



Staff Report PW2022-020

Title of Report: PW2022-020 Dundalk Reserve Capacity
Department: Public Works
Branch: Water & Wastewater
Council Date: April 6, 2022

Recommendation:

Be it resolved that Council receive Staff Report PW2022-020 for information; and
That Council approve the recommendations for the endorsement of the report for the Dundalk Water and Sewage Treatment Reserve Capacity as prepared by Triton Engineering Services Ltd; and

That Council approves these reports to be forwarded to the Ministry of Environment, Conservation and Parks (MECP) District Office in Owen Sound and the Grey County Planning Department for their review and comment on the Dundalk Water and Sewage Treatment Reserve Capacity 2022 calculations.

Background:

Dundalk Drinking Water Reserve Capacity:

The Drinking Water Reserve Capacity Calculation is based on the Source Capacity, which is 4,778 m³/d, Well D3 (1,180) + Well D4 (1,637) + Well D5 (1,961). The Firm Capacity, which is the system capacity with the largest water source, Well D5 out of service, is 2,817 m³/d. This corresponds with the Permit To Take Water (PTTW) for the Dundalk Water system. This figure is referenced as the "Available Capacity" for the Water Reserve Capacity Calculation. (see Attachment #1, Triton Table 1) The 2022 uncommitted drinking water reserve capacity Equivalent Residential Units (ERU's), is 1,999 ERU's, the number of single-family homes that could be serviced by the drinking water system remaining capacity.

Dundalk Sewage Treatment Facility Reserve Capacity:

The Dundalk Sewage Treatment Reserve Capacity 2022 wastewater uncommitted reserve capacity is 182 Equivalent Residential Units, (see attached Triton Table #2.) As with the Water Reserve Capacity calculation, the 2022 committed ERU's are 534 residential units, which includes future lots to be developed in White Rose Phases 1 & 2 and Flato North Phases 3,5 and 6, Flato Glenelg Phase 1, Flato Block 75 and Flato East 7,8, &10. (Attachment #1, Triton Table 3)

The Draft Plan Approved, uncommitted development is currently at 507 ERU's.

Staff Comments:

There were 251 new residential units connected and 232 residential units occupied into the Dundalk municipal systems in 2021.

The 2021 maximum day drinking water taking was 1,004m3.

Flow monitoring of sanitary sewer manholes flows were conducted in 2018 and early 2019 to establish typical new development flow rates. This data was analyzed and evaluated to establish a new development per capita flow to be used in the current and future wastewater reserve capacity calculations.

Extraneous flows have also been assessed in this year's report, which takes into account precipitation, temperature, average daily drinking water consumption and the average day sewage flow measured at the influent headworks of the sanitary sewage treatment system. Table 4 consists of this information and indicates that the sanitary sewer system is subject to groundwater infiltration and sump pump connections likely a significant contributor to extraneous flows. Theoretically if the wastewater system was tightened up, and removal of sump pumps, an estimated 395 ERU's could possibly be attained for the system.

Township staff have identified some of these inflow connections and will be working towards addressing these and others in the near future, to be discharged into a stormwater system if available, or out letting onto ground for surface discharge.

Financial Implications:

The ongoing Environmental Assessment (EA) for wastewater is included in the 2022 budget working towards addressing the shortfall of reserve capacity for future growth and development.

Communications & Community Action Plan Impact:

Goal 5 - Upgrading our "Hard Services"

Action 5

The residents and businesses of Southgate recognize our linear services - roads, bridges, water and sewer works, for example - to be a fundamental purpose of municipal government. This infrastructure needs to be serviceable and sustainable so that our businesses and communities can thrive and grow.

Strategic Initiatives:

5-B - The Township will have adopted a long-term asset management plan for the timely repair, replacement, and expansion of the Township's infrastructure, facilities, and other assets.

5-C - The Township will have increased wastewater treatment capacity in Dundalk to support growth.

Concluding Comments:

Staff recommends that Council receive Staff Report PW2022-020 for information, and that Council approve the recommendations for the endorsement of the report for the 2022 Dundalk Water and Sewage Treatment Reserve Capacity as prepared by Triton Engineering Services Ltd, and that Council approves these reports to be forwarded to the Ministry of Environment, Conservation and Parks (MECP) District Office in Owen Sound and the Grey County Planning Department for their review and comment on the 2022 Dundalk Water and Sewage Treatment Reserve Capacity calculations.

Respectfully Submitted,

Dept. Head: *Original Signed By*
Jim Ellis, Public Works Manager

CAO Approval: *Original Signed By*
Dave Milliner, CAO

Attachments:

Attachment # 1 Triton Engineering Dundalk Water and Sewage Treatment Systems
2022 Reserve Capacity Calculation