

File 121000

July 2, 2021

Sonya Skinner, CAO
Town of Collingwood
P.O. Box 157, 97 Hurontario Street
Collingwood, Ontario L9Y 3Z5
sskinner@collingwood.ca

Re: Staff Report CAO-2021-10
ICBL Exemption Report

Dear Ms. Skinner:

We are in receipt and have reviewed Staff Report CAO-2021-10 ICBL Exemption Report and would like to take this opportunity to comment. In our opinion the releases recommended in the report fall considerably short of what is appropriate. Further the report makes little mention to the dialogue and solutions discussed with the industry that have occurred since the ICBL was abruptly put in place on April 26, 2021.

Referencing the most recent information submitted to council, our understanding is that today if you count the highest recorded winter/summer MDDs, recently allocated development and committed capacity to Town of Blue Mountains and New Tecumseth the WTP has 863 SDUs available in winter and 1773 SDUs available in summer (reference council presentation June 21 by CAO Skinner). The constraint in winter is due to cold water operating conditions and specifically estimates for chlorine contact time. In addition, there are also some +/-1175 SDUs of capacity available that are being held as a Safety Factor.

We have had multiple conversations to date with staff and have discussed 7 solutions to help the Town manage this capacity issue:

1. We believe adjustments to chlorine dosing methodology in winter have the potential to increase winter capacity closer to the WTP rated capacity. We understand the Town is hiring a peer reviewer to look at this option in detail. Crozier and Associates retained an independent consultant, Steve O'Brien, to examine this issue (Steve has considerable knowledge of the WTP having been on the original design team). Mr. O'Brien completed chlorine contact calculations and concluded additional winter capacity is available within the WTP based on the current chlorine dosing practises and we believe this option warrants serious discussion with Town staff. Mr. O'Brien's memo was circulated to Staff earlier this week and we append his memo for your information.
2. Advance installing UV to remove winter chlorine contact concern to solve current winter restriction completely. We understand this has been added as a consideration to the WTP RFP and can be in place by winter 2022/23.

3. Advance construction of new chlorine contact chamber construction as part of WTP expansion to solve current winter constraint problem. This is also added as a consideration in the WTP RFP and if implemented will alleviate winter constraint issue by 2023/24.
4. Implement short term capacity reductions with New Tecumseth and Town of the Blue Mountains. Town of Blue Mountains recently confirmed historically they do not take their full allocation in the winter, and this is a possible short-term solution and could free up additional summer or winter capacity as soon as winter 2022.
5. Review and update on a regular basis the real time available capacity of the plant based on most current usage data. Historically as new users have come online the increase in water use has not been reflective of the current assumed cu.m/d being projected. This is evident from the MDD flows observed over the past 5 years (see Figure 1 - PW2021-09 that presents minimal summer MDD increase since 2017). Similarly, the value being used for the winter MDD is from 2017 and is more than 1,000 cu.m/d more than the winter MDD from 2019 and 2020 - winter MDD flows have been decreasing since 2017.
6. Consider further the rationale and be clear on the timing of applying the 5% Safety Factor (SF) which accounts for 1175 SDUs. This has been discussed with the Town we and understand the SF will be considered for removal once some certainty is in place regarding the WTP. In this case, considering the time it takes for most approved development to go from allocated to actually taking water is + 1 year it is logical to start releasing the Safety Factor SDUs 2 years before the plant comes on line.
7. Advance full plant expansion design/construction. We understand RFP has closed and a decision regarding preferred consultant is pending which will put some certainty to this solution. We understand the current timing for the full plant expansion is targeted to be on-line by winter 2025-2026.

In summary, 863 SDUs are available now. We have 4 ways to increase the 863 to 1773 within 2 years. Plus, an additional 1175 SDUs in a Safety Factor that should be considered for release in 2-3 years once plant expansion is tendered and construction well underway. This provides **2,948 SDUs** available to be allocated until the expansion comes online. These values ignore the potential gains to be made by water conservation and water use efficiencies that will occur.

