



Ministry of
Environment and
Climate Change Strategy

Organic Matter Recycling Regulation

Intentions Paper Review

Coast Waste Management Association

October 17, 2018



Ministry of
Environment and
Climate Change Strategy

Outline

- Background
- Review Process
- Policy Items under Consideration
- Timeline
- Questions



Meet OMRR

- *Environmental Management Act (EMA) and Public Health Act (PHA)*
- Composting Facilities
 - Construction and operation
- Biosolids and Compost
 - Production
 - Distribution, sale, storage
 - Land applications



History & Drivers

- 2002: OMRR into force
- 2006: Intentions Paper
- 2011: Intentions Paper
- 2012: CCME - Canada-wide Approach
- 2015: Scientific Review of biosolids
- 2016:
 - Compost facility amendment - June
 - Intentions Paper
- 2018:
 - Intentions Paper

IP: Summary of Policy Topics

- Authorization process and fee payments
- Engagement with First Nations
- Director's powers and substitutions
- New feedstocks for composting
- Enhanced planning and standards
 - compost facilities
 - land application and distribution of organic matter
- Protection of human health and the environment
 - sampling and recordkeeping
 - technical standards

Authorization Process

Description		Authorization Process (in addition to complying with the OMRR)	
		<i>Current</i>	<i>Proposed</i>
Compost Facilities	Composting facilities processing food waste or biosolids, and: <i>Current</i> : with a design production capacity of 5,000 tonnes or greater of finished compost per year (dry weight) <i>Proposed</i> : receiving 15,000 tonnes or greater (wet weight) of feedstock per year	Permit, approval, operational certificate	No change
	All other composting facilities (i.e., not captured above)	Notification	Registration
	BGM* facilities (using 5 m ³ or more of biosolids)	comply with the OMRR	Notification
	BGM facilities (using less than 5 m ³ of biosolids)	comply with the OMRR	No change
Land Application	Land application of managed organic matter (Class A biosolids, Class B biosolids and Class B compost)	Notification	Registration
	Land application of retail grade organic matter (Class A compost, BGM)	comply with the OMRR	No change

*BGM = biosolids growing medium

Fees – Compost Facilities

Item	Description	Fee	
		<i>Current</i>	<i>Proposed</i>
Permit	Application	\$400	No change
Operational certificate	Application	\$0	No change
Permit, operational certificate	Annual	\$200	No change
Registration	Application	–	\$400
	Annual	–	\$200
	Amendment	–	\$400
	Transfer	–	\$400
Substitution	Application	–	\$150 per hour

Fees – Land Application

Item	Description	Fee	
		<i>Current</i>	<i>Proposed</i>
Registration	Application fee	–	\$400 for one year \$1200 for five years
	Amendment	–	\$400
	Transfer	–	\$400
Substitution	Application fee	–	\$150 per hour

Engagement with First Nations

Engagement Trigger	Compost Facility	Land Application
Pre-registration	–	60 days prior
Intent to register	90 days prior	30 days prior
Change to registration	30 days post	30 days post

Pre-registration engagement includes:

- engagement of FNs
- notification of regional district, MHO*, ALC**
- submission of land application review report with registration application

*medical health officer notification if on agricultural land, or in a watershed;

**Agricultural Land Commission notification if within Agricultural Land Reserve

Director's powers and substitutions

- Substitution of one requirement for another
- Can be initiated by:
 - Proponent, via application
 - Director
- Intent of the OMRR must be met
- FN notification
- Subject to appeal



New Feedstocks for Composting

- Addition of new materials to Schedule 12
 - Wood residue (untreated and unprocessed wood)
 - Domestic composting toilet sludge
 - Domestic wastewater treatment plant sludge
 - Non-recyclable paper material
 - Compostable plastic
 - Used mushroom growing substrate
- Director's discretion to consider other organic materials (substitutions)



Enhanced Planning and Standards – Compost Facilities

Facility description	Proposed Planning Requirement
Processing food waste or biosolids and receiving a total annual mass of 15,000 tonnes or greater (wet weight) of feedstock per calendar year	As required by permit, approval, operational certificate
Processing other feedstocks and receiving a total annual mass of 15,000 tonnes or greater (wet weight) of feedstock per calendar year	Full Facility Environmental Management Plan
Receiving less than 15,000 tonnes (wet weight) of feedstock per calendar year	Light Facility Environmental Management Plan
Processing only wood residue and/or yard waste only	Light Facility Environmental Management Plan

