



A review of the current Canadian legislative framework for wastewater biosolids

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Background

- One of the projects of the Biosolids Task Group of the CCME
- Review of Canadian regulatory framework for biosolids
- Objectives:
 - outline the current regulatory framework
 - identify regulatory issues
- Based on:
 - responses to survey of federal and provincial representatives
 - Review of federal/provincial guidelines

Topics

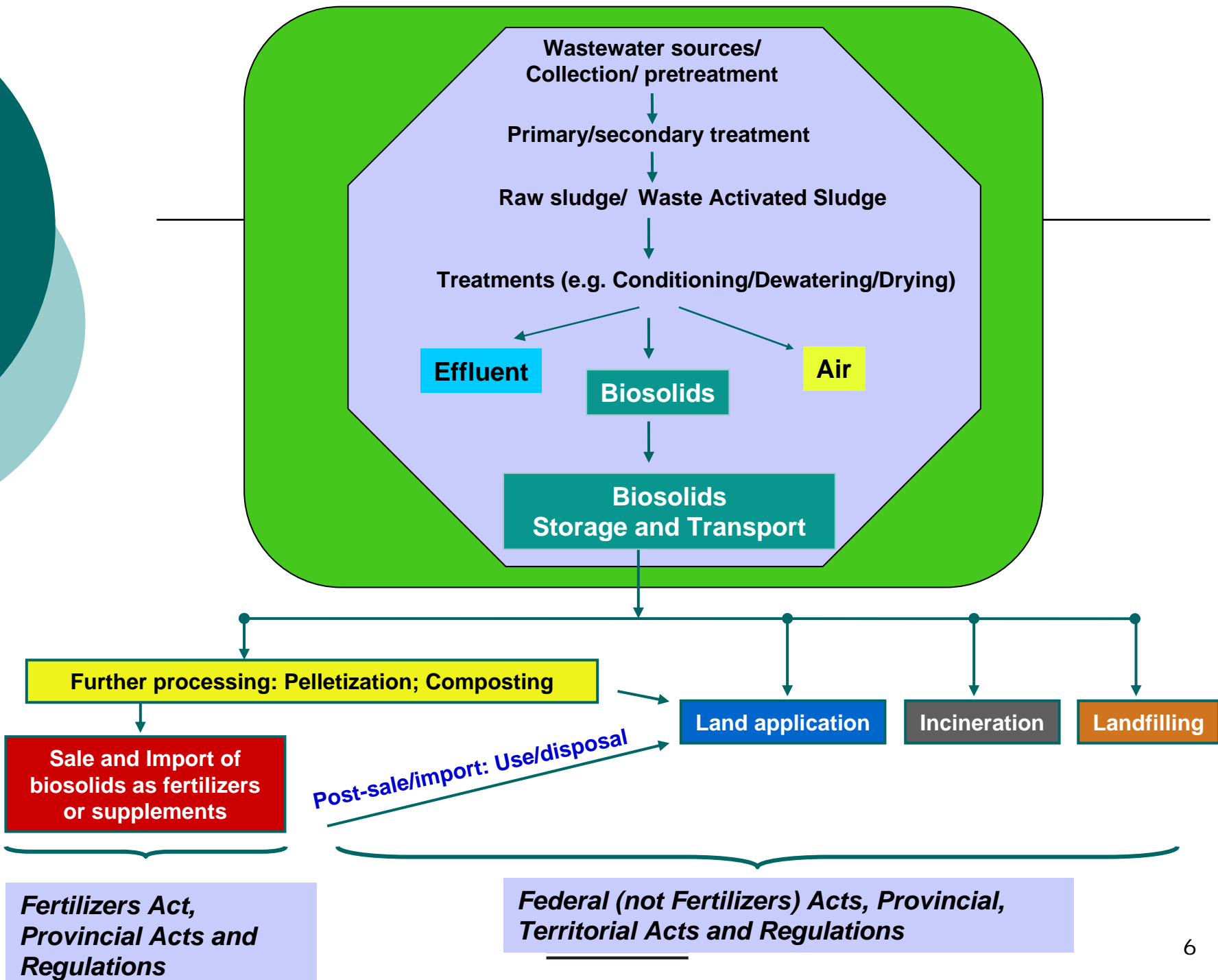
- Legislative authority
- Definitions
- Approval process
- Standards/Restrictions
- Monitoring and compliance
- Challenges

Material covered

- For the purposes of this presentation, “biosolids” refers to solid or semi-solid material generated from municipal wastewater treatment plants, after the removal of liquid effluent, regardless of the extent of treatment
- does not include biosolids derived from solely industrial sources (e.g. pulp and paper biosolids)
- Also looked at regulation of septage

Uses of biosolids

- Review focused on land application of biosolids
- In most provinces, >80% land applied
- In NS and PEI, land application is only option
- In ON ~ 40% land applied, 40% landfill, 20% incinerated
- In QC ~ 27% land applied, 31% landfill, 42% incinerated



Federal Legislative authority

Environment Canada

- ***Canadian Environmental Protection Act, 1999:***
 - Authority for managing “CEPA-toxic” substances, including certain ones released into wastewater sewer systems.
 - Releases of certain substances, some of which are present in wastewater residuals, must be reported (CEPA National Pollutant Release Inventory).
 - Authority for regulatory instruments to manage many of the environmental protection risks on federal and aboriginal lands.

