



**S. BURNETT**  
**& ASSOCIATES LIMITED**  
ENGINEERING & ENVIRONMENTAL

# **Town of Shelburne Council Meeting**

## **Environment Assessments Council Update**

**April 26, 2021**

# Current / Planned Projects



- Water Supply Schedule 'B' Class EA
  - PW1
  - PW3
  - PW7/8
- Elevated Water Tower
- Increased Capacity of the Water Pollution Control Plant (WPCP) Schedule 'C' Class EA
- Water and Wastewater Master Servicing Plan Schedule 'B' Class EA
- Stormwater Master Servicing Class EA

# Water Supply EA

## PW1



- PW1 was taken offline in 2020 due to low production. The well was rehabilitated and new pumps installed in 2020, which increased the sustainable rate of 14 L/s, compared to less than 5 L/s. This is based on a 2-hour pumping test, post rehabilitation.
- However, air entrainment issues were encountered which has kept this well offline.
- Work was recently authorized to change out turbidity equipment and to install up to two (2) air release valves to try to eliminate the air entrainment.
- A 72-hour pumping test is required after new equipment is installed to confirm the sustainable pumping rate of 14 L/s.
- The current plan is to have the well back on-line by mid-summer 2021 as long as the air entrainment issue can be resolved.
- Alternatively, a new well be required at PW1.

# Water Supply EA

## PW3



- During rehabilitation work at PW3 in May 2020, bubbling was observed in Walter's Creek, which led to the well being considered potentially GUDI.
- To meet new GUDI requirements, a 72-hour pumping test and water quality sampling was completed.
- The resulting GUDI report was submitted to MECP on March 3.
- The GUDI report concluded that PW3 should be reclassified from a groundwater well to GUDI with adequate in situ filtration, requiring 4-log inactivation of virus per the current guidelines.
- MECP confirmed on April 8 that they agreed with the recommendations of the GUDI report and issued a draft drinking water works permit for SBA's review.

# Water Supply EA

## PW3 (continued)



- During the GUDI assessment, the PW3 arsenic design was put on hold.
- Following the initial GUDI work, the PW3 WTP was modified to increase the expansion footprint to accommodate UV disinfection to meet the 4-log removal.
- The expanded WTP design was recently approved by MECP and will be tendered in the next two (2) months (late spring / early summer.)
- The improvements are expected to increase the PW3 pumping rate from max rate of 10.3 L/s (2017 pumping test) to 15 L/s, with a sustainable rate of 13 L/s.
- Total project costs for PW3 are now estimated at \$3M. (Originally estimated at \$1.77 M prior to GUDI status and previous ICIP Funding application request was for \$2.7M following GUDI).

