Water Supply Strategy Update – Public Meeting 1 – Questions and Answers

The following are questions that were asked during Public Meeting 1 for the Water Supply Strategy Update. Answers below have been enhanced from those provided during the meeting to provide additional details as appropriate.

1. **It makes no sense that the grey water pilot would be outside the scope of updating the water strategy. Please explain why.**

   Region of Waterloo have staff dedicated to water efficiency and conservation initiatives. The team is leading the grey water pilot to look at opportunities to capture water from showers, treat it internally within the compact system and reuse it for toilet flushing. The timing of the grey water pilot will extend beyond the duration of the Water Supply Strategy Update. The project team for the Water Supply Strategy Update includes some of these team members and the results of the pilot will be monitored and assessed for opportunities to incorporate findings into the Water Supply Strategy Update.

2. **Does this include New Hamburg, Baden etc?**

   The Baden and New Hamburg water systems are not a part of the scope of the Water Supply Strategy Update. These communities are not serviced by the Integrated Urban System. There is a dedicated Baden-New Hamburg Water System and we plan its future through a separate master planning process.

3. **Farmers used to build a cistern to catch rainwater to supply non potable water to the house. Why can't we do that with new technology to flush toilets, etc?**

   There are modern cisterns in many commercial and industrial buildings in Waterloo Region. Examples include the GRT bus washing facility and the Ken Seiling Waterloo Region Museum. Because these can be expensive to install, they're mostly beneficial for properties with large water flushing volumes. It may also be beneficial in new buildings because the systems can be designed at the beginning without requiring complicated retrofits. This is something the Region is exploring.

   Newer technologies such as the ones being considered in the Region of Waterloo grey water pilot build on this principle for capturing water and reusing for toilet flushing. Best practices for grey water are being considered by the project team to assess potential impacts to future water use trends.

4. **How does the project team understand the draft evaluation criteria "Aligns with planning and approval / regulatory requirements"? Does this mean meeting population targets set by the Province? Does this mean understanding our maximum population capacity?**

   "Aligns with planning and approval / regulatory requirements" refers to whether or not an option aligns with the Regional plans and strategies and the ability to implement it within the approvals and permitting process. The ability to meet growth targets falls under this criterion.

5. **How do you propose to manage the cities. With their appetite for higher and higher buildings. This means that the buildings need to go deeper into the water**

sources. Currently individuals are having to challenge new development as the cities are not able to.

The Region provides comments on *Planning Act* application for new development where underground construction is proposed in source water protection areas. Region staff recommend alternatives (such as constructing above-ground cantilever parking) rather than installation of deep infrastructure that might require permanent dewatering of groundwater.

6. **How concerned is the Region with their ability to supply water to the high towers that are being built in the City of Kitchener?**

   Water Supply Strategy Updates use a 20-30 year planning horizon to allow time for new supply sources and infrastructure to be in place when the community needs it. In the near-term, water use and growth is monitored through the annual Water and Wastewater Monitoring Report to ensure approved development does not exceed the remaining system capacity. These processes work together to provide reliable long-term drinking water supply to meet the community's needs. This means that anything you see being built already has a confirmed reliable water supply.

7. **How is the road salt management strategy being integrated into the water management strategy?**

   The Water Supply Strategy Update will review trends for sodium and chloride in drinking water supplies. Sodium and chloride are challenging to remove once in a water supply. This is why the Region of Waterloo tracks sodium and chloride on an ongoing basis and works proactively to encourage best management practices to reduce salt application and protect groundwater. The Region uses a multi-pronged approach including commenting on development applications, risk management plan reviews under the *Clean Water Act*, education and outreach, and working with area municipal road agencies and contractors to implement best management practices. This will continue to be a priority for the Region going forward. More information on how the Region is working to reduce salt is available on the Region of Waterloo website.

