisions for the composting of paper and cardboard. Enabling this material to be categorized as organic matter suitable for composting under the regulation could support viable operation of composting facilities (providing an additional potential feedstock for composting) and potentially reduce the disposal in landfills of paper and cardboard contaminated with organic food waste (that is not acceptable for recycling).

F. *Other organic matter*

OMRR lists specific organic matter that is eligible for composting under terms of the regulation. Adding a provision that enables the director to specify additional organic matter that may be suitable for recycling (with appropriate additional regulatory requirements) would enable inclusion of such matter under the regulation – consistent with

Canadian Council of Ministers of the Environment (CCME) Guidelines for Compost Quality that are not specific to particular materials. Note that the inclusion of additional matter would not be considered before consulting with stakeholders, including the Ministries of Health and Agriculture and Lands.

4.2 *Updates based on science*

A. *Consistency of schedules*

OMRR contains a number of schedules that set out technical standards and requirements for recycling organic matter. These include: pathogen reduction processes; vector attraction reduction; pathogen reduction limits; quality criteria; and sampling and analysis protocols and frequency (schedules 1-5). Schedules 9 and 10 also set out general and matrix soil standards for identified metals and minerals. The ministry intends to update these schedules to ensure consistency and currency with:

- ◆ The Standards Council of Canada National Standard for Organic Soil Conditioners (CAN/BNQ 0413-200/2005) – see http://www.resourceconservation.mb.ca/cap/mls/mls_pdfs/BNQ_2005.pdf;
- ◆ Canadian Council of Ministers of the Environment (CCME) Guidelines for Compost Quality – see www.ccme.ca/publications/list_publications.html#link8;
- ◆ Federal *Fertilizer Act* and Regulations, including standards for metals in fertilizers and supplements (trade memorandum T-4-93) – see <http://www.inspection.gc.ca/english/plaveg/fereng/ferenge.shtml> and <http://www.inspection.gc.ca/english/plaveg/fereng/tmemo/t-4-93e.shtml>; and
- ◆ *Environmental Management Act* Contaminated Sites Regulation – see www.qp.gov.bc.ca/statreg/reg/E/EnvMgmt/EnvMgmt375_96/375_96.htm.

These standards and regulations reflect current science and technologies and understanding of composting and compost. The CCME guidelines, for example, are based on four criteria for product safety and quality (foreign matter, maturity, pathogens and trace elements) and establish two grades of material

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(unrestricted and restricted). Compost maturity and carbon:nitrogen ratios are important components of these standards.

B. Consistency with the Contaminated Sites Regulation

Many areas of the province have naturally occurring background levels of some trace elements such as chromium, nickel and selenium that are higher than the limit currently specified in OMRR. The Contaminated Sites Regulation (CSR) includes soil trace element standards, as well as a protocol for determining background trace element levels. The ministry is suggesting that a “background release” section (analogous to the provisions contained in the CSR) be incorporated into OMRR.⁷

4.3 Consultation with First Nations

Information concerning consultation with First Nations with respect to OMRR will be developed in accordance with legal requirements, ministry policy and government direction.

4.4 Requirements for composting facilities

The ministry is considering modifications to requirements for composting facilities. Potential changes include:

A. Triggers and measures for requiring an environmental impact study or preparation of plans and specifications

Section 23 of OMRR requires an environmental impact study and report for composting facilities with annual production capacity of 20 000 tonnes or more. Section 24 requires plans and specifications for the construction and operation of a new composting facility, or any modification of an existing composting facility that results in an increase in the “annual production capacity” of more than 10 percent or more than 20 000 cubic metres. Section 24(2)(b) and Section 25 require specification of the “design capacity” of the composting facility to enable consideration of potential future environmental

impacts that may be associated with the intended scale of the facility.

