

COVID-19 Strategic Sharing Group: Water Utility Management Response

Meeting Date April 24, 2020 from 1:00 p.m. – 2:30 p.m. EDT
Facilitator Sandra Cooke, Canadian Water Network

There were 21 municipalities participating from coast to coast (see the [attendee list](#)).

The objective of the meeting was to better understand approaches and responses taken by municipalities/utilities across Canada for maintaining municipal water services with scaled back staff and considerations for scaling back up operations during the uncertain and rapidly evolving circumstances of the COVID-19 pandemic (see the [meeting agenda](#)).

The discussion kicked-off with a presentation by guest expert, Michèle Prévost, professor in the Department of Civil Engineering at Polytechnique Montréal and Industrial Chair on Drinking Water at the Natural Sciences and Engineering Council of Canada (NSERC). The second half of the meeting examined return to work considerations or protocols in place for the scaling back up of operations. Bernadette Conant closed the meeting by sharing an update on coronavirus wastewater effluent surveillance research in Canada. For more information on the work that CWN is coordinating and undertaking with respect to this effort, please refer to [CWN's website](#) and specifically the [draft framework document](#) for the Canadian Coalition on Wastewater-Related COVID-19 Research.

Below is a list of the specific topics which were discussed:

- Recommissioning water systems and operations following the shut-down of public buildings
 - Including: existing and emerging concerns related to stagnation, lack of standardization for flushing requirements/practices, communications and messaging to building owners, perceived and emerging challenges for preparing for recommissioning
- Return to work for staff who are currently working from home or on modified duties or schedules
 - Including: prioritizing the return of specific staff, updated health and safety measure to reintegrate staff into workplace, logistical challenges related to re-staffing at full workforce, productivity challenges under the new office norm/expectations.
- Return to work for staff, including those who have contracted, been in direct contact with a COVID-19 patient or have been in a household quarantined for COVID-19
 - Including: temperature-checks, employee health surveying, applying social distancing and disinfection protocols

Key challenges identified this week by the participating municipalities/utilities include:

- Developing **standardized regulations and guidelines for building recommissioning**. There is growing acknowledgement that standardized guidelines either at the provincial or federal level would ensure regional and municipal consistency in recommissioning approaches.
- Many utilities/municipalities are in the preliminary phases of **return-to-work planning** and continue to explore strategies and actions to respond to anticipated workplace challenges such as ensuring social distancing in communal areas and employee productivity.

Summary of Municipal/Utility Actions

Discussion Topic 1: Guest Expert Presentation – Recommissioning Water Systems and Operations Following Shut Down of Public Buildings

Michèle Prévost, Professor, Polytechnique Montréal

As municipalities begin to slowly resume operations and re-open buildings that were closed or under-occupied for long periods during the COVID-19 pandemic, there are some key considerations that must be evaluated for buildings both large and small before systems can operate safely. The resulting stagnation in buildings due to COVID-19 closures raises serious chemical and microbial health concerns. Professor Michèle Prévost, describes a number of concerns, challenges for addressing them and how to move forward toward safely recommissioning buildings after COVID-19.

- Post-COVID-19 guidance after the nationwide shutdown is changing by the hour. Building water quality issues of concern will go up because of stagnation, particularly related to the **presence of lead, copper, and legionella**. This is relevant to utilities/municipalities because they own and operate buildings that will need recommissioning, but also are in a position to advise and support private building owners in safe recommissioning.
- **Recommissioning will require a high volume of water**. The decrease in water demand in industrial areas during the lock down will have resulted in stagnation in a number of buildings and municipal mains. As buildings begin to re-open, flushing plumbing is recommended before starting back up, which will result in high water demand. Utilities can support this through **coordination of flushing** and **by increasing residual chlorine**.
- In Quebec, the province will be providing guidance **to flush all systems with less than 25% occupancy**. The current challenge is writing guidance and procedures for safely and effectively recommissioning the diverse building portfolio.

