

# Information Bulletin – Waste Management Facility Design, Modification and Operation



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This bulletin provides an overview of what is required to build or alter a waste management facility in Manitoba. It also covers questions that facility owners and operators often ask.

Manitoba's [Waste Management Facilities Regulation](#) governs the following types of facilities:

- landfills
- waste transfer stations
- composting areas
- recycling facilities
- remote seasonal waste facilities

These facilities provide a place for people to dispose of their waste. They prevent dumping and littering, protect public health and the environment, and support sustainable development. Poorly designed and built facilities risk public safety, lead to costly and hard to manage issues, and limit prospects for growth and development.

## Planning and Design

The first step in planning a new or expanding an existing facility is selecting the right site. You need an engineer to help with this. These are some of the items to consider:

- Capacity: the size should accommodate current and anticipated waste based on your communities goals.
- Layout: the design should include planning for new cells as existing capacity is filled.
- Location: the regulation sets out minimum distances to features like wells, buildings, and surface water. It also prohibits construction on steep slopes, gravel pits, quarries, or permafrost.
- Soil conditions: the soils on site must prevent contaminated water from seeping into groundwater.
- Groundwater: the base of the liner must be at least one metre from the seasonal high water table.
- Drainage: rainwater and snow melt must be managed to avoid pollution being carried off-site.
- Flooding: the site must be protected from a one-in-100 year flood.
- Leachate: the water that has been in contact with waste must be managed to prevent pollution.
- Closure: the design has to account for all stages of the facility's life.

Further details on the above items can be found in sections three and four of the [Standards for Landfills in Manitoba \(standards\)](#). Those sections provide the minimum design criteria for landfills. Engineers must follow these standards. Any project proposal must demonstrate that standards are met.

## **Do I need a licence or permit to build and operate a waste management facility?**

Yes. You need a permit or a licence to build and operate a waste management facility. The Environmental Approvals Branch of Environment, Climate and Parks issues permits and licences.

Please email [EABDirector@gov.mb.ca](mailto:EABDirector@gov.mb.ca) or call 204-335-2554 for more information.

## **When do I need a permit for a waste management facility?**

You need a permit under the [Waste Management Facilities Regulation](#) if you plan to build, expand, or operate any of the following:

- a municipal landfill or regional waste management facility that receives waste produced within Manitoba and the amount of waste received is less than:
  - 5,000 tonnes of solid waste per year, or
  - 400 tonnes of solid waste within 30 days
- a waste transfer station
- a non-commercial composting facility that will have ten or more cubic metres of organic waste at any given time
- a recycling or material recovery facility
- a remote seasonal waste facility

## **When do I need an Environment Act licence for a waste management facility?**

You need a licence under [The Environment Act](#) if you plan to build, expand, or operate any of the following:

- a landfill that has a gas collection system
- a commercial composting facility
- a gasification plant
- a landfill that meets any of the following criteria:
  - receives more than 5,000 tonnes of solid waste in a year or 400 tonnes of solid waste within 30 days
  - receives solid waste from outside the province
  - is operated by anyone other than a municipality or regional waste management authority to
    - dispose of their own solid waste, or
    - dispose of solid waste produced by others for commercial purposes

## **When do I need to hire an engineer?**

You need an engineer to prepare parts of the licence or permit application package for landfills and composting facilities. The engineer will:

- investigate soil and groundwater conditions to determine if the site is suitable
- design a new cell, including the leachate management system
- design the expansion or modification of an existing cell
- develop the closure plan when a synthetic liner system is used to cap a closed cell

You also need an engineer to prepare and submit record drawings of the construction, which means they will be involved during the construction phase.

### **When do I not require an engineer for a waste management facility?**

You do not need an engineer for the following activities:

- preparing and submitting a permit application for a remote seasonal waste facility, a waste transfer station, or a material recovery (recycling) facility
- conducting routine operations and maintenance
- preparing the operations manual
- submitting closure plans and the closure report
- closing the landfill when using a clay cap

### **What do I do if I have concerns about the engineering recommendations made by a consultant?**

Resources are available to assist you with any concerns about landfill development. The department reviews landfill submissions and will flag any recommendations at odds with Manitoba's regulatory requirements.