The ministry is considering a number of questions related to these “triggers” and units of measure:

- ◆ What **units** should be used to specify “annual production capacity” and “design capacity” (cubic metres or tonnes of incoming organic matter or outgoing compost production, or another measure)?
- ◆ Should any of the **trigger levels** (i.e., for preparation of an environmental impact study or plans and specifications) be revised?
- ◆ Should the **trigger levels** (i.e., for preparation of an environmental impact study or plans and specifications) **be deleted** thereby requiring an environmental impact study and plans and specifications for **all composting facilities**?
- ◆ Should plans and specifications be required for proposed changes in the **organic matter composted** (e.g., addition of food waste and/or animal carcasses) or in the **processing technology** (e.g., to in-vessel) at a composting facility?
- ◆ Should the director have the authority to **specify additional requirements for composting facilities** including public consultation, environmental impact study, plans and specifications, and specified elements (such as odour and leachate management), if the director deems such requirements appropriate?

B. Plans and specifications

The ministry is reviewing requirements for plans and specifications within OMRR to ensure that they effectively address general and site-specific objectives for protection of the environment and human health. Potential changes to the regulation could include:

- ◆ Revision of **odour management requirements** to address source control, siting and monitoring, process management and odour control measures;
- ◆ Establishing mandatory **buffers** around composting facilities;

⁷ See additional information posted on the Contaminated Sites Regulation Ministry of Environment website: www.env.gov.bc.ca/epd/epdpa/contam_sites/policy_procedure_protocol/protocols/background_soil.html

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- ◆ Requiring **additional plans** to address wildlife, vector, litter and dust management considerations; and
- ◆ Requiring that dischargers **prevent wildlife** (including bears and eagles) **from accessing “attractants”** (i.e., organic matter, compost and/or garbage) at the composting facility (e.g., by enclosing attractants within an electric bear-proof fence or other bear-proof barrier).

C. *Leachate management for composting facilities*

Effective leachate management is essential for composting facilities to ensure protection of human health and the environment.

Section 26 of OMRR requires an impermeable surface, roof, cover, prepared surface and leachate collection system, and specifies that leachate must not be discharged into the environment unless authorized under the *Environmental Management Act*. However, such a cover or leachate collection system is not required, and leachate can be discharged into the environment, if a qualified professional can demonstrate through an environmental impact study that the environment will be protected and appropriate water quality criteria satisfied through the use of alternative leachate management processes.

The ministry is reviewing a number of options for requirements in OMRR that address leachate management. Potential provisions for the revised regulation could include:

- ◆ **Prohibiting leachate discharge** to the environment – in all situations, or specifically in areas of high precipitation;
- ◆ **Requiring an impermeable surface, roof, cover, prepared surface and leachate collection system** – in all circumstances, or only in areas of high precipitation;
- ◆ **Revising or removing provisions for undertaking an environmental impact assessment** (and thereby obtaining exemption from sections 26(2) and 26(3) leachate management requirements); and/or

- ◆ **Requiring submission of the environmental impact assessment report** to the director before leachate discharge occurs.

D. *Notification of operation*

Section 25 of OMRR requires the discharger to give notice in writing to the director and the Land Reserve Commission (if the composting facility is on an agricultural or forest land reserve) at least 90 days before beginning operation, with information concerning the facility and a “personnel training program plan” related to operating the facility in compliance with the regulation.

The ministry is reviewing this section of the regulation for the scope of the facilities required to provide notification (i.e., all or a defined portion of composting facilities) and the nature of information required with notification (e.g., confirmation of proper government land use/zoning, training plan for facility operators).

E. *Capacity of composting facilities*

The current regulation specifies that at least half of the compost stored at a facility must be removed annually (section 28). The ministry is proposing to revise this requirement to specify that such material must be used as compost, and not simply moved and stored at another location.

4.5 *Requirements for production of “biosolids growing medium”*

The requirements for “biosolids growing medium,” including process and quality criteria and distribution requirements, are set out in the regulation.⁸ Biosolids growing medium is a prescribed blend of class A biosolids, or class B biosolids that meet the pathogen and vector attraction reduction requirements for class A biosolids, and mineral material such as sand. These provisions may not be relevant to current practices and standards. The ministry is seeking comment on whether the regulation should be revised, including:

- ◆ Should the **process and quality criteria and distribution requirements** for biosolids growing

⁸ OMRR sections 10 and 11, and schedule 11

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medium be revised for consistency with current practices and standards?