8. **It seems we are at 70% capacity. Would this study be the start of a Class EA process for an additional supply?**

   The Water Supply Strategy Update is like a road map, and it is intended to provide recommendations for future projects. Where a new water supply system is recommended, a project-specific Class Environmental Assessment will be completed and will include detailed development and evaluation of options as well as public consultation.

9. **Based on the projected growth how long before we need a pipeline?**

   The Water Supply Strategy Update is still early in the process. A future needs assessment will be completed to determine the amount of water the community needs through to 2051. From there, options will be evaluated to determine the preferred strategy. As part of the preferred strategy, we will consider the timing of recommended projects. Information for the preliminary preferred strategy will be shared in a future public meeting.

10. **You can use cisterns, but the municipality does not allow it unless you put a meter on the cistern water to pay for discharge, would this change with new technologies.**

    Metering the discharge of cisterns that collect rainwater is needed to ensure the cost of providing wastewater servicing is recovered. If new water is introduced through technologies like cisterns, where the water coming into the building is not metered through the drinking water meter, it is anticipated that metering requirements would remain unchanged.

11. **Is the groundwater in Wilmot Township also a source for Kitchener?**

    Yes, there are municipal supply wells located in Wilmot Township that provide water into the Integrated Urban System. Kitchener is a part of the Integrated Urban System.

12. **Is the RoW actively reviewing what other communities are doing to conserve water? Many other communities have a much more limited supply system and there may be opportunities there.**

    Yes, an important part of the Water Supply Strategy Update is to review the existing water efficiency and conservation programs to look for new opportunities. This includes reviewing practices from other communities to determine if there are initiatives used that may be beneficial for Waterloo Region as well.

    Currently, the Region of Waterloo remains a national leader in water conservation programming, but part of that involves constantly monitoring new ideas that have come up in other jurisdictions and best practices.

13. **If an additional supply is required, it will be expensive. Will this study potentially include an annualized contribution to a reserve to fund this?**

    The recommendations from the Water Supply Strategy Update will be incorporated into the Capital Program. The Capital Program is funded by a combination of user rates and development charges and reserves. Growth related components of projects are typically funded by Regional development charges. As a long-range capital plan emerges from the Water Supply Strategy Update, it will inform the budget needed to deliver on this Capital Program, including any necessary reserve contributions.

14. **Where can we find more about New Hamburg and Baden water supply?**

    The Baden-New Hamburg Water and Wastewater System Servicing Review was completed in 2021, and the project information is posted on the Region of Waterloo website.

    This project information provides background on the Baden-New Hamburg Water System as well as information on recommendations for future projects.

15. **You keep mentioning the master plan, but the cities are continually approving variations to the master plan without study. The master plans are no longer valid. Do you have the ability to control the cities?**

The Region works collaboratively with area municipalities to provide services to the community. Master plans can be created for many different types of services. The Region of Waterloo and area municipalities both complete master plans specific to the services they are responsible for providing.

The Water Supply Strategy Update is a master plan for a service provided by the Region of Waterloo. Collaboration between the Region of Waterloo and area municipalities will continue to be critical to the process, but those municipalities do not update or make changes to master plans the Region creates.

16. **Who is assessing the wetlands and the implications that some like the Strasburg wells have on reduced wetlands?**

    There are more than 700 environmental monitoring locations across Waterloo Region to assess water levels in aquifers. Environmental monitoring locations are an important part of the Region's holistic approach to water supply. It is typically required by the province as part of the permits and approvals process. The Region also uses groundwater flow models to help predict potential influences from groundwater pumping on environmental features.

17. **When you said looking at options from other places in Ontario, will you also be looking at leading edge technologies and methods from throughout the world.**

    The focus of the review for best practices and technologies is primarily within North America, with consideration for water use trends in other parts of world as well. This work will be done by the consultant using a tool that evaluates over 160 known water conservation measures. It is also noted that the monitoring of best practices is also always ongoing by Region of Waterloo staff to continue be leading edge on water conservation.

