

Information Bulletin – Environment Act Proposals for Wastewater Treatment Facilities – Supplementary Guidelines



These guidelines apply to Environment Act Proposals for the construction of wastewater treatment facilities, including wastewater treatment lagoons and wastewater treatment plants.

In addition to the standard information requirements of the Environment Act Proposal (https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/licence/index.html), the following information should be provided:

Introduction and Background

1. Details regarding existing facilities and issues – organic or hydraulic overloading, extraneous flows, leakage or seepage, maintenance problems, septage or truck haul handling, other.
2. Details regarding current and future populations to be served by the facility and corresponding organic and hydraulic loading, including loading from community sewer (gravity or low pressure systems) and truck haul (sewage and/or septage). Identify industrial or institutional loading and seasonal variations with any loading component. Where applicable, discuss and provide any industrial service agreements relevant to the project.
3. Projected load growth over the estimated life of the new facility.
4. Alternatives considered during project selection and design, including alternative treatment technologies and regional facilities. How was the proposed design or option selected?
5. Community consultation undertaken during project selection and design, and discussion of any concerns identified.

Description of Development

1. Include a land title certificate copy (current Certificate of Title or Status of Title) and either a copy of a land purchase agreement or a description of land purchase arrangements if additional land is being purchased. (A Proposal should not be filed until the exact location of the facility is known and the present landowner is aware of the project.)
2. Include sealed engineering drawings showing size and configuration of the proposed facility and any related existing and planned components and appurtenances. Plans must include horizontal dimensions and vertical elevations, and show site access details and distance to nearest residences, property lines and waterways.
3. Include a brief description of how the facility was sized to accommodate existing and projected organic and hydraulic loading. For wastewater treatment lagoons, ensure hydraulic capacity is based on live storage, and does not include dead storage below the invert of the outlet of secondary cells.
4. For wastewater treatment lagoons, include liner or cutoff details – clay soil or synthetic. For synthetic liners, include cover material and gas relief system details. For cutoffs, include dimensions and details of the materials the cutoff extends through and into. For expanding wastewater treatment lagoons, identify how liners may connect or interact to form a continuous liner between old and new cells.
5. Discharge route – describe route and provide a plan from the facility outlet pipe through to a permanent downstream receiving waterway. Use aerial photographs and/or provincial drainage maps to clearly illustrate the location of the wastewater treatment facility and the drainage route.
6. Operation – describe the operating cycles for the facility.
7. Maintenance – describe seasonal maintenance activities.
8. Wastewater collection system – where the facility services a piped wastewater collection system, briefly describe the area serviced by the facility and any features - gravity or low pressure sewers, combined sewers that also accommodate stormwater, location of lift stations.
9. Decommissioning – describe the decommissioning of any existing facilities that may need to be done in connection with the project, including the proposed method of sludge disposal. The description should address what is being decommissioned, when it will be decommissioned, how it will be decommissioned, and where decommissioned materials will be placed.

Description of the Environment

1. Describe the existing land use, topography, vegetation and soil type of the project area.
2. Describe any existing wildlife use of the project area with particular attention to rare or endangered species.
3. Describe the flow regime (including high and low flows) and water quality conditions of the receiving waterways.
4. Describe fish species and fish habitat found in the receiving waterways.
5. Identify any water users and Water Rights licenses on the receiving waterways.
6. Describe the nature and location of any other municipal or industrial wastewater treatment facilities that discharge to the waterways.

Description of Environmental Effects

1. Describe effects on the terrestrial environment resulting from the construction and operation of the proposed facility.
2. Describe effects on the aquatic environment resulting from the construction and operation of the proposed facility, with particular attention to water quality and fish habitat. Water quality effects should specifically address biochemical oxygen demand, nutrients, salts, metals and any constituents in the incoming wastewater that will not be removed by the facility. Any water quality parameters that may not meet Manitoba Water Quality Standards, Objectives and Guidelines (https://www.gov.mb.ca/water/pubs/water/lakes-beaches-rivers/mb_water_quality_standard_final.pdf) as a result of the operation of the facility should be identified. Fish habitat effects should specifically address sedimentation, temperature and mortality.

Mitigation and Residual Effects

1. Identify practices to be employed during construction and operation to mitigate terrestrial effects, and any residual effects.
2. Identify practices to be employed during construction and operation to mitigate aquatic effects, and any residual effects.
3. Identify options to mitigate the impacts of nutrient loading to the receiving waterway. The assessment of nutrient reduction strategies should include but is not limited to the following:
 - a) effluent irrigation / land application;
 - b) alternative design, operation and storage capacity including employing trickle discharge and vegetation harvesting;
 - c) engineered/constructed wetlands; and
 - d) chemical treatment.
4. Identify follow up monitoring for surface water and groundwater protection.

Facility Classification with respect to the Water and Wastewater Facilities Operators Regulation (Manitoba Regulation 77/2003)

1. Classification is required for wastewater collection and treatment facilities pursuant to Manitoba Regulation 77/2003. Please complete the appropriate form(s) for the facilities identified in the Environment Act Proposal and include this information with the Environment Act Proposal:
 - [Application for Wastewater Treatment Facility Classification](#)
 - [Application for Wastewater Collection Facility Classification](#)