Federal Legislative authority

Canadian Food Inspection Agency (CFIA)

- ***Fertilizers Act (FzA) and Regulations (FzR)***
 - Biosolids that are sold or imported as a fertilizer or supplement are regulated and must meet prescribed safety, efficacy and labelling standards.
 - FzA does not regulate products that are not sold, nor product production, storage or use
 - “Processed sewage” and “compost” (includes composted biosolids) are defined in Schedule II of the *FzR*, and therefore are exempt from registration (pre-market approval).
 - If biosolids are used in a product type that requires registration (e.g. fertilizer-pesticide, low analysis farm fertilizer) they will be subject to mandatory pre-market approval

Provincial/Territorial Authority

- Biosolids management captured under water protection/nutrient management legislation
- Applicable provincial regulations have different scopes including sewage disposal, agricultural operations, organic matter recycling etc.
- Authority for one or more of the following:
 - Production, handling, storage, transport, disposal, use
- Most have legislation requiring public input to projects for managing biosolids

Definitions/classifications

- Many different variations of “sewage”, “biosolids” or “sludge”, sometimes depending on level of treatment
- Different classifications of biosolids in different jurisdictions based on quality criteria (e.g. pathogens, heavy metals, odour), or degree of treatment
- SK has only one class, most other provinces have 2 or 3

Approval Process - federal

CFIA

- For regulated but non-registerable products:
 - Voluntary basis - Letter of No Objection to Sale (LONO) – valid for up to 3 years
 - Assess products containing biosolids for:

Safety - processing method, inputs, and results of analysis for trace metals, pathogens and dioxin and furans

Efficacy - application rate and frequency must satisfy provincial recommendations for nutrients and/or organic matter

Label - meeting the labelling requirements to ensure that the consumer is not misled as to the composition or utility of the product

Approval Process - federal

CFIA

- For registerable products:
 - Mandatory pre-market assessment
 - Assess products for:
 - Safety** – as for LONO, may have additional requirements depending on other ingredients
 - Efficacy** – as for LONO, in some cases may require data demonstrating efficacy of the product
 - Label** – as for LONO
- Approval does not exempt any product from marketplace monitoring

Approval process - provincial

- All manage production, quality, use and disposal through approvals/permits/licences
- Some have exemptions from approvals for biosolids that are sold and/or meet specific quality requirements
- General process involves submission of information on biosolids, and in some cases, receiving soil
- Most require testing to determine nutrient content and other criteria
- Some provinces require site-specific information

Approval process - provincial

- Most have public notification requirements as condition of approval
- Some require Nutrient Management Plan or Land Application Plan, depending on quality
- Some approvals valid for 1 year, some longer

Standards - federal

CFIA

- Standards apply to all fertilizers and supplements that are regulated (i.e. not specific to biosolids)
- CFIA standards are minimum for all products that are sold; provinces may impose stricter standards
- Pathogens - *Salmonella* (absence in 25g), fecal coliform (<1000 MPN/g)
- Trace metals, dioxins – based on cumulative addition to soil so depends on application rate

Standards - provincial

- Many based on CCME, BNQ, or USEPA standards
- Similarities, but each province has different classifications
- Metals – most have maximum acceptable levels in biosolids. Some have limits in soil that receive biosolids
- Pathogens – most have standards and/or have treatment requirements
- Organic chemicals – if use BNQ standard → dioxins
- Application restrictions – Some have timing restrictions, crop restrictions, waiting periods for harvest or grazing

Monitoring and Compliance

CFIA

- All regulated products subject to inspection, sampling and analysis
- Marketplace monitoring programs for compliance with pathogen and metal standards, nutrient guarantees, and labelling requirements
- Non-compliant products subject to regulatory action, including product detention
- CFIA not legislated to take action after a sale has occurred

Monitoring and Compliance

Provincial

- Most have enforcement section
- Ensure that approvals are valid, and monitor compliance with approval
- Permit holders must monitor quality of biosolids
- Some require groundwater quality testing from domestic wells
- All require records to be maintained for minimum one year

Challenges

- Lack of clarity of roles and responsibilities
- Lack of consistency in definitions
- Different classifications

Next steps

- Identification of areas that could benefit from harmonization and/or strengthening
- Evaluation of best practices
- Discussion of harmonization
- Formulation of a national approach to biosolids management



Thank you