18. **Does this project consider stormwater and it's effect on water management?**

    The Water Supply Strategy Update will consider stormwater management as it may relate to long-term trends for the quantity and quality of water supply in the future.

    The Region has a strong collaborative working relationship with area municipalities, the Grand River Conservation Authority, and the land development community to ensure stormwater management is protective of groundwater supplies.

19. **Are there other examples in the region besides Wilmot where water is sent across municipal boundaries?**

    Yes, it is common for water to be transferred between municipal boundaries in the Integrated Urban System. There are many examples of this, but a few include transfers from Kitchener to Waterloo, Kitchener to Cambridge, Waterloo to Woolwich, and Cambridge to North Dumfries. This versatility of moving water across the Region is one of the unique and valuable aspects of the Integrated Urban System.

20. **How is the plan addressing the impacts of climate change on water supply and demands?**

The draft evaluation criteria for this project includes the 'ability to adapt to climate change'. As part of the evaluation process, the future water supply options will be evaluated based on their resiliency to climate change. Water demand trends may also be impacted by climate change, particularly temperature and rainfall. Climate change will also be considered when forecasting future water use trends.

21. **Does Wetland preservation help with water management as addressed in this project?**

    Wetlands play an important role in water management and biodiversity. From a water perspective they can be supported by both surface water runoff and groundwater. The Water Supply Strategy Update will consider potential impacts to the natural environment (e.g. wetlands) for each water supply option.

22. **What are the biggest risks to the water supply, and how is the region planning to mitigate them?**

    There are many factors that impact water supply. The biggest risk for planning future water supply sources is uncertainty. New information continues to become available with respect to the understanding of local supply resources, long-term impacts from salt application, best practices, technology, regulations, climate change, land use changes, and water use behaviours. The Region is mitigating this risk by identifying key factors that would impact the timing or recommendations in the preferred strategy. These will be monitored after the completion of the Water Supply Strategy Update to determine if the approach should be updated. The Water Supply Strategy Update is also updated every 5-10 years, which allows the strategy to evolve as new information becomes available.

23. **Has the Region considered what it will do when PFAS is testing regularly**

    The province sets drinking water standards for all Ontario municipalities to ensure municipal drinking water is safe, including testing requirements. Like many municipalities across Ontario, the Region recognizes that this is an issue of public interest and is ready for further direction from the province to put in place a coordinated and compliant program for testing of drinking water for PFAS.

24. **Are you looking at things such as building code changes that could require builders to include water reuse in new homes.**

    The Water Supply Strategy Update will consider how recent and anticipated changes in building codes may influence future water use trends. The Region of Waterloo is also partnering with area municipalities to create High-Performance Development Standards, which are environmental and climate change related design standards for new development applications. There are considerations in the draft standards to reduce water consumption through measures such as water efficient fixtures, and reducing the need for municipal water for landscaping (i.e. grey water collection and drought friendly species).

25. **How prepared is the Region for water supply emergencies, such as contamination events or severe droughts? Which areas are at greatest risk? Will the report cover this?**

Planning for emergencies is an important part of the Water Supply Strategy Update. We start by considering long term sustainable supplies. This considers how periods of drought may impact water supply sources. We then consider what happens if supply sources need to be taken out of service. The circumstances and extent of water supply shutdowns looks at past experiences and expected future circumstances, including factors such as contamination events. The recommendations for the Water Supply Strategy Update will target reliable service under these emergency scenarios.

26. Are microplastics becoming a problem in our supply?

The Ontario Drinking Water Quality Standards do not currently regulate microplastics. However, like any emerging topic related to drinking water, the Region is following developments in the scientific community related to microplastics to better understand the issue and respond.

27. Does the water supply master plan involve assessing the condition of water infrastructure to keep up with replacing and repairing older infrastructure and / or minimizing risks such as water main breaks?