Enhanced Planning and Standards – Compost Facilities

- Best Practices
 - Adoption of best practices and higher performance standards
 - Implementation of Best Management Practices (BMPs), Best Achievable Technology (BAT), including for: leachate and runoff management, odour control
 - Phased-in requirements for facilities that process food waste or biosolids, and which will receive 15,000 tonnes or greater (wet weight) of feedstock per year:
 - Within 5 years for all new facilities
 - Within 10 years for all existing facilities
 - Compost in-vessel or fully enclosed

Enhanced Planning and Standards – Compost Facilities

- Quality Criteria
 - Invasive species, noxious weeds prohibited
 - Pre-screening to remove foreign matter
 - Foreign matter 0.5 percent dry weight
 - Plastic limit \leq 0.25 percent dry weight
 - Maturity (respiration, temperature)
- Setbacks
 - Facilities:
 - 30 metres to nearest watercourse, water supply well
 - Storage:
 - 15 meters to nearest watercourse
 - 30 metres to domestic water sources

Enhanced Planning and Standards – Land Application

- Quality criteria
 - Class A biosolids, Class B biosolids, Class B compost – see table
 - Class A compost, BGM
 - Alignment with Schedule 10.1
 - Foreign matter content, 0.5 percent dry weight
 - Plastics \leq 0.25 percent dry weight
 - Contaminants of Emerging Concern
 - At Director’s request for Class A and B biosolids: dioxins/furans, phthalates, PAHs, PCBs, phenols, PBDEs, select pharmaceuticals and personal care products

Substance: Managed Organic Matter	($\mu\text{g/g}$)
Arsenic	75
Cadmium	20
Chromium	1060
Cobalt	151
Copper	757
Lead	505
Mercury	5
Molybdenum	20
Nickel	181
Selenium	14
Zinc	1868

Enhanced Planning and Standards – Land Application

- Labelling and disclosure
 - Compost derived from biosolids or domestic WWTP sludge
 - Biosolids growing medium
- Best practices
 - Agronomic rates (agriculture, silviculture)
 - Requirements for facilities in the ALR

Enhanced Planning and Standards – Land Application

- Setbacks
 - Non-agricultural land:
 - Class B biosolids, Class B compost: 30 m from watercourses, drinking water
 - Class A biosolids: 15 m from watercourses, drinking water
 - retail grade organic matter: none
 - Agricultural land
 - managed organic matter: 30 m from watercourses, potable water sources, irrigation wells
 - retail grade organic matter: 3 m from watercourses; 30 m from drinking water
- Waiting periods for Class A biosolids
 - 30 days prior to grazing
 - As per Schedule 8 for planting and harvesting of food crops
- Mine site reclamations, landfill closures
 - Registration process

Product Sampling - Pathogens

Parameter	Current Frequency	Proposed Frequency	Applicable to
Fecal coliforms	7 composite/ 1,000 dry weight	1 composite/ 500 tonnes wet weight	Class A compost Cass A biosolids
	--	1 composite/ 500 tonnes wet weight	BGM
	7 grab/ 1,000 dry weight	1 composite/ 500 tonnes wet weight	Class B compost Cass B biosolids
Salmonella	--	1 composite/ 1,500 tonnes wet weight	Class A compost Cass A biosolids BGM

- each composite sample comprised of 10 grab samples, @ frequency above or 1x/yr, whichever occurs first
- Samples collected no more than 2 months prior to land application

Product Sampling – Metals & Foreign Matter

Parameter	Current Frequency	Proposed Frequency	Applicable to
Metals	Not specified	1 composite/ 500 tonnes wet weight	Class A compost Class B compost BGM Class A biosolids Class B biosolids
Foreign Matter	Not specified	1 composite/ 500 tonnes wet weight	Class A compost Class B compost BGM Class A biosolids Class B biosolids

- each composite sample comprised of 10 grab samples, @ frequency above or 1x/yr, whichever occurs first
- Director can request increase in frequency

