

LEGISLATIVE REQUIREMENTS

We've touched on Ontario's legal requirements and regulations throughout the book. This chapter summarizes:

- biosolids-related laws and bylaws at the provincial and municipal levels
- roles and responsibilities for all those involved in the process of land-applying sewage biosolids.

The regulatory requirements indicated here are those in place at the time this book was written. Individuals applying sewage biosolids to agricultural land must comply with the most recent version of all applicable regulations and legislation.

All municipal sewage treatment plants generate sewage biosolids as a by-product of the wastewater treatment process. Most sewage biosolids are generated by digestion, either anaerobic or aerobic, as a final stage of treatment at a municipal sewage treatment plant. On a regular basis, the digested biosolids must be removed from the treatment process and managed in some way generally off-site from the plant.

As we noted at the beginning, municipalities have several options for their biosolids. Each municipality will choose the most appropriate and environmentally acceptable biosolids management practice based on their specific situation and the volume and quality of their sewage biosolids.

The operation of municipal sewage treatment plants is regulated under the Ontario Water Resources Act.

The management of biosolids is regulated under the Environmental Protection Act and the Nutrient Management Act.

REGULATORY FRAMEWORK

ONTARIO WATER RESOURCES ACT (OWRA)

The operation of municipal sewage treatment plants in Ontario is governed by the Ontario Water Resources Act and associated regulations.

These facilities must be designed, constructed, maintained and operated in accordance with the strict requirements in a Certificate of Approval issued under section 53 of the OWRA by the Ministry of the Environment.

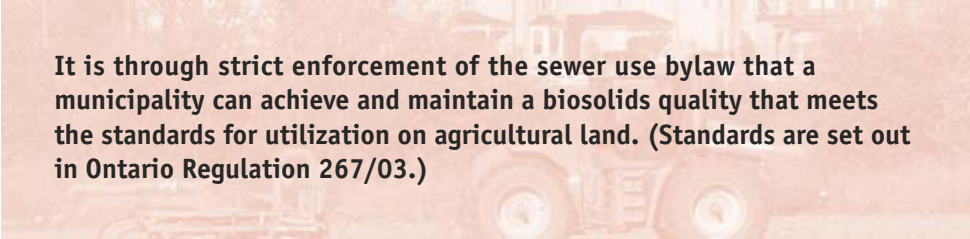
The operators of such approved plants must also be trained and certified under Regulation 129 made under the OWRA.

The Ministry of the Environment and the Ontario Clean Water Agency train and certify wastewater treatment plant operators and staff.

SEWER USE BYLAW

Any municipality in Ontario that owns a sewage treatment plant is responsible for ensuring it's maintained and operated in compliance with their Certificate of Approval. As part of their responsibility for effective wastewater collection and treatment, many municipalities have adopted and enforce a strict sewer use bylaw. Sewer use bylaws generally apply to industrial, commercial, and institutional wastewater dischargers. The bylaw sets criteria for the quality of wastewater being discharged to the municipal sewage collection system for ultimate treatment at an approved sewage treatment plant.


Enforcement of the sewer use bylaw can greatly assist the municipality in its effort to meet the final effluent criteria for the sewage treatment plant. Enforcement can also reduce the levels of contaminants that will be concentrated in the sewage biosolids generated by the plant.



It is through strict enforcement of the sewer use bylaw that a municipality can achieve and maintain a biosolids quality that meets the standards for utilization on agricultural land. (Standards are set out in Ontario Regulation 267/03.)

ENVIRONMENTAL PROTECTION ACT (EPA)

Any biosolids management activities following treatment at the sewage treatment plant are governed by the Environmental Protection Act. These may include incineration (if not located at a sewage treatment plant), hauling, storage, landfill, and application on non-agricultural land.



Ontario Ministry of the Environment enforcement staff are responsible for monitoring operations at wastewater treatment plants.

NUTRIENT MANAGEMENT ACT – 2002 (NMA)

The land application of sewage biosolids on agricultural land is a form of nutrient management and is therefore governed by the NMA. Prohibitions, separation distances, and crop waiting periods are specified in Ontario Regulation 267/03 under the NMA for sewage biosolids application.

Under Ontario Regulation 267/03, all agricultural land to which sewage biosolids are to be applied must have a NASM plan developed by a certified NASM plan developer and approved by the Ontario Ministry of Agriculture, Food and Rural Affairs. For more information about the Nutrient Management Act, Ontario Regulation 267/03 and associated protocols, guides and tables, please go to www.e-laws.gov.on.ca

STAKEHOLDER ROLES AND RESPONSIBILITIES

“All stakeholders, including operating agencies and other generators, haulers and farmers have certain responsibilities and rights to ensure that the final utilization of these biosolids is successfully carried out in an environmentally friendly manner with beneficial effects for the agricultural soil.”

from the Guidelines for the Utilization of Biosolids and Other Wastes on Agricultural Land

MUNICIPALITY

Municipalities are responsible for enforcing their sewer use bylaws and operating their sewage treatment plant in accordance with their Certificate of Approval issued under the Ontario Water Resources Act.

The Ministry of the Environment has developed a series of sector-specific wastewater treatment BMP documents that assist industries in developing their own operational practices to reduce or eliminate contaminants from entering the sanitary sewer. Wastewater treatment would only be considered if the industry could not reduce or eliminate contaminants by all other means.

