

Mayor's Report

More Than Just A 'Storm Water Drainage Study'

In early January, Council received a PowerPoint [presentation](#) by [Opus International Consultants](#) regarding the recently completed [Storm Water Drainage Study](#). Belcarra's previous drainage study was done 34 years ago, in 1984, and provided important guidance on upgrading drainage culverts over that period. However, following the release five years ago of updated rainfall data by [Environment Canada](#), Council felt that it would be prudent to assess any potential vulnerabilities in Belcarra's storm water drainage infrastructure due to 'climate change'.

As a prerequisite for the study, a topographic map of the municipality was prepared utilizing an aerial LIDAR scan — which stands for 'Light Detection and Ranging' — and the Village now has detailed topographic information that was not previously available. In addition, municipal staff measured and mapped all drainage infrastructure throughout the Belcarra Bay and Bedwell Bay areas of the Village, and this information has been compiled and documented in the [appendices](#) to the study.

Another benefit of the study was the preparation of a detailed [Capital Assets Inventory](#) of the drainage infrastructure which the municipality required for its [Capital Assets Management Plan](#). This now completes the municipality's capital assets inventory needed to undertake long-term financial planning.

As part of the study, a hydraulic model of the drainage system was developed by the consultants. The drainage system was assessed under the 5-year and 100-year return period storms, with and without climate change considerations. The modelling subsequently predicted one main drainage corridor where culverts and storm sewers could have inadequate pipe capacity due to climate change considerations. That drainage corridor is along the Kelly Road alignment.

Understanding the historical background of the Kelly Road drainage corridor is important to understanding both the purpose of the drainage study and the drainage model predictions. When Belcarra incorporated in 1979, the Kelly Road drainage corridor was mostly open ditch from Main Avenue to Bedwell Bay except for the culverts under Bedwell Bay Road and Marine Avenue. The ditch, however, suffered from severe erosion due to the grade and was rapidly beginning to look like the 'Grand Canyon'. As a result, during the summer of 1984 a concrete storm sewer was installed to replace the open ditch along Kelly Road.

The Kelly Road storm sewer has served its purpose without problem for 34 years and will likely continue to do so another 10 or 15 years. The question examined by the recently completed [Storm Water Drainage Study](#) is: will the size of the Kelly Road storm sewer be sufficient for the long-term given climate change considerations? The storm drainage modelling indicates that Belcarra should prepare for future climate change and include up-sizing of the Kelly Road storm sewer in its long-term financial planning.

Ralph Drew
Mayor