Post-Land Application Sampling & Recordkeeping

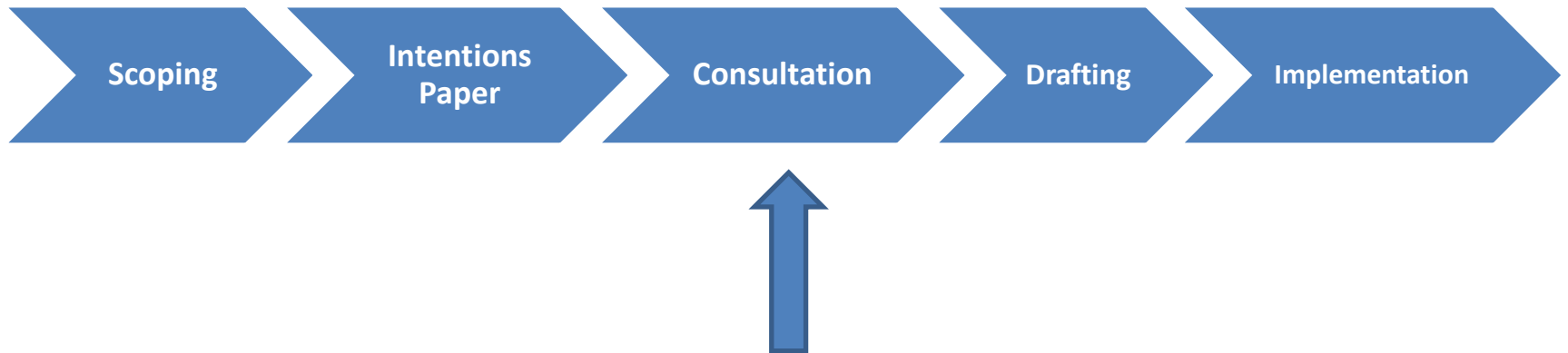
- Post application sampling:
 - At Director's request
 - Metals, soil quality parameters
 - Dioxins/furans, phthalates, PAHs, PCBs, phenols, PBDEs, select pharmaceuticals & personal care products
- Recordkeeping:
 - 7 years
 - Submitted plans, reports posted online

Human Health & Environment – Technical Standards

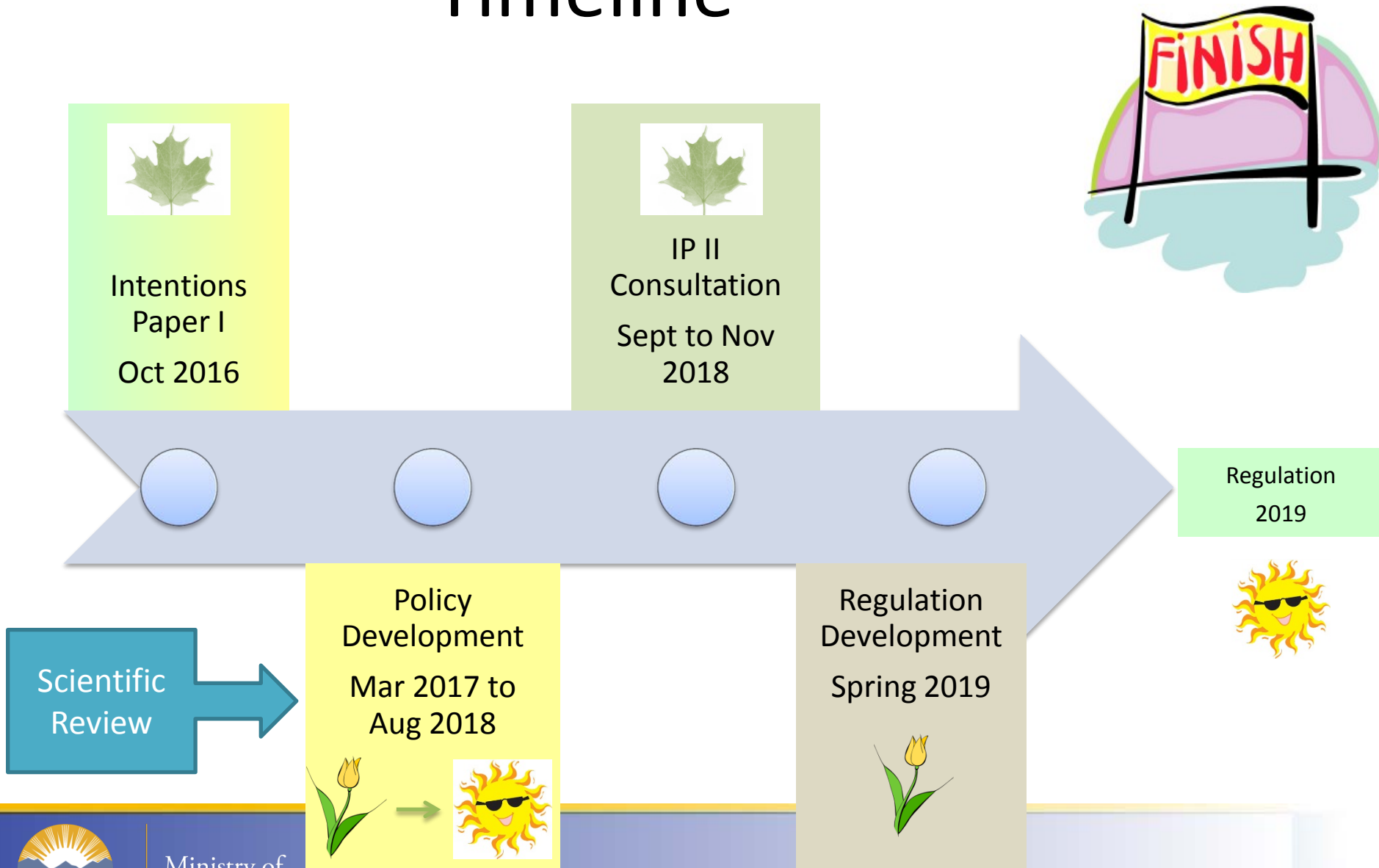
- Adding maximum *Salmonella* limits as follows:
 - must be ‘non-detect’ at a detection level of less than 3 MPN per 4 grams of total solids dry weight basis
- Deleting references to the C:N ratio for composting and replacing with respiration and/or temperature as a measure of compost maturity
- Considering options for extending curing time requirements for compost or a requirement to demonstrate maturity if less than a 14 day period
- Temperature rise of the compost above ambient temperature is less than 8 degrees Celsius
- Total Kjeldahl Nitrogen in biosolids growing media must be less than 1.0 percent by weight
- Organic matter content of BGM must not exceed 20 percent dry weight