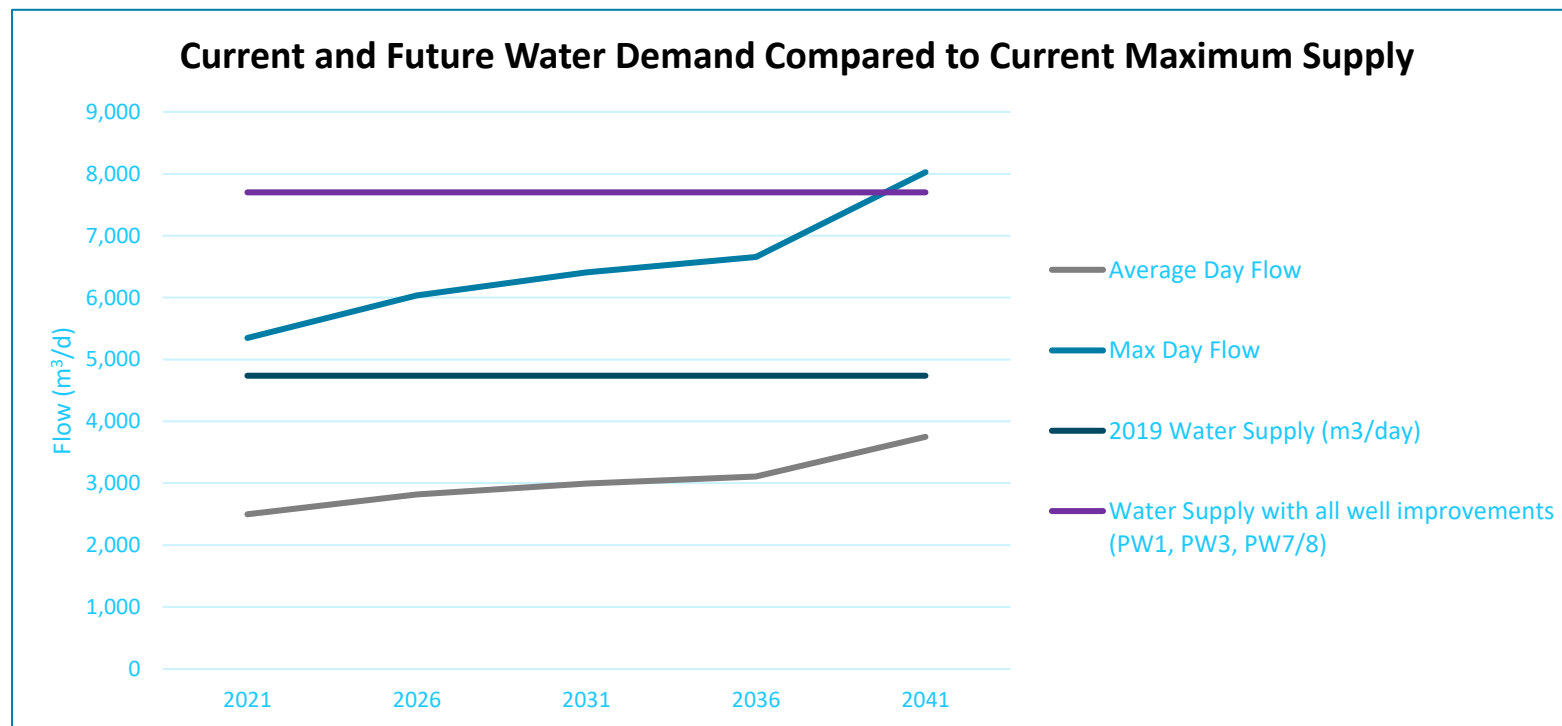


# Water Supply EA

## PW7 / PW8

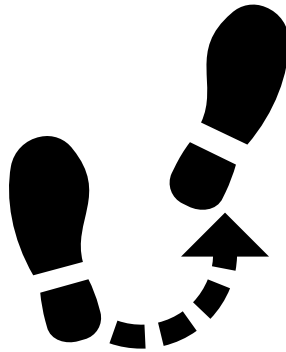
- The current permit allows either well PW7 or PW8 to pump up to 18.9 L/s.
- Pumping tests were completed in 2018 with both wells pumped at 15 L/s. Observed drawdown suggested that concurrent pumping at 18.9 L/s was sustainable, but that new pumps would be required.
- In support of a 2021 pumping test at a combined 37.8 L/s, Lotowater completed borehole geophysics for the wells and Aardvark installed two (2) 1-inch multilevel wells at previously drilled 6-inch monitoring wells.
- New pumps with new VFD's were installed and a 7-day pumping test is scheduled for mid-May.
- The new pumping rate requires an update to the Source Water Protection Plan, and based on GRCA timelines, provision of water is planned for late spring / early summer 2021.

# Water Supply EA



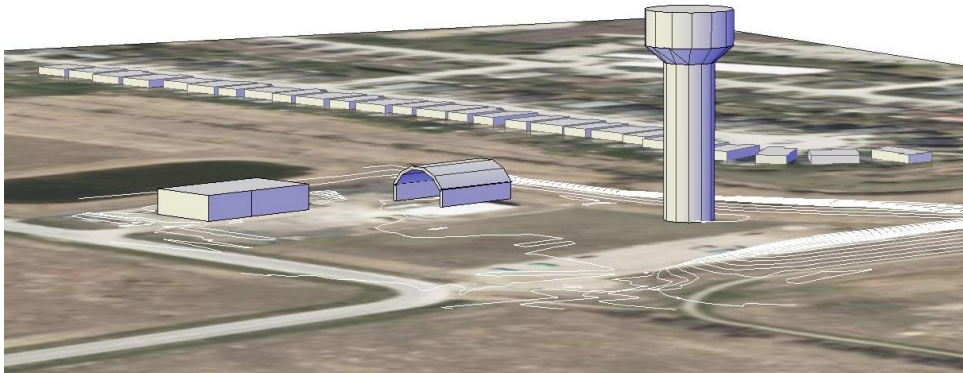
# Water Supply EA

## Next Steps



- Complete PW7/PW8 pumping test.
- Install UV and Arsenic treatment at PW3.
- Install air entrainment mitigation equipment at PW1 and run 72-hour pumping test.
- Complete Hydrogeology Report.
- Update Source water protection model (EarthFX).
- GRCA updates Source Water Protection Plan (spring 2021).
- Hold a second Public Information Centre.
- Finalize EA and submit Notice of Completion (winter 2021).
- Prepare and submit Permit to Take Water Amendment, which will trigger Intra-basin transfer notification by MNRF.
- Provision of water (late spring / early summer 2021).
- New well to meet increased demand in 2035.

# New Water Tower



- SBA submitted a Drinking Water Works Permit amendment application for the new elevated water storage tank in February 2021.
- MECP has approved the application.
- Since the EA for the Water Tower was completed in 2012, SBA prepared a public notice to ensure that nearby residents understood the need for the tower, what the tower would look like, and who to contact if they had questions.
- RFP is planned for May 2021 for detailed design and tower construction.
- Tower construction anticipated for August / September 2021.
- Current estimated cost \$3.5 million.



# WPCP EA

- Second PIC completed in June 2020.
- Assimilative capacity study (ACS) completed and approved by MECP in April 2020.
- Three treatment technologies are being compared in the EA: MBR, SBR, extended aeration.
- Pilot testing currently underway at the WPCP for MBR technology to help confirm its suitability for meeting the required effluent water quality limits from the ACS.
- Phased construction is also being evaluated in the EA, which could defer some capital costs.
- Current Capital Costs Estimated at \$26M to \$34M. If a phased approach is used, costs for Phase 1 range from \$19M to \$28M. Low range includes maintaining Storm Ponds.
- Current work underway to develop a Boyne River Adaptive Monitoring and Stewardship Plan in partnership with NVCA. Next meeting scheduled for April 23.
- Urgency of advancing WPCP upgrades is clear based on recent allocation reporting.
- Recommend allocating engineering design budget to proceed with preliminary design – summer 2021. Approx. \$2M (based on MBR alternative).

# WPCP EA

## Next Steps



- Complete pilot study
- Confirm recommended WPCP treatment technology
- Host a Public Information Centre
- Finalize the EA Report
- File the Notice of Completion for the EA



# Master Servicing Plan EAs

- Notice of Commencement Issued in January 2021 for Water / Wastewater MSP EA.
- Work underway to update water distribution model and the wastewater system calculations to incorporate new proposed developments, including West Expansion Area.
- Several existing bottlenecks identified for sanitary and water.
- Water / Wastewater MSP EA completion anticipate end of summer 2021.
- Stormwater MSP EA scheduled to start in early 2022.