- ◆ Should **notification or registration** of operation (similar to notification for a composting facility under OMRR section 25) be required for a biosolids growing medium facility?

4.6 Additional housekeeping changes

The ministry is reviewing OMRR for errors of omission and consistency with established government legislation and policy. The regulation will be revised to address these “housekeeping” issues and changes. Potential issues and changes identified to date include:

- ◆ **Consistency in the management and regulation of defined organic matter in storage and while being composted** – revisions to ensure that leachate and odours arising from *storage* of organic matter, as well as those related to the *composting* of organic matter, are appropriately and consistently managed to protect the environment and human health. This could be accomplished by refining the definition of “composting” in the regulation to include “storage of defined organic matter.”
- ◆ **Notification of land application of managed organic matter** – OMRR presently requires that notification of land application of managed organic matter be provided,⁹ and that a land application plan be prepared for each site (and each occurrence) where managed organic matter is land applied.¹⁰ The ministry is reviewing these provisions – frequency of notification, requirements for preparation and scope (time period and number of applications and sites) for which a land application plan is applicable – for effectiveness in achieving environmental protection objectives and efficiency for government staff and those responsible for preparing plans.

⁹ OMRR sections 21 and 22, and schedule 13.

¹⁰ OMRR section 5.

5. Best Management Practices

The revised regulation will be supported by guidelines and/or “best management practices” (BMPs) that provide information regarding how composting facilities can meet ministry goals for protection of human health and the environment and operate in a manner that is consistent with the Organic Matter Recycling Regulation. These practices and procedures could be based on existing BMPs developed by the industry and/or developed jointly with government and would not have the force of law. Guidelines or BMPs may be viewed as assistance to persons governed by a regulation in meeting their legal obligations.

6. Assuring compliance

6.1 Compliance promotion

The ministry will develop a strategy for the promotion of voluntary compliance with the requirements of this regulation, in cooperation with industry association and other interests. Compliance promotion may entail training for ministry staff, as well as information and education for those operating composting facilities.

6.2 Compliance verification

The ministry’s approach to assuring compliance with OMRR will include regular and random compliance reviews and inspections, as well as reviews and inspections in response to identified or potential issues or concerns regarding protection of the environment or human health.

The ministry is committed to utilizing the compliance verification data to guide the ongoing management of composting facilities and assure the goals for environmental protection are being met.

6.3 Enforcement

The ministry response to non-compliance will entail written advisories, warnings, directives, tickets and prosecutions. The choice of response will be based on standard ministry-wide policy, the compliance history for the composting facility and the significance of the impact from the non-compliance occurrence.

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7. Providing Comment on Potential Revisions to the Regulation

The ministry is intending to finalize and implement revisions to the Organic Matter Recycling Regulation through 2007. Comments regarding the proposed intentions of the ministry are being solicited and will be carefully considered in the review and revision process. The ministry welcomes all suggestions with respect to any aspect of the regulation.

Submissions will be compiled and summarized, without specific attribution, by an independent contractor and the summary posted on the ministry website. Following review of comments and submissions, the ministry will complete legal drafting of the revised regulation for legislative review and implementation.

This intentions paper and a response form with questions based on revisions to the regulation have been posted on the ministry's website: www.env.gov.bc.ca/epdiv/ema_codes_of_practice/index.

Those interested are invited to submit comments using the instructions and questions provided on the response form. Individuals or organizations may also make written submissions to the ministry without following the format set out in the response form – as desired.

Comments to the ministry should be made on or before December 3, 2006.

All submissions will be reviewed for inclusion in a consultation summary report. Comments received will be treated with confidentiality by ministry staff and contractors when preparing consultation reports. Please note that comments you provide and information that identifies you as the source of those comments may be publicly available if a Freedom of Information (FOI) request is made under the *Freedom of Information and Protection of Privacy Act*.

If you have any questions or comments regarding the consultation process, review the information posted on the ministry website, or contact Cindy Bertram of C. Rankin & Associates, who has been contracted to manage consultation comments, at:

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Thank you for your time and comments!