

Meeting Minutes

City of Guelph

Water Conservation and Efficiency Public Advisory Committee (WCEPAC)

September 24, 2019

Wastewater Treatment Plant, Administration Building, Main Boardroom

From 7:00 to 9:00 p.m.

Meeting Chair: Jaime Boutilier (JB)

Present: Justin Arbuckle (JA), Louise Cottreau (LC), Taylor Dorland (TD), David Worden (DW), Patty Quackenbush (PQ)

Regrets: Taylor Dorland (TD), Grant Parkinson (GP), Emma Thompson (ET)

Staff: Travis Pawlick (TP), Stephanie Shouldice (SS), Nathan Siniowski (NS), Emily Stahl (ES), Heather Yates (HY)

Agenda Items

Welcome to all

Item 1

Approval of the June 4, 2019 meeting minutes

Motion: To approve the June 4, 2019 meeting minutes

Motion Approved by JB and committee members in attendance

Carried

Item 2

Wastewater Treatment overview and efficiency related studies – T. Pawlick

A summary of the Wastewater Services departments including various roles and services. This presentation includes an overview of two upcoming studies with connections to water efficiency and conservation: the Reclaimed Water Feasibility Study and the Assimilative Capacity Study.

Attachment A: Wastewater Presentation

Reclaimed Water Feasibility Study Discussion:

PQ: Is some of the flushing work contracted out?

TP: City staff conduct all flushing.

DW: Do you know how many cubic meters are used for flushing each day?

HY: Estimated 40 cubic meters a day, 5 days a week.

TP: The flushing truck uses about five loads a day.

JB: Have you considered public perception on the use of reclaimed wastewater?

TP: Yes. **We understand that we need to seriously consider the “yuck” factor** to get public approval. This topic will be an important part of the consultation process. We anticipate little disapproval for wastewater reuse to clean sewer mains as reuse will occur within the wastewater collection system.

HY: We are considering language around wastewater and the rebranding of it.

LC: Consider hydro-vac industry experiences (e.g., consideration for salt impacts on vehicles).

TP: We will need to consider how sediment and algae growth might affect the vehicles.

Assimilative Capacity Study Discussion:

TP: Assimilative capacity is about considering how much wastewater we can safely discharge into the Speed River. Wastewater outputs cannot negatively affect the Speed River or the local wildlife. Reducing wastewater outputs too much will have an impact on downstream river flows.

JB: Will you work with the University of Guelph on this project?

TP: We will hire a consultant due to the specialized nature of this research.

Item 3

Water Supply Master Plan and update – E. Stahl

A presentation on the Water Supply Master Plan including historical drivers for water efficiency and considerations for the 2020 Plan.

Attachment B: Water Supply Master Plan Presentation

Additional resources:

- The [Water Supply Master Plan website](#) will undergo updates as the project progresses.
- [Guelph and Guelph/Eramosa Tier 3 webpage](#).

Discussion:

ES: Start thinking about what you would like to see included in the next Water Efficiency Strategy and the technical memos that will help inform the next update.

HY: Noted that the same technical memos related to water reuse will inform both the Water Supply and Wastewater Treatment master plans. This will help ensure master plans align and reduce costs.

HY: Next year we will have a water efficiency target from the Water Supply Master Plan update. We expect a tough target and will need to consider how much water we can still save from our community and what our target audience will be to achieve our desired water savings.

JB: Was there a quarry that recently applied for another very large permit?

ES: Yes. Lafarge. The City will conduct modelling and comment on the permit.

JB: When you provide comments, can you recommend acceptable limits?

ES: We do not suggest specific values. Rather we demonstrate what the impact of various water taking limits would be on the community. For example, drawdown in our wells.

JB: Would being able to recommend acceptable limits force industries with large water taking requests to improve water efficiencies?

ES: Permits to take water require demonstrated efforts to protect water quantities through conservation. The City can encourage the Ministry to put greater emphasis and enforcement on these stipulations.

Item 4

Integrated Water Mapping Project – N. Siniowski

In 2012, the City of Guelph hired a consultant funded by the Ministry of Environment to develop an integrated water database that joins metered consumption from Alectra (formerly Guelph-Hydro), property information from the Municipal Property Assessment Corporation (MPAC), and economic data from the North American Industry Classification System (NAICS), with the City of **Guelph's** Geographic Information System.

In 2016, we brought the work in-house to produce more accurate results at a lower cost. The purpose of the Integrated Water Mapping project is to understand water demand trends throughout the City to support decisions for the sustainable management of our water utility.

The program is subject to various challenges in regards to accessing accurate and up-to-date data for more than 40,000 properties. For example, NAICS industry classification is updated every 5 years. Some other challenges with joining and relating these datasets are address records with different formats, or individual properties with multiple customer accounts or flow meters. Each year we continue to improve the accuracy of our database.

