

**Subject:** Update on Uncommitted Water Supply Capacity

**Department:** Infrastructure Services

**Division:** Environment

**Report #:** IS-Env-2020-014

**Meeting Date:** September 28, 2020

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**Orangeville Forward – Strategic Plan**

**Priority Area:** Sustainable Infrastructure

**Objective:** Plan for Growth

**Sustainable Neighbourhood Action Plan**

**Theme:** Land Use and Planning

**Strategy:** Co-ordinate land use and infrastructure planning to promote healthy, liveable and safe communities

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## **Recommendations**

That report IS-Env-2020-014, Update on the Uncommitted Water Supply Capacity be received.

## **Background**

The purpose of this report is to advise Council of the uncommitted reserve capacity in the Town's water supply system as of January 1, 2020. The following summarizes the relevant background information on this matter:

1. The uncommitted reserve capacity for the Town's water supply is calculated in accordance with the Ministry of the Environment Procedure D-5-1, Calculating and Reporting Uncommitted Reserve Capacity at Sewage and Water Treatment Plants. Generally, the calculation determines the available supply capacity, and using the historical consumption data calculates the projected demand for unbuilt, but approved, planning applications. The difference between the two is the

uncommitted reserve capacity. A copy of the complete calculations is Attachment 1 to this report.

2. As of January 1, 2020, the calculated uncommitted reserve capacity was 852 m<sup>3</sup>/day. This volume could service approximately 841 single family homes, or approximately 1,052 town homes. However, it must be noted that this is a theoretical capacity only, and could change quickly, unexpectedly and significantly as a result of changes in the performance of, or water quality from, one of the nine well fields.
3. The uncommitted reserve capacity calculation is based on the agreement the Town entered into with Transmetro Properties Limited when it acquired Well 12 and active planning applications. That agreement requires the Town to reserve supply capacity for a specified number of residential units on specific lands. Currently we are reserving 706 m<sup>3</sup>/day of supply capacity in accordance with the terms of the agreement over and above the uncommitted reserve capacity listed above.

The agreement also resulted in the allocation that is being maintained for the Humber College lands on County Road 16 (Veterans' Way). While it is no longer planned, an allowance of 174 m<sup>3</sup>/day has been reserved pending the disposition of the property.

4. The total water use in the Town has dropped significantly since 2003. Attachment 2 shows the annual Maximum Day and Average Day uses for the period from 1998 to 2018, along with the number of households in the Town. The plot shows that while the number of households in Town has continued to increase, the amount of water being used by the Town as a whole has declined. Since 2013 an increasing trend in water demand has been observed as a result of population growth. The water demand decreased in 2017 and 2019, likely due to cooler and wetter summers.
5. The available water supply from the Town's twelve water supply wells has decreased by approximately 1,000 m<sup>3</sup>/day since 2018. This is due primarily to turbidity issues encountered at Well 6 in fall 2018 and the need to reduce the taking at both Wells 11 and 2A due to increased draw down during pumping. A capital project will be included in the draft 2021 capital budget to evaluate the status of our existing wells and provide recommendations to re-establish lost capacity.

## Analysis

Based on the background information provided above, this report suggests that there is currently capacity available in the water supply system to service additional development, however all allocations of water supply capacity should be evaluated on a case-by-case basis. As in the past, the water supply allocation will not be given until the Town is satisfied the project is going to construction.

All new development requires allocations of both water supply and sewage treatment capacity. With the expansion at the Water Pollution Control Plant now complete, available water supply is the limiting factor in servicing allocations. The decline in available water supply due to changes in the safe yield from our wells and trends showing an increase in average day water demand, highlight the importance of securing additional sources of water supply for the Town in the near future.

The Class Environmental Assessment (Class EA) to add an additional source of supply to the Town's water system has been underway for over a year. Pump testing of a potential new well has been completed, hydrogeological computer simulations have been calibrated using the pump test results and the Public Information Centre will be conducted virtually this fall. It is anticipated that the Class EA will be completed in early 2021. The next step will involve securing a Permit To Take Water (PTTW) for the new well from the Ministry of Environment, Conservation and Parks. This may require additional pump testing, monitoring and modeling. Once the PTTW has been secured, detailed design and construction to connect the well to the Town's system will be required. Staff anticipate that this work will not be completed before mid-2022.

## **Financial Impact**

There is no financial impact associated with this report.

Respectfully submitted  
Douglas G. Jones, M.E.Sc., P. Eng.  
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### **Attachments:**

1. Water Works – Available Supply Capacity as of January 1, 2020
2. Maximum and Average Day Water Demands – 1998 - 2019