



Factsheet #2

Liquid Waste Management Plan Overview

The Liquid Waste Management Plan Process

The City of Port Alberni (the City) has initiated the development of a Liquid Waste Management Plan (LWMP). When completed, the LWMP will be a long-term plan to support sustainable wastewater management in Port Alberni. By carrying out an LWMP, the City is committed to finding community-driven and cost-effective solutions to continue to protect public health and the environment. The BC Ministry of Environment outlines a three stage process for Liquid Waste Management Plans (LWMPs), which includes comprehensive public involvement and consultation.



The three stages of a typical LWMP are outlined in the following sections.

Stage 1 of the LWMP is a broad investigation examining existing wastewater management strategies and community development plans. Key wastewater management challenges unique to the community are identified to develop alternatives for more thorough consideration in subsequent stages of the LWMP. The City's Stage 1 LWMP was completed and approved by the BC MOE in 2001.

Information developed during the Stage 1 LWMP is combined with additional studies to develop the **Stage 2** LWMP. The purpose of this stage is to develop a short-list of options, evaluate them, and identify preferred solutions. With the finalization of the Stage 2 LWMP, the City's preferred long-term wastewater management strategy is selected. This strategy will be carried forward to the City's Stage 3 LWMP. The City of Port Alberni is currently carrying out Stage 2 work.

Based on information developed in the previous stages, the **Stage 3** LWMP develops a plan for implementation of the preferred wastewater management strategy. This stage outlines a strategy that will achieve provincial and federal regulatory objectives, develops a financial plan, identifies an implementation schedule, and prepares a draft Operational Certificate (OC) that will replace the City's existing permit for the wastewater treatment facility. The OC will prescribe the requirements for operations and environmental monitoring for wastewater treatment.



Provincial and Federal Laws Require Secondary Wastewater Treatment or Better

Municipal wastewater treatment in BC is governed by the provincial Municipal Wastewater Regulation (MWR) and federal Wastewater Systems Effluent Regulations (WSER). These regulations inform LWMP development and include mandatory effluent quality standards that can be achieved through secondary wastewater treatment or better, particularly for facilities that discharge effluent to surface water such as lakes, rivers, or marine environment. These laws also include requirements for monitoring, record-keeping, reporting and toxicity testing during operation of the wastewater treatment facility.



Why is the Public Being Consulted on the Stage 2 LWMP?

The consultation process is important because an approved LWMP allows a local government to borrow money without going to referendum. Because public consultation and First Nations engagement are key components of the procedure, a LWMP encourages members of the community to be involved with the decision-making process and develop local wastewater management solutions.

Key Elements of the LWMP

Six issues make up the core elements of the City's LWMP and provide the tools to implement the plan. Each of these elements is described briefly in the sections below.

Source Control

Source control includes practices that protect sewer and wastewater treatment infrastructure, the public, and the environment from discharges that may pose risks to safety and proper operation of these systems. Source control practices often include laws and public education. The City already has a bylaw in place. To further improve source control practices, the City is proposing to update the existing sewer use bylaw to better align with anticipated community make-up and development.

Effluent Integration

Effluent integration describes the process of returning treated wastewater (effluent) to the environment. The City's current effluent integration approach no longer meets BC Ministry of Environment requirements. As part of the upgrades to the City's wastewater treatment facility, the City is proposing a new discharge to Port Alberni inlet. This proposed new discharge includes a weighted outfall pipe with a diffuser resting on the sea floor in the Port Alberni Inlet. An Environmental Impact



Study is being carried out by the City and their consultants to support the design and implementation of this new marine discharge.

Wastewater Treatment

The City's existing wastewater treatment system includes an earthen lagoon system with an aeration system that provides oxygen to the microorganisms in the lagoon. As part of the upgrades to the City's wastewater treatment system, the City is proposing to upgrade the infrastructure of the former Catalyst Paper lagoon system. These upgrades could include cleaning out the lagoon, repairing berms, adding a new aeration system, and adding an effluent disinfection system. At this time, this wastewater treatment option is most feasible for the City compared to other options evaluated over the years.

Combined Sewer Overflows

The City has both combined and separated sewers. During some rainfall events, extra water contributed to a combined sewer exceeds the sewer capacity. When this happens, wastewater and storm water are discharged to the environment without treatment – this is called a combined sewer overflow or CSO. The City currently has four CSOs within the collection and conveyance system. CSOs are no longer accepted industry practice and the BC Ministry of Environment's goal is to reduce and eliminate CSOs. As part of the LWMP, the City proposes to continue to twin sanitary and storm sewer systems to reduce and eventually eliminate CSO events.

Sustainability and Resource Recovery



Sustainability and resource recovery are important elements of a community's long-term wastewater management strategy. As part of the City's LWMP, the City proposes to continue to beneficially reuse solids periodically removed from the wastewater treatment system through composting activities. The City also proposes to reassess other feasible opportunities for wastewater resource recovery in the future. And, of course, the City will continue to re-integrate what is essentially "used water" back into the watershed from which it originated.



Urban Stormwater



Port Alberni's climate includes large amounts of rainfall during the year. Stormwater is precipitation, including rainfall and snow melt that runs off surfaces like rooftops, paved streets, highways, and parking lots. This runoff can pick up and transport pollutants, such as oil, trash, pesticides, soils, and other wastes. As part of the City's LWMP, the City proposes to continue to assess feasible approaches for controlling and reducing stormwater runoff. The City's proposed strategies introduce policies that encourage developers to implement stormwater management strategies for new developments in the community.

For more information, visit the City of Port Alberni's LWMP website at www.portalberni.ca/liquid-waste-management-plan or contact City of Port Alberni Engineering at 250-720-2830.