Attachment C: Integrated Water Mapping Project

Graph 1 (slide 3): We have recorded warmer temperatures and less precipitation recent years, this contributes to increased outside water use (i.e. irrigation) during peak season (i.e. summer) which results in higher production volumes.

Graph 2 (slide 4): The projected vs. actual water production suggests that our water conservation programs are working to reduce water use in Guelph.

Graph 3 (slide 5): Our goal is to limit the difference between production and consumption by recovering unmetered unauthorized water loss (i.e. meter inaccuracy, main breaks and leaks) through water loss management programs including the meter replacement program, district metered areas, acoustic leak detection.

Maps 1-3 (slides 7 and 8): We can spatially analyze water meter data to identify pockets of high or low water demand in the city.

PQ: Is population accounted for? **The results might be a function of the residential area's density.**

NS: No, this represents only metered water use. Pockets of higher single-family residential demand in the south-end could be a result of the areas more recent development resulting in fewer mature trees and less established lawns and gardens requiring greater outside water use (i.e. irrigation) during peak season.

PQ: The student population might be an influential factor. The average 2.9 people per household might not be accurate in student neighborhoods. The homes students live in

are typically still considered single-family (not multi-residential), so it may appear that the home has a higher water use when it is truly a result of more people living in the home.

HY: We could compare seasonal water use to find any fluctuations in water use patterns.

LC: Could you consider production instead of consumption?

NS: water production is metered at our well houses where as the integrated water mapping represents metered water consumption at each service connection

Graph 4 (slide 9): We have minor peak water use in Guelph.

Graph 5 (slide 10): Homes developed after 1990 are consuming on average more than the mature homes, suggesting that mature homes have undergone retrofits and now have more efficient fixtures.

DW: This could demonstrate the positive effects of conservation efforts. People in older neighborhoods may have been exposed to water conservation messaging for longer. They may also more strongly **identify as a "Guelphite"** with a sustainability mindset.

JA: Newer homes may be more likely to have irrigation systems installed or use more water outdoors to establish newer lawns.

LC: Can you access backflow prevention reports to find properties with irrigation systems?

HY and JA: No. Irrigation systems may not have backflow prevention devices installed so it is not an accurate way to identify irrigation systems in Guelph.

HY: A past study found that irrigation is not a common practice in Guelph. We would like to keep it this way. We will explore irrigation systems more in the next few years.

LC: Consider the water use of irrigation systems versus fan sprinklers.

Graph 6 (Slide 10): Homes built after 1970 are observed to have the highest water use. Homes built after 2010 homes are observed to have a declining water use trend.

Item 5

Blue Built Home (BBH) overview – S. Shouldice

The history of BBH, **2018 updates, and the programs' success to date. Next steps for program** development include new multi-residential property onboarding and an online hall-of-fame.

Attachment D: Blue Built Home Presentation

Discussion:

JA: Is verification conducted post Blue Built Home certification to verify that water saving fixtures and appliances are still installed?

SS: No, we do not. **We would not revoke a households' certification at this time.**

PQ: Agrees that multi-residential seems to be the biggest opportunity for water savings. Is there a difference between multi-residential condominiums (ownership) versus apartments (rentals)?

SS: It is much easier to access and inspect apartment compared to condominium units.

HY: Individual suite owners in condominiums can apply for Blue Built Home certification.

DW: Can residents obtain rebates from BBH and other rebate programs (e.g. Royal Flush)?

SS: No. They are only eligible to receive one rebate per fixture, as explained in the Blue Built Home Terms and Conditions.

JB: Would the resident sign-up for an eMERGE Home Tune-up before or after installing retrofits?

SS: They can install retrofits before or after. If they do not meet Blue Built Home requirements during the Home Tune-up, they can provide receipts for fixtures as proof of required retrofits and will qualify for rebates if purchased within six months of program application.

JB: If the Home Tune-ups are a free service, how is eMERGE funded?

HY: Through partnerships with the City, other organizations and private donors.

DW: Recommend communicating the financial savings achieved through BBH on the online hall of fame to promote the program.

HY & SS: Agree that it is important to highlight diverse values and potential motivations for participating in the program. HY suggests having images of various participants cycle on a loop to promote various benefits of participating in the program.

JB: What incentive exists for multi-res developers?

SS: Financial rebates go to the property owner (and water account holder) upon occupancy. This could be the builder for rental properties.

TP: If other municipalities offer a similar program, you might get more buy in from developers because there is a greater opportunity for them to participate on a larger scale.

LC: It might be worthwhile to promote the program at Water Wagon events (e.g. Hillside) to reach out to early adopters and help grow the program. The requirements of the program are very achievable. Reaching out to sales centers and developers will likely also be important.

JA: Recommend promoting through youth education/school programs.

JB: Recommends promoting the program to other municipalities via conferences presentations.

Item 6

Meeting adjourned 9:30pm

Next Meeting:

DATE CHANGE: Wednesday November 27, 2019 from 7 – 9 p.m. City Hall Meeting room D