The scope of the Water Supply Strategy Update does not include assessing the condition of water infrastructure. The Region of Waterloo has a dedicated asset management group who oversees condition assessments for water infrastructure owned by the Region. Staff from the asset management group are working with the Water Supply Strategy Update project team to share relevant information.

It can also be noted that the Water Supply Strategy Update is focused on water supply sources. Watermain needs are reviewed for Region-owned watermains through a separate study called the Water Supply and Distribution Operations Master Plan. Locally owned watermains are reviewed by the area municipalities.

28. What are the risks of developing lands on the recharge areas that were recently opened up for development by the province?

Development on the regional recharge area has the potential to reduce the amount of water available for our supply wells and impacts water quality.

The regional recharge area forms the core of the Waterloo Moraine and provides water security for all of Waterloo Region. The regional recharge area replenishes our drinking water supply aquifers and provides a significant amount of water to our creeks, streams, wetlands and rivers. Approximately 40% of the Region’s drinking water comes from water that soaks into the ground on the regional recharge area.

The regional recharge area provides a sustainable source of high-quality water that also helps improve the water quality for many municipal supply wells. Development on the regional recharge area has the potential to increase salt concentrations in our groundwater supplies and is therefore not permitted.

29. How many wells are pumping at maximum capacity? How many % more overall can the current wells produce?

The Integrated Urban System has over 80 municipal supply wells. The operation of individual wells depends on many factors related to maintenance needs, system

upgrades, asset renewal, and variations in water use trends. Pumping rates from a given well may be increased or decreased over time to accommodate these changing needs. Overall, the existing Integrated Urban System is operating up to approximately 70% of the maximum capacity based on the 2024 Water and Wastewater Monitoring Report.

30. **With 180M liters per day how do you know the health of the aquifers? what is done if you see that the aquifers are starting to be contaminated or at reduced capacity.**

    The Region has a network of over 700 environmental monitoring wells throughout Waterloo Region. These wells are used to monitor water levels in our aquifers and this information allows us to adjust municipal well pumping rates if water levels are getting too low. A number of these monitoring wells are tested for water quality on a regular basis, which informs the Region of potential contaminants that may be present in our aquifers. This information is used proactively to assess risks and provide time to consider future mitigation options to ensure our water supply meets Ontario Drinking Quality Water Standards.

    These trends also provide the Region with insight into what programs and messaging need to be developed to mitigate water quality and quantity risks, including our extensive community education around the need to reduce road salt use.

31. **Are there limits to how much water a factory can use? Would water be a limited factor for a factory to be built here?**

    The Region reviews development and future industrial requests to confirm there is adequate capacity in the existing water supply system before the any growth can proceed. The existing system capacity is determined based on approvals such as Permits to Take Water, the Municipal Drinking Water License, and the Drinking Water Works Permit. A specific limit has not been established for how much water a factory can use; however, the Region vigilantly monitors water supply capacity to ensure the Region has sufficient water for industry and encourages sustainable water use.

    Region of Waterloo staff work with existing and new businesses to promote water efficiency and conservation measures to reduce water use or consider alternatives such as industrial water reuse. The Region will cost share with companies on large water use reduction projects that provide proven water savings. Most of the top water users in Waterloo Region have participated in the program.

32. **Sorry, off topic. But can we have something like this for Wilmot township?**

    Refer to answer 14 for information regarding the Baden and New Hamburg Water System. It can also be noted that public meetings will be held for Wilmot when Class Environmental Assessments or master plans are completed for systems within the Wilmot community.

33. **Does the Region monitor/ restrict sand and gravel pits in terms of:**

    a. **If contamination is leaking into the aquifer**

b. Stop development of new pits if sufficient already sand and gravel exists.

c. Strictly enforce regulations sand and gravel pits must abide by

The province is the approval authority for aggregate licenses in Ontario. The Region provides technical reviews and comments related to how pits influence municipal water supply sources for the Ministry of Natural Resources and Forestry to consider in their *Aggregate Resources Act* Site Plans. This includes reviewing potential impacts of chemical storage to municipal water supply aquifers. The province is also the approval authority for any water takings related to aggregate pits, such as water takings for aggregate washing.

