



SANITARY SEWER BYLAW REVIEW

BACKGROUND

Issue

Hundreds of kilometers of sanitary sewer pipes collect and carry wastewater from Prince George industries, commercial businesses, institutions and residences to the City of Prince George wastewater treatment plant and lagoons before discharging to local rivers. Harmful substances contained in wastewater can have serious consequences on public health & safety, municipal infrastructure and the environment. Even if a discharge is small in quantity from one location, the total combined effect of harmful substances from multiple discharges can be significant. The substances we put in the sanitary sewer matters. The City of Prince George Sanitary Sewer Bylaw No. 7897, 2006 currently serves as the regulatory means of setting waste discharge requirements for all users. It has been in place for 13 years and requires updating to ensure that current knowledge is applied to effectively manage the City's sanitary sewer system. Establishing a new Bylaw is a proactive and fiscally responsible initiative to safeguard City infrastructure, the public, and the environment, now and into the future.

Sanitary Sewer Infrastructure Maintenance and Wastewater Treatment Costs

Annual cost of Utilities Division sanitary sewer operations and maintenance	\$4.5 million
Annual cost to operate the City of Prince George Wastewater Treatment Centre	\$1.9 million
Routine Sanitary Sewer Maintenance – Main Flushing	\$7,000 per KM
Annual # of service requests received by Utilities Division for blocked sewers	500
*this is 52% of all requests related to the sanitary sewer	
Annual cost of responding to blocked sewers	\$250,000 est.
Annual cost of grease removal from “hot spots”	\$170,000 est.

Background

Historically, Sanitary Sewer Bylaws outlined standards for servicing, listed prohibited substances, set limits for restricted substances and established sewer rates. In 2009, the Canadian Council of Ministers of the Environment (CCME) produced a Model Sewer Use Bylaw as a tool to assist Canadian municipalities in implementing source controls for harmful substances discharged to community sewer systems. Removing these substances at the source, before discharging to the sanitary sewer, is important because:

- Substances that are harmful, either by themselves or in combination, pose a risk to sewer infrastructure, health & safety and the environment;
- Many substances are not treatable or only partially treatable by municipal wastewater treatment systems;
- It's easier to identify and pretreat harmful substances from a single identifiable source than from a mixture; and
- Efficiency of wastewater treatment can be improved and associated costs lowered.

In the 2015 City of Prince George Sanitary Sewer Services Master Plan, a key recommendation was the establishment of a source control program as an economical and sustainable means of pollutant control, to reduce sanitary sewer infrastructure maintenance and wastewater treatment costs. The Utilities Division Source Control Program was started in late 2015. As part of the initial focus of the Source Control Program, a working group of City staff was created to review the current Sanitary Sewer Bylaw No. 7897 and set objectives for an updated bylaw that incorporates principals of the CCME Model Use Bylaw.

Objectives

The objectives established by the Bylaw Working Group for updating the sanitary sewer bylaw are:

- To protect the sanitary sewer system and its processes from damage, obstruction, toxic upset, or loss of efficiency;
- To protect the public, workers and property from exposure to hazardous substances and conditions;
- To protect the quality of wastewater biosolids in order to ensure their continued beneficial use as a soil amendment;
- To protect the environment from harmful substances not removed by the wastewater treatment;
- To establish effective enforcement;
- To ensure the City of Prince George maintains compliance with provincial and federal regulations;
- To establish the basis for updating rates, fees and charges for sanitary sewer users; and
- To create a regulatory structure for controlling discharges to the City's sanitary sewer system that is clear, consistent and fair.

Summary of Concepts Being Proposed For a New Bylaw

- The name proposed for the new bylaw is: "Sanitary Sewer Use Bylaw", which would better express a new emphasis on controlling the materials entering the sanitary sewer system. Sanitary sewer servicing items would be removed and added to other City of Prince George Bylaws;
- Improve clarity on the responsibilities of the City and of the Property Owner with respect to Sanitary Sewer Use, Maintenance and Repair;
- New language on requirements for discharge to a septage disposal facility;
- Enhancement of source controls for industrial discharges. In addition to provisions for waste discharge permits carried over from the current bylaw, the new bylaw would clearly define Authorizations and provide the basis for a new regulatory tool - commercial sector Codes of Practice;
- Clear and expanded requirements for persons responsible for unauthorized discharges and spills;
- Clearly defined authority for the City to enforce the bylaw, with additional options for addressing non-compliance and recovery of costs.

More on the Codes of Practice

Three Codes of Practice are being assessed for inclusion in an updated bylaw. The Codes would form part of the proposed bylaw and set minimum standards for pre-treatment, inspection, maintenance and record keeping for all operations within specified commercial sectors. An education and audit program would be developed by the City of Prince George Source Control Program to assist businesses operating under a Code of Practice in achieving compliance. The intent is to create a more comprehensive, fair and effective approach to source controls. The recommendations of the Source Control program for Code of Practice development for Prince George are:

1. Food Service Operations

These are operations where food intended for public consumption is prepared or otherwise handled in a manner which may result in the discharge of oil and grease or solids to the sanitary sewer. The discharge of fats, oils and grease (FOG) and other food wastes can lead to blockages in sanitary sewers, fouling of sewer pump stations and increased maintenance and wastewater treatment costs.

2. Mechanical Repair Operations

These are operations undertaking the repair or maintenance of vehicles, engines, transmissions or other mechanical devices that use oil or grease for lubrication. The wastewater from mechanical repair operations can contain solids, metals, oils & grease and solvents that exceed levels allowed under the bylaw. Some of these substances can cause structural damage to the sanitary sewer through plugging and corrosion. Others may be highly toxic, even in low concentrations.

3. Vehicle Wash Operations

These are industrial, commercial or institutional operations that wash the exterior of vehicles. Wastewater from vehicle washes may include metals, elevated levels of oil and grease and unacceptable levels of acidity or alkalinity. High or low pH can cause reactions within the sewer and also damage sewer infrastructure. Accumulated sediments may contain harmful substance levels that reach concentrations where the sludge is considered controlled or hazardous waste. Organic matter and soils released during vehicle washing is not always contained onsite and can cause problematic deposits in the sanitary sewers.

Key Stakeholders

An updated Sanitary Sewer Use Bylaw would apply to all users of the City's sanitary sewer system. Effective management of sanitary waste requires a cooperative effort between users of the sanitary sewer (industrial, commercial, institutional and residential) and local government. Key stakeholders identified are¹:

- Food Service Operations: approximately 350
- Mechanical Repair Operations: approximately 300
- Vehicle Wash Operations: approximately 200
- Businesses currently operating under a City of Prince George Waste Discharge Permit
- Liquid Waste Haulers
- RDFFG
- Northern Health – Public/Environmental Health Office
- PG Construction Association
- Plumbing & Heating Association

- Chamber of Commerce
- BC Restaurant & Food Services Association
- BC & Yukon Hotels Association
- BC Auto Recyclers
- Automotive Retailers Association
- Automotive Recycler's Environmental Association
- Local First Nations
- Local Engineering & Environmental Consultants
- Waste Disposal Companies
- Utilities Contractors

Note

1. The stakeholder list provided is not exhaustive, but meant to provide some context and preliminary numbers.

Consultation

The City of Prince George is committed to engaging with stakeholders and residents, and will be offering a number of ways to learn more and provide input into the bylaw updating process including:

- Sector Focus Groups
- Information sessions
- Website information
- Consultation Feedback Forms

A record of consultation and feedback received will be kept and considered in the drafting of an updated bylaw. A report for City Council, including record of consultation and feedback will be prepared and accompany the bylaw for Council consideration.

Timeline

The anticipated date that a new Sanitary Sewer Use Bylaw, and consequential amendments to other City bylaws, would go to City Council for approval is the spring or summer of 2019. The core bylaw would come into effect upon enactment and the Codes of Practice are proposed to be phased in over a period 3 years.