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**Date:** 8/15/2016 9:25:26 PM  
**Subject:** Metro Vancouver Water Main Leak in Stanley Park

Greetings Mayor, Council and Park Board Commissioners

I am writing to provide some information regarding Metro Vancouver's transmission water main running through Stanley Park, which has experienced a significant leak. This is a key water main that supplies half of Vancouver's water. The water leaking from the pipe is leaking into Lost Lagoon. Because of the high pressure of the pipe and the location of the pipe, the repair is extremely technically challenging. Metro Vancouver has been attempting to fix the leak without depressurizing the pipe, as that could lead to pressure reductions across the downtown peninsula, Fairview, Mount Pleasant, Kitsilano, & neighbourhoods west to UBC.

#### **Impacts to the environment**

The main has been leaking chlorinated water into Lost Lagoon for the past 6 weeks as it took significant effort to confirm the source of the leak. There is no impact to habitat since Lost Lagoon (in previous years) has been topped up seasonally with chlorinated water. COV Environmental Services has been working with Metro Vancouver staff and all the chlorinated water is now neutralized before entry into Lost Lagoon.

Real Estate and Facilities Management & Parks staff are managing the overflows into Lost Lagoon to ensure that the lake is drained normally and lake levels are managed to limit any damage to the shoreline.

#### **Location, Severity and Technical Challenges with the Associated Repair**

The main runs adjacent to the causeway and the edge of the excavation is within 1m of the edge of the sidewalk. The main is 6 feet in diameter, 10 feet below ground level.

Efforts to repair the leak over the weekend were not successful due to the depth of the excavation (up to 24 feet as the leak was found to be at the bottom of the pipe), the poor soil conditions, and the condition of the main - very corroded. The typical repair methodology for a steel pipe, hammering in a wood plug, was not successful. Due to the level of risk associated with the proximity to the causeway, the MV repair team backfilled the large excavation, created a dam to hold water and neutralize the chlorine before discharging into Lost Lagoon and retained consultant expertise to develop a solution.

Engineering consultants have been retained to develop an emergency repair methodology that will likely involve building a large temporary retaining wall to stabilize the causeway to allow MV crews to repair the pipe while remaining in service. As you likely recall, the causeway is a provincial responsibility, so they are coordinating directly with Metro Vancouver as repairs are underway.

#### **Timing of Repair**

An engineered solution will likely be developed within 1 week from today with repair work to likely start immediately thereafter, to be scheduled with with the City's Traffic & Data Management branch.

Metro Vancouver aims to fix the repair without impacting traffic and without affecting water service to the City.

A worst case scenario could potentially result 1 or 2 lanes of the causeway to be shut down with pressure drops of 10-20 PSI for the northern part of the City and compromised ability to provide fire flow capacity.

#### **Water Consumption & Recover of COV costs**

The working agreement with Metro is that the City is to be credited for the estimated volume leaked - and as such, will not affect our water invoices or our GCAP target. We also have previously recovered any out of pocket costs associated with supporting repairs to their infrastructure which we intend to pursue in this case.

This is a very serious situation and staff from the City and Park Board are working closely with Metro Vancouver and the Province to ensure that this is resolved satisfactorily.

Please don't hesitate to reach out if I can answer any questions you may have.

Best

Sadhu

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