If a municipality determines that their sewage biosolids meet the criteria for utilization on agricultural land, they must work with a NASM plan developer and the local farm community to secure approved NASM application sites.

The municipality must then either hire a licensed biosolids hauler or obtain the necessary approvals from the Ministry of the Environment to haul their own biosolids to an approved land application site.

The municipality is also responsible for providing alternative destinations if biosolids don't meet the criteria or can't be land-applied due to weather or field conditions. The municipality may delegate this requirement to the hauler/land application contractor.

The municipality should retain records related to the quality and quantity of the biosolids shipped to land application sites and site locations.

BIOSOLIDS HAULER – BROKERS, LAND APPLICATORS, AND TECHNICIANS

All biosolids haulers in Ontario must obtain Ministry of the Environment approval in the form of a Waste Management System Certificate of Approval. It is their responsibility to operate in compliance with their Certificate of Approval.

In many Ontario municipalities, the responsibility for selecting suitable sites for land application of sewage biosolids is delegated to a biosolids hauler/land application company. In this case, the hauler must work with the landowner or operator and a certified NASM plan developer to obtain the necessary NASM plan approval from the Ontario Ministry of Agriculture, Food and Rural Affairs.

The hauler is also responsible to ensure that the hauling of the biosolids is done in compliance with the Waste Management System Certificate of Approval. The biosolids land applicator, the farm operator, and the NASM plan developer are responsible to ensure that the land application information in the NASM plan is understood by all parties and that the biosolids are applied according to the plan.

The Nutrient Management Act and regulations require the following key players to be trained, certified and/or licensed:

- those who develop the NASM plans
- companies that do land application (prescribed materials application businesses), and
- operators of the land application equipment (nutrient application technician licence).

The biosolids land applicator must ensure that the materials are applied uniformly and do not exceed the maximum application rate. The operation should be scheduled such that it is mutually beneficial for the hauler and the farmer.

All candidate application sites must be assessed to verify that the proper conditions exist prior to approval for application.

The hauler must provide the farmer with a report indicating the fertilizer-equivalent values of the land-applied biosolids. This is essential for the farmer to make sound nutrient management decisions.



FARM OWNER AND OPERATOR

The farmer and the certified NASM plan developer should work together to develop a utilization program for individual fields.

The farmer has the right and responsibility to:

- ▶ insist on program flexibility such as application rates or timing
 - ▷ application rates should be adjusted to suit the nutrient requirements of the crop, as long as they're within the rate in their NASM plan
- ▶ stop or refuse biosolids from being spread on the approved site at any time
- ▶ ensure that biosolids are land-applied at times that are beneficial for crop production, but not disruptive to normal farming practices
- ▶ ensure that appropriate waiting periods between material spreading and cropping or pasturing are observed
- ▶ obtain advice from intended market sources as to other limitations or restrictions
- ▶ account for the sewage biosolids' nutrient value in his/her nutrient management planning calculations, if the farm is part of a farm unit that is required to have a nutrient management plan.



Farmers are encouraged to use cropland BMPs to optimize the benefit and minimize the risk of sewage biosolids land application.

ONTARIO MINISTRY OF AGRICULTURE AND FOOD AND RURAL AFFAIRS (OMAFRA)

When required by the Nutrient Management regulations, OMAFRA is responsible for the approval of NASM plans and the registration of operations receiving NASM.

OMAFRA also:

- provides scientific review and establishes land application criteria with the Ministry of the Environment and stakeholders
- reviews and approves the strategies of phased-in farms that are required to have a nutrient management strategy
- is responsible for the training, certification and licensing requirements as set out in the Nutrient Management regulations.

OMAFRA staff are responsible for the training, certification and licensing requirements as set out in the Nutrient Management regulations.

MINISTRY OF THE ENVIRONMENT (MOE)

MOE approves municipal sewage treatment plants under the Ontario Water Resources Act. Most sewage biosolids management activities are approved under the Environmental Protection Act. These may include hauling, storage, incineration (if not located at a sewage treatment plant), landfill, and application to non-agricultural land.

MOE is responsible for monitoring compliance with the regulatory components through inspections and investigations.

The ministry's continuing efforts include:

- ▶ co-development with OMAFRA of a regulatory framework based on sound science that both protects the environment and provides for a sustainable biosolids land application program
- ▶ fostering of continuous improvement through research, information transfer, and training
- ▶ development of training for licensing and certification
- ▶ ensuring compliance with the regulations and the use of practices that meet regulatory requirements in treatment, management, and land application programs.

With specific regard to agriculture, MOE is responsible for compliance under the Environmental Protection Act, the Ontario Water Resources Act, the Pesticides Act, and the Nutrient Management Act. All of this legislation, plus any associated regulations, protocols, and approvals, apply to agricultural operations.

MOE's compliance program is staffed with Agricultural Environmental Officers (AEOs) – provincial officers with specialized agricultural training. An AEO may visit a farm for a number of reasons, including:

- ▶ to perform an inspection to assess compliance with legislative requirements
- ▶ to respond to a complaint received by the ministry either from the public or through a referral from another agency (regardless of whether a NASM plan is in place)
- ▶ to respond to a report of an environmental incident or spill.

The MOE's on-farm compliance approach engages farmers actively to resolve issues. As the requirements are often complex, AEOs work directly with farmers to achieve compliance with the law.