Policy Development Process

- Environmental Protection Division policy development process:



Timeline



Engagement Opportunities

IP Consultation: September 7 to November 8

- Online feedback form
- Email: env.omrr.reg.reviews@gov.bc.ca
- Webinars and presentations
- Other meeting opportunities



Questions?

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www2.gov.bc.ca/gov/content/environment/waste-management/food-and-organic-waste/regulations-guidelines

Scientific Review – Overview

- Announced in June 2015
- Deliverables
 - Literature review (published June 2016)
 - Soil sampling project (published Oct 2016)
 - Biosolids sampling project (anticipated Oct 2018)
 - Vegetation sampling project (in progress)

www2.gov.bc.ca/gov/content/environment/waste-management/food-and-organic-waste/biosolids-in-bc

Scientific Review – Studies

- Soil study
 - Three sites: Cariboo, Thompson Nicola, Okanagan
 - Biosolids-treated plots and untreated control plots
 - Nutrients, metals, persistent organic pollutants (POPs)
 - Results
 - All levels below the OMRR and CSR standards
- Biosolids study
 - Two WWTPs
 - Pathogens, metals, POPs, contaminants of emerging concern (CECs)
 - Results
 - Pathogens, metals below OMRR standards
 - POPs, CECs, low levels or undetected; below existing standards
- Vegetation study
 - Two sites: Cariboo
 - Biosolids-treated plots and untreated control plots
 - Nutrients, metals, POPs, CECs
 - Results
 - In progress; anticipated Spring 2019



Consistency: Agricultural Waste Control Regulation

- Managed and retail grade organic matter applied on the agricultural land base would have additional requirements under the proposed changes to the AWCR
- Land applications on agricultural land would be required to account for all nutrient sources and may not exceed agronomic application rates
- High risk areas, including watersheds of phosphorus-impacted surface waters, recharge areas of nitrogen-sensitive aquifers, and high precipitation areas would be subject to land application restrictions
 - there will be seasonal and weather based restrictions for land application

Consistency: Agricultural Waste Control Regulation

- Setbacks would apply to land applications and storage of managed and retail grade organic matter on the agricultural land base
- Agricultural operations will be required to have a nutrient management plan (NMP) if they are above soil test thresholds
 - If managed organic matter is land applied on that site, then a LAP will also be required
- Most OMRR land application sites are not expected to have high enough residual nitrogen levels to trigger the need for an NMP