The department is also willing to review any draft proposal and provide comments on the adequacy of engineering requirements, including those above and beyond the provincial requirements. The review will focus on the scope of the engineering work following the [Standards for Landfills in Manitoba](#).

Municipalities are encouraged to contact the department at [EABDirector@gov.mb.ca](mailto:EABDirector@gov.mb.ca) to review any draft proposal before making a formal submission.

### **Will the need to hire an engineer change with future amendments to the regulation?**

No. The engineering requirements of the [Waste Management Facilities Regulation](#) are anticipated to stay the same. In fact, the engineering requirements in the previous and current regulations are the same.

### **Will the department close my landfill to dispose of my waste at a regional landfill site?**

No. The department will not close your landfill in favour of a regional landfill. A municipality determines its preferred waste management options.

### **Where can I access funds to construct a landfill?**

The Manitoba government currently provides comprehensive funding to all municipalities. Municipal Relations supports municipalities with an unconditional annual municipal operating grant. Municipalities have the flexibility to use it for operating or capital needs of their community, including infrastructure and engineering costs related to municipal landfills. For more information on grants and other funding opportunities, please visit [Manitoba Municipal Funding](#).

### **What are other funding opportunities available for my waste management?**

The Federation of Canadian Municipalities offers the [Green Municipal Fund](#). It helps municipalities support innovative waste-management strategies for waste diversion and waste stream management. Please visit [Green Municipal Fund](#) for more information.

The Department of Labour, Consumer Protection and Government Services also provides municipalities with federal gas tax funding to build a municipal gas structure (e.g., a methane recovery facility). Please visit [Federal Gas Tax Fund](#) for more information.

### **Do I need an engineer to install new structures or buildings for short-term or long-term use at my waste management facility?**

The department may not require an engineer to design and install new structures for short-term use at your waste management facility. Any new structure for long-term use will require a site suitability study conducted by an engineer.

The department must approve the construction of any structure for short-term or long-term use.

For more information, municipalities are encouraged to contact the Environmental Approvals Branch at [EABDirector@gov.mb.ca](mailto:EABDirector@gov.mb.ca).

### **If my neighbouring municipality has a suitability assessment done for their landfill, can I use it for my landfill?**

No. Suitability assessments are site-specific. They consider soil variability, the presence of groundwater, drainage conditions, setback distances, and other things. A landfill is then designed based on those conditions. All new sites require an assessment.

### **If I have done a suitability assessment in the past for a landfill site, can I use it to expand that landfill site?**

Yes. A new assessment is optional for an expansion if one has been done previously for the same site. Yet, additional information may be needed if the previous evaluation was incomplete. The department encourages municipalities to conduct whole-site assessments.

### **Where can I find an engineer for a waste management facility in Manitoba?**

The [Association of Consulting Engineering Companies Manitoba](#) lists consulting firms with expertise in environmental engineering. Select “Environmental” in the list.

### **Where should I direct my compliance-related questions?**

Municipalities are encouraged to contact their [regional environment officer](#) for any compliance-related questions.

### **Will the department work with municipalities to develop a compliance plan for non-compliant facilities?**

Yes. The department will work with individual municipalities to determine a flexible and reasonable compliance timeline.

## **Who can help me to sample and monitor my groundwater monitoring wells, surface water, or leachate?**

An engineer, a certified technician, a certified engineering technologist, or an environmental scientist may do sampling and monitoring.

### **Glossary**

Some commonly used terms are defined below:

**Composting facility:** means a facility where composting is carried out.

**Landfill or waste disposal ground:** means a facility where solid waste is disposed of by placing it on or in land, but does not include a remote seasonal waste facility.

**Leachate:** means liquid that has percolated through solid waste and contains dissolved and suspended materials from the solid waste.

**Material recovery facility:** means a building where commingled recyclables are separated and processed (including sorting, baling and crushing) or where source-separated recyclables are processed for sale to various markets.

**Operator:** means the holder of a licence or permit issued for the waste management facility.

**Remote seasonal waste facility:** means a facility for the deposit of solid waste that (a) serves a population of less than 200; (b) is located in an area that does not have all-season road access; and (c) is operated for less than six months in a year.

**Transfer station:** means a facility at which solid waste is received and temporarily stored to transport it to another site for processing, recycling or disposal.

**Waste management facility:** means a landfill, a composting facility, a transfer station, a material recovery facility, or a remote seasonal waste facility.