

Dufferin County water management strategy moves forward

Written By JAMES MATTHEWS

A new well has been identified that may alleviate ground water stress on some Dufferin County municipal supplies.

Behnam Doulatyari, senior manager of watershed plans and source water protection at the Credit Valley Conservation Authority, walked county council through an amendment to Section 34 of the Clean Water Act during council's July 9 meeting.

The amendments to source protection plans and assessment reports incorporate recent technical work completed for Orangeville-Mono water budget update and the addition of New Municipal Supply Well 13 to the Orangeville drinking water system.

A 2011 study identified significant stress on the area's ground water Local Area A was assigned a significant risk level due to impacts of pumping and recharge reductions under both average and drought conditions. Predictions also include reduction in baseflows to cold water streams.

Local Area A includes Orangeville's wells in the western half of Sub 19, Mono's Cardinal Woods Wells, and Amaranth's Pullen Well.

?In the modelling that was done at the time, significant ground water stress was determined under regular conditions and drought conditions,? Doulatyari said.

A joint municipal water management plan was put in place between East Garafraxa, Amaranth, Mono, and Orangeville. There was also involvement in the management plan at the upper tier county level.

?It applies to the local area where ground water stress is deemed to be significant,? Doulatyari said.

It's hoped the stress from increasing demand and slower recharge of ground water will be decreased.

Consistent with the original study from 2011, Local Area A was again assigned a significant risk level due to impacts of pumping and recharge reductions under average and drought conditions.

The predicted drawdown exceeded the available drawdown at several municipal wells in Orangeville during the long-term drought, considering future changes in land use and increased pumping.

In Mono, the predicted drawdown exceeded the available drawdown in several scenarios for the Cardinal Woods wells. Reduction in baseflows to cold-water streams like Monora Creek was also identified.

?The risk level does not indicate a problem with municipal wells and current pumping rates,? according to a staff report to county council. ?Rather, it reflects a need to manage the drinking water as a regional resource shared by the municipalities.?

The updated water quality analysis included vulnerability assessment that identified Wells 5 and 5A to be more vulnerable to surface contamination.

Local Area A remains at significant risk due to projected groundwater drawdown exceeding available capacity at several municipal wells in Orangeville and Mono under future pumping and drought scenarios, along with reduced baseflows to cold-water streams. It underscores the need for coordinated regional water management now to meet future needs.

Updated vulnerability mapping shows increased contamination risk for Wells 5 and 5A, with high-vulnerability protection areas now extending into employment lands, highlighting the need for coordinated land-use planning to protect water quality.

Doulatyari said there is a main point of interest to come from the study.

?Given the quality and quantity constraints that have been determined by the study or confirmed by the study additional or new growth in (Local Area A) is not advisable,? he said. ?The stress on underground water system is significant.?

Councillor Fred Nix, Mono's deputy mayor, asked why more new drinking water sources aren't being sought given constraints.

Doulatyari said there isn't a single straightforward answer to that question.

?There is a certain amount of population that doesn't currently exist here but was accounted for in the amount of taking that was included in the study,? he said.