Similarly, the Region provides technical reviews and comments related to municipal water supply sources for consideration by the area municipalities on applications made through the *Planning Act.*

34. When will you be looking at the tools you will need in order to achieve the potential of certain technologies such as water reuse, e.g building code changes. You just said that you wouldn't be doing it, but if you don't assess the barriers to getting full use of new technologies we can't achieve what we need to do and have recommendations on how to overcome those barriers.

The Region of Waterloo monitors and evaluates emerging water saving opportunities and technologies. This is done on an on-going basis. Information is reviewed as part of the Water Supply Strategy Update to assess how it may influence future water use.

35. Will the Region consider water reuse such as recycling wastewater as an alternative to meet future demands?

Yes, the Water Supply Strategy Update will consider water reuse and recycling wastewater as potential options to meet future water demands.

36. What emerging contaminants have been found in the region's water supply, and how are they being monitored?

The Region's drinking water is tested against all provincial drinking water regulations, which are set by the province to protect public health. The Region complies with all regulations and results are posted on its website. Should standards for new parameters be added by the province, the Region will test and meet those standards.

37. If the province sets substandard sand and gravel pit regulations to protect our aquifer, how can the Region and citizens pursue good regulating for sand and gravel pits in order to protect our aquifer.

The province is the approval authority for aggregate extraction in Ontario. The Region will continue to provide technical reviews and source water protection recommendations related to municipal water supply sources for the Ministry of Natural Resources and Forestry's consideration to include on *Aggregate Resources Act* Site Plans, and for consideration by area municipalities on proposed zone changes.

Citizens have the opportunity provide comments through formal applications made through both the *Planning Act* and *Aggregate Resources Act* approvals processes.

38. **Is there consideration for low impact development measures such as infiltrating roof runoff and financial incentives where this might help boost groundwater supplies?**

    The Region monitors industry practices and opportunities around low impact development. The Region supports low impact development where clean sources of water are passively infiltrated, such as soak-away pits and rain gardens. This includes excess runoff from rooftops and landscaped areas, but generally not from paved surfaces that receive salt application.

    Low impact development does not remove salt from water, which may present a threat to groundwater resources. To mitigate this risk, the Region has worked in close collaboration with several area municipalities to develop low impact development implementation guidelines to inform their Stormwater Master Plans.

39. **There have been new studies that suggest that chloramine disinfection is not as safe as once thought, is the Region looking at that?**

    The new compound formed by the decomposition of inorganic chloramine disinfectants in drinking water is an emerging issue. These findings require ongoing studies to be conclusive and the Region is monitoring these. There is a lot of additional work that needs to be done on this issue, but we continue to monitor any progress or updates. The Region has been using chloramines for over 20 years to safely provide secondary disinfection. The Region has been reaching out to the academic community to understand how to proceed with this issue.

40. **Will the Region be continuing to monitor sand and gravel pits after January 2025, when Regional authority over planning and new development ends?**

    With the proclamation of Bill 23 on January 1st, 2025 the area municipalities will become the approval authority over land use planning under the *Planning Act*. While the details of this transition are still being discussed, the Region will continue to provide comments to area municipalities on *Planning Act* applications for matters of Regional interest, where they pertain to source water protection of municipal water supplies.

41. **The public water quality reports do not cover non-regulated parameters. Can the Region publish data on emerging contaminants found in the water supply - that are not regulated now.**

    The science for emerging contaminants evolves as studies are completed, including practices for sampling and establishing acceptable concentrations. The Region has a requirement to publish data based on the regulations and standards put in place by the province. This ensures the information shared with the public is accurate and adheres to best practices.

42. **Will the answers to all questions tonight be on EngageWR**

    Yes, all questions asked during public meetings will have responses posted on EngageWR following the meeting.