



Staff Report

Report Title: Blairs Grove Wells

Prepared By: John Yungblut

Department: Public Works

Date: Sep. 9, 2020

Report Number: PW-2020-09-56

File Number: P250 Reports

Attachments:

Recommendation:

That the Township of Huron-Kinloss Committee of the Whole hereby approves Report Number PW2020-09-55 prepared by John Yungblut, Director of Public Works AND authorizes the Director of Public Works to proceed with the commissioning of BG-W3 AND the abandonment of BG-W2 AND FURTHER directs staff to investigate an alternative well location along the Lakeshore.

Background:

In mid-August 2020, the Township Operating Authority, Veolia Canada, reported an issue with the artesian groundwater well known as BG-W2 which was drilled in 1982 and has been in operation in the community of Lurgan Beach since 1994. Once the well pump began drawing water for approximately twelve hours, the flow being produced would gradually decrease over the next several hours.

On August 24, 2020, Veolia brought in well driller, W.D. Hopper & Sons Ltd. to remove the well pump and determine the cause of this issue. Upon video inspection of the well casing, they determined the casing had deteriorated significantly and the pump was becoming clogged with stones and fragments of the internal sleeve. The deterioration was so extensive that the well was not repairable, and the recommendation from the well driller was for the abandonment of BG-W2.

After discussing the issue with Veolia, W.D. Hopper & Sons, B.M Ross and Associates and the Ministry of Environment, Conservation and Parks, the Director of Public Works made the decision to pursue the equipping of the second well at this location, which is also artesian, known as BG-W3. BG-W3 was drilled in 1994 at the recommendation of the hydrogeologist in order to increase the flow rate of BG-W2.

When the wells were tested in 1994, it was determined that the wells were hydraulically connected, so operating both wells simultaneously produced the same flow rate as operating them independently. The records from that time period do not indicate any reason for not equipping BG-W3 other than it was simply not needed.

W.D. Hopper & Sons Ltd. video inspected BG-W3 on August 28, 2020 and found significant scale buildup on the well sleeve that restricted the camera from inspecting the entire well. An unofficial six hour pump test was completed on August 31, 2020 to determine if the scale buildup would impact the quality or flow rate of the water. The water produced from this test appeared to be of good quality and the flow rate was adequate for this type of test. A 24 hour test was recommended by the well driller if a Permit to Take Water (PTTW) for BG-W3 is obtained by the MECP. The application was submitted to the MECP on August 31, 2020.

With no Blairs Grove well currently in service and only one well currently operating at the Point Clark Pump House, water supply along the Lakeshore south of Concession 6 is going to be of some concern. The well currently not in service in Point Clark, known as PC-W2 can be brought online if an issue occurs with PC-W3 which is currently in service.

In response to this situation, Public Works issued a lawn watering ban for all Lakeshore water users south of Concession 6 starting August 27 until September 10th. The Ripley-Huron Fire Chief has also instituted a tanker shuttle procedure for this area during the lawn watering ban in the event of a fire. Our Operating Authority, Veolia Canada, has also instituted a plan that can provide additional flow from the Murdoch Glen Pump House in the Heritage Heights area if necessary. Veolia reported that the Lakeshore Standpipe was filled on August 30th, so there no further action will be required at this point.

Discussion:

Based on the information gathered to date, BG-W3 appears to be the best option for water supply along the Lakeshore at this point. It should be noted that the groundwater in this area is extremely hard and it is the cause of rapid deterioration of the well casing. BG-W2 was inspected in 2006, so the majority of this damage has occurred since then.

Township staff recommend pursuing alternative locations for a new groundwater well along the Lakeshore as a long term solution since most wells have a seventy year lifespan and the wells in the area will have about a thirty to forty year lifespan because of the water quality and a greater number of water quality complaints are received when the wells in Blairs Grove are operated. In the past, the well in Blairs Grove have only operated occasionally due to the water quality, however in recent years the water demand has been increasing and these wells will need to be operated for the majority of the summer season.

Financial Impacts:

Township staff have not received an estimate for the costs associated with commissioning BG-W3 at this time. The methodology for the abandonment of BG-W2 is still being discussed, so these costs are also not known. These costs will be provided in a future report.

The costs associated with developing a new well location along the Lakeshore will be brought forward during 2021 budget deliberations.

Strategic Alignment / Link:

We are a prosperous community that continues to grow in a sustainable manner by investing in infrastructure.

Respectfully Submitted By:

John Yungblut, Director of Public Works

Approved By:

Mary Rose Walden, Chief Administrative Officer