- There are currently no evidence-based best practices, however decisions need to be made immediately.
- How to effectively recommission buildings will vary because the situation is different depending on the size of the building, the length of time it was decommissioned and whether or not contaminants like lead, copper or legionella are of concern.
- Considerations such as how many times to flush, how long to flush, and at what temperature to flush are being evaluated in an effort to determine standardized protocols.
- **Getting the message out to building owners will be a big challenge** particularly as water quality issues related to stagnation will impact small-scale businesses and large 20-story office buildings alike. Unfortunately, this issue is not something that buildings have typically had to deal with in the past, so it is not a top-of-mind priority for them when recommissioning and communication efforts will be important.

During the presentation, participants were asked to respond to a poll question regarding whether their utility/municipality has a plan to manage water quality in the recommissioning of public or private buildings as we emerge from lockdown. **Approximately 57% of respondents indicated they had no plan**, while 29% indicated they only have a plan for public/utility-owned buildings respondents. The results of the poll question are presented in Figure 1.

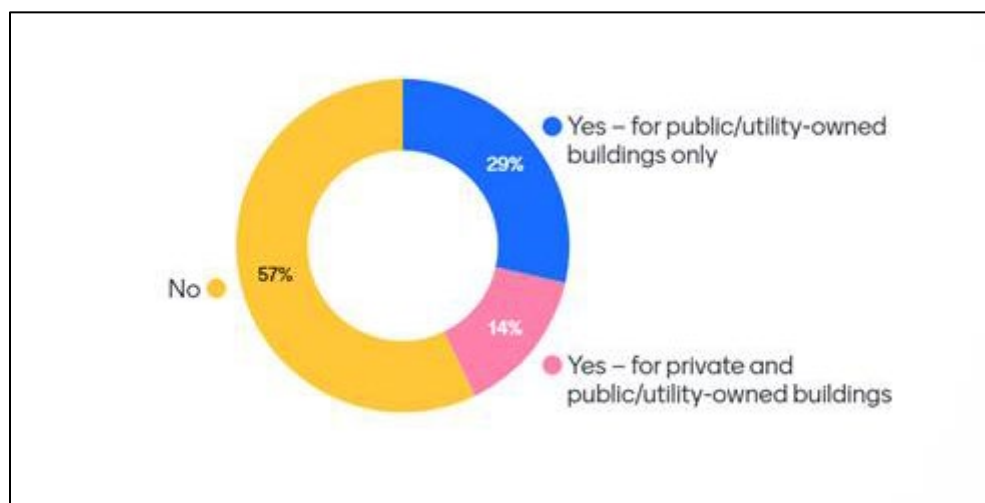


Figure 1. When asked whether their municipality/utility has a plan to manage water quality in the recommissioning of public or private buildings as we emerge from lockdown (no. of respondents = 14)

Of those who had some plans in place (4 municipalities/utilities), Figure 2 indicates a relatively balanced approach that includes flushing public mains in the vicinity, flushing building plumbing

systems, testing water quality in buildings, and coordination of flushing programs across the city – including peak flow management.

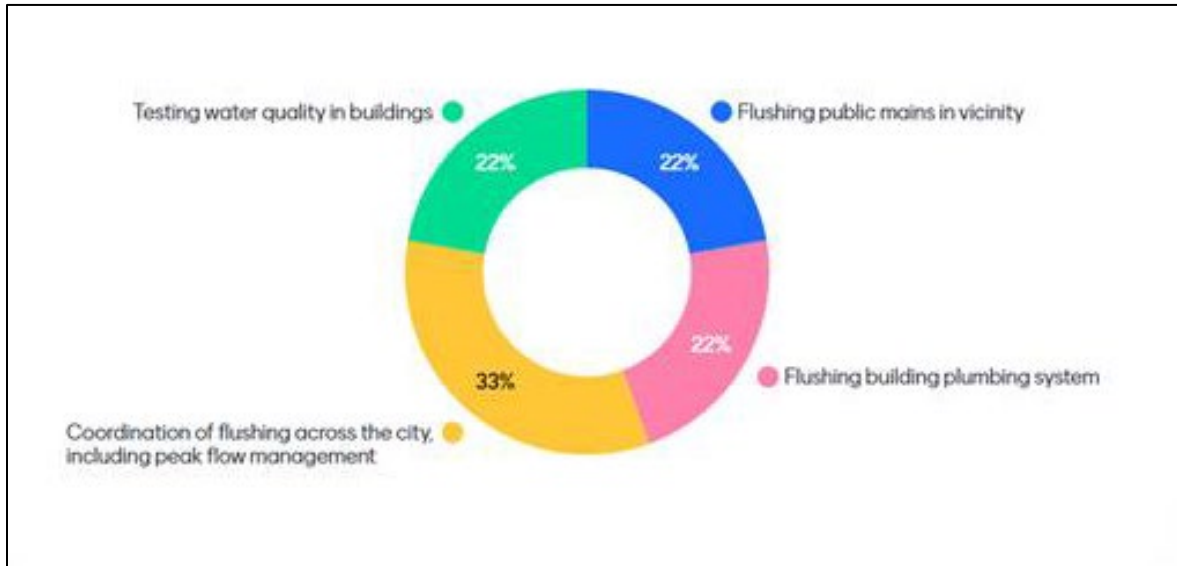


Figure 2. A follow-on question asked if municipalities/utilities have a water quality management plan for buildings (public or private), what elements it includes (selecting all that apply). (no. of respondents = 4)

In the discussion that followed our guest expert’s presentation, a number of key themes emerged with respect to ongoing considerations and challenges with respect to recommissioning public and private buildings.

- Many municipalities are either considering or have already begun to **increase the chlorine dosage** to drinking water treatment to ensure water quality. For example, one municipality has started to increase their chlorine dosage marginally every week to increase disinfectant residuals. This gradual approach reduces taste and odor complaints and supports flushing programs.
- Municipalities have acknowledged the need **for standardized guidelines outlining flushing requirements**. There is concern for having conflicting information should municipalities develop their own guidelines and a general consensus that they would like to see provincial health authorities take the lead to ensure there is consistency across the province and country. Current guidelines available or under consideration to potentially draw on:
 - Province of Quebec has building flushing guidelines under development.
 - The City of Vancouver has guidelines on Legionella management in buildings.
 - CWWA is working with the Federation of Canadian Municipalities (FCM) and larger municipalities to develop a coordinated message to building operators. They are doing this through the **development of a Fact Sheet** to distribute to provincial associations, municipal utilities and health units as guidance for building owners –

as well as looking to leverage business and industrial associations and large institutions to disseminate the message. In particular, **smaller municipalities will need assistance** with developing and rolling out recommissioning plans.

- With respect to flushing, some municipalities/utilities expressed a few key challenges for consideration including:
 - Proactively coordinate flushing to **manage peak water demands** and to ensure **sewer water systems are not over stressed** as a result of high levels of flushing in certain areas or at certain times.
 - Proactively addressing **customer billing concerns** as they relate to already revenue-strained building owners being asked to pay for the water required to flush. If relief is provided, it was cautioned that this be carefully ring-fenced by the unique situation of the pandemic so as to not create a precedent.
- A challenge municipalities/utilities are faced with is **identifying which building owners to target when recommissioning efforts commence**. A variety of approaches were contemplated for prioritizing customer outreach, including:
 - Using **billing data** from automated meter systems, which provide real time information on usage, or billing data comparing last year's volumes to this year's monthly volumes. Based on this data, decisions on the threshold for customers who should flush can be established – with some municipalities choosing consumption declines above 50% as a basis to contact customers.
 - Alternatively, buildings to target can be prioritized based on **percent building occupancy**. Quebec is taking this approach, and selecting buildings with less than 25% occupancy.
- Further challenges and considerations highlighted related to identifying **which buildings to target** included:
 - It was highlighted that there are **many types of buildings**, for example, hospitals and residential apartment buildings that do not need to be recommissioned because they have been in continuous use. At the opposite end of the spectrum, other buildings may require flushing such as schools and commercial/industrial buildings and might need to begin recommissioning efforts earlier because they have experienced more prolonged stagnation.
 - Many municipalities/utilities highlighted the importance of **getting guidelines/standards into the hands of building managers/operators** to ensure a successful recommissioning campaign. For many large buildings/businesses, the name on the water bill does not necessarily match the individual who handles building operations, whereas the reverse is true for small businesses.
 - Additionally, building owners and utilities may also want to consider their **responsibility and liability considerations**, including checking insurance policies

for relevant information or guidance and appropriate communication and action regarding regulatory requirements (such as flushing for managing lead levels).

- **Tailored communication is key** and must be done in way the building owner will understand – being aware how the messaging may be received on the other end and the need to maintain customers' confidence in public water systems.
- Municipalities/utilities can **consider broader dissemination of messaging** such as TV/radio interviews, social media posts, and website posts and some have suggested leveraging business and industrial associations, school boards and other large institutions to get the word out.

Discussion Topic 2: Return to Work Protocols for Staff and Criteria to Support Decision-Making

As municipalities begin to emerge from lockdowns and start to slowly bring staff back to work, there are key considerations and challenges for maintaining social distancing and safety requirements. Below is a summary of the key challenges and considerations discussed.

- Municipalities are slowly starting to think about and plan to bring staff back to work. The general consensus favoured a **slow and gradual return to a full workforce** with key considerations including, what departments to bring back and how to stagger return rates while still honouring previously established work safety protocols such as alternating shifts and staggering shifts. Some municipalities shared their plans to keep non-operational staff at home for a longer period while **prioritizing bringing back critical field and office staff** more immediately.
 - Prioritization for office staff could consider the suitability/productivity of their home office set-up. Other strategies included a combined home/office work-week.
 - Some utilities/municipalities are exploring options, such as expanding employee wellness benefits, that would help strike the right balance between protecting staff health by keeping them at home, but not introducing safety issues or causing injury because home work spaces are not adequately set up.
- To remain vigilant with respect to health and social distancing, **municipalities are adopting a number of safety measures to prepare for the reintegration of staff into the workplace** including, installing plexi-glass and other physical barriers in vulnerable areas, providing signs and guidance, conducting surveys and health assessments, mandating the use of surgical masks, and updating protocols for workers travelling between facilities.
- Some of the key challenges raised by municipalities related to **logistical challenges of maintaining physical distancing with a full workforce** in areas such as washroom facilities where capacity is significantly reduced and the related **office productivity challenges** that will ensue as a result of staff respecting safety protocols.

Various considerations and strategies continue to evolve with respect to return-to-work protocols for staff who contracted and have recovered from COVID-19 or those who are returning after a period of isolation after having been in direct contact with a COVID-19 patient either at home or elsewhere. Below is a summary of the actions taken and strategies being considered by municipalities/utilities:

- The **adoption of staff temperature-taking as a safety precaution has been mixed**. Some have commenced the process, generally led by a third party, while others have made the decision not to adopt this precaution for various reasons.
- Continued discussion around **securing and utilizing appropriate PPE** under a range of circumstances.

Looking Ahead: Opportunities to Consider and Emerging Challenge Areas

- Many utilities/municipalities expressed a **desire to coordinate efforts to get messaging out to building owners regarding recommissioning standards and protocols**. Utilities/municipalities are open to sharing resources and leveraging contacts to spread the word.
- As utilities/municipalities continue to explore options to return staff to work, there is continued discussion regarding the **best strategies/initiatives to maintain social distancing while accessing communal workspaces** and effectively surveying employees returning to the office.
- Although municipalities/utilities do not yet have the data to fully calculate the financial impacts of the COVID-19 pandemic, **addressing revenue concerns and forecasting future needs and challenges** remains a key consideration.
- Utilities/municipalities must continue to consider customer revenue impacts due to COVID-19 and are considering options and opportunities to address **customer billing expectations and procedures in light of flushing requirements**. As regulators may mandate flushing as part of the recommissioning of buildings, utilities and municipalities anticipate both customer requests for relief and potential and media attention on this topic.

Canadian Water Network's 
Canadian Municipal Water Consortium

Attendees

Municipality/Utility	Name
Alberta Capital Region Wastewater Commission	Wade Teveniuk
Canadian Water and Wastewater Association	Robert Haller
City of Abbotsford	Jamie Austin
City of Calgary	Jesse Aylward
City of Calgary	Martin Pollard
City of Hamilton	Nick Winters
City of Kitchener	Bu Lam
City of Kitchener	Greg St. Louis
City of Kