

Spill Contingency

September 2020

Under the *NWT Waters Act*, the City of Yellowknife requires a licence from the Mackenzie Valley Land and Water Board (MVLWB) to draw water from local water bodies and to deposit waste into the environment. The City is applying to renew its licence. This factsheet is part of a series designed to provide residents and stakeholders with information on the licence application in support of public engagement.

Background

As part of its municipal water licence, the City of Yellowknife is required to have a **Spill Contingency Plan (SCP)** to provide a clear response plan in the event of an unplanned release of potentially harmful materials from its operations and infrastructure.

The types of spills dealt with in the plan include:

- Sewage spills from forcemains, lift stations, and Fiddler's Lagoon structures;
- Fuel and gasoline spills from aboveground and underground storage tanks at City sites;
- Waste oil storage spills from tanks at the Baling Facility or the City Garage;
- Sodium Hypochlorite spills from pump houses or the Water Treatment Plant;
- Chlorine gas releases at the pool; and
- Other types of chemicals spills at City facilities.

What the Water Licence regulates

The water licence conditions that apply to the SCP include:

- The requirement to submit a SCP for approval from MVLWB;
- Annual review and modification of the SCP by the City, as needed; and
- Spill reporting requirements and the responsibility to respond and employ action to a spill.

Plan overview

The SCP provides detailed information on City facilities and equipment, spill kits, personnel roles and responsibilities, contact information and off-site resources.

The SCP also describes the procedures in place to prevent failures and spills (e.g. maintenance, safety and site access control). This includes the responsibilities of personnel and associated training requirements.

What does it mean?

FORCEMAINS

Forcemains are pressurized pipes that collect sewage and transport it to the Fiddler's Lagoon.

LIFT STATIONS

The City has 14 lift stations that pump wastewater through the system, "lifting" it from lower to higher elevations to maintain flow in the system.

A focus on prevention

The SCP describes several measures in place to mitigate the risk of failures and spills. These include:

- Regular testing and inspections of forcemains;
- Sewage lift station monitoring 24/7; most have backup power;
- Ongoing underground fuel storage tanks replaced with double walled aboveground tanks;
- Large waste oil storage tanks have secondary containment structures;
- Chemicals stored and used as per Material Safety Data Sheets (MSDS) sheets at all facilities.
- Planned upgrade to Kam Lake Road forcemain; and
- Planned construction of sewage holding cell at largest lift station (#5, City Garage).

Spill response by location

The following steps are described for each type of spill.

Sewage – Lift stations and forcemains

- Stop the failure
- Contain the spill and build a berm if necessary
- Report the spill
- Add lime or remove contaminated material
- Soils that have been impacted are taken to Fiddler’s Lagoon “honey bag” story area

Fiddler’s Lagoon structures

- Construct temporary containment
- Report the spill
- Repair the failed structure
- Conduct water testing and toxicology at designated points to assess impact

Spills in open water

Depending on the type of material spilled, the response may include one or more of the following:

- Deploy hydrophobic booms (Booms are common oil spill response equipment used to protect shorelines or sensitive aquatic areas. They serve as a floating, physical barrier placed on the water to contain, deflect, redirect oil, or absorb.)
- Construct berms or ditching
- Recover the material

Spills on snow or ice

- Compact snow around the perimeter of the spill
- Construct snow berms to contain the spill
- Recover material
- *If the ice is not deemed safe, the procedure for a spill on water is followed.*

Spill Contingency

Spills on land

- Prevent further dispersion of the spill
- Build a berm and absorb the material
- Recover the material

Depending on the nature of the materials recovered from spills, they are treated and disposed of either at the Solid Waste Facility, at Fiddler's Lagoon, or by a qualified contractor.

Have questions or comments?

The City will be posting more information on each of the components of the water licence renewal at www.yellowknife.ca/WaterLicenceRenewal and will be soliciting feedback from interested residents and stakeholders via email, letter and our online engagement tool [PlaceSpeak](#).

Additional details on engagement opportunities will be provided in the weekly Capital Update and via Twitter and Facebook.

Questions related to the renewal process can be directed to Madison Warren, Municipal Engineer at waterlicence@yellowknife.ca.