Further consider the approval process of the proposed developments to secure permits and construct units. This takes time as is evident in the applications for exemption received by the Town recently. Absorption of units and actual construction timing take years to come online. This needs to be considered.

We acknowledge the Town cannot over allocate its WTP. That said the current logic presented in the Staff Report CAO 2021-10 allocates 218 units per year over 4 years. At this rate the plant will be under allocated by some **2,100 SDUs** when the new plant comes on-line in 2025.

We believe sufficient information has been collected that justifies an immediate meaningful release of more units as part of this exemption request (in the order of *740-800 SDUs* now - at a minimum). A release of this amount will not over-allocate the WTP and will provide some certainty and continuity to a key industry in the Town by keeping the approvals / permit / construction process moving in a consistent manner.

To help visualize how the allocation process can proceed given the SDUs available we have prepared a hypothetical release schedule as summarized below:

- 740 SDUs approved for allocation now for 2021. Available allocation in the WTP will still be 1298 SDUs (863-740+1175 SF SDUs). The allocated developments will connect between end of 2021 and as early as end of 2022. Note actual timing of connections will extend into 2023 and water usage will be less than the remaining allocated amount until all connections occur.
- Up to 740 SDUs approved for allocation in 2022. One of the solutions 1,2 or 3 discussed above will be implemented to address the winter chlorine issue by winter 2023/24 (at the latest) so summer is now the constraining factor. Available allocation in the WTP would be 1468 SDUs (1773-740-740+1175 SF SDUs). These allocated SDUs will connect later in 2022 into 2023-24 and again until all connections are made available plant capacity will exceed the estimated remaining allocation of 1468.
- Up to 740 units approved for allocation in 2023. They will connect later in 2023 through the end of 2024. Plant allocation would be accessing the SF SDUs as planned. Remaining available allocation at end of 2024 would still be 728 SDUs (1773+1175-740-740-740).
- This would leave 728 units available for allocation in 2024 until the new plant was commissioned in 2025. These connections would occur into 2025-26. At this time the plant is technically fully allocated. Further allocations in 2025 would require the new plant which is to come online in 2025 and give some certainty moving forward.

Recognizing the above is completely hypothetical and future developments would be released in keeping with Town allocation and planning policies it does confirm that a meaningful release of units can occur now. At no time with the above allocation process in place is the WTP over allocated. We further believe this option is conservative, keep in mind:

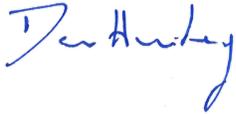
- 740 connections per year have never happened given historic data. Approvals and construction take time (see Town historic building permit data from June 21 council presentation by CAO Skinner).
- Calculations assume conservative MDD values and do not account for water conservation gains that can be achieved and have been observed in recent data. The Town should continually check this data and update available capacity numbers annually to capture efficiencies (and SDUs) as the process proceeds (see point 5 above).
- This analysis has given no account for reduced water use from TOBM and NT which is still on table and are legitimate short-term options (see point 4 above and June 21 council presentation).

We believe the above presents an approach that will release a meaningful number of exemptions and will not continue to further jeopardize one of the Town's most important industries. We ask that staff consider this information and recommend a more meaningful release of units at this time.

Yours truly,

Tatham Engineering Limited

C.F.Crozier & Associates Inc.



Dan Hurley, B.A.Sc., P.Eng., LEED AP
President
DJH:rlh



Christopher Crozier, P.Eng., Consulting Engineer
Founder & CEO

copy:	Mayor Saunderson	Town of Collingwood	bсаunderson@collingwood.ca
	R. Glenn	Town of Collingwood	rglenn@collingwood.ca
	P. Slama	Town of Collingwood	pslama@collingwood.ca
	Council	Town of Collingwood	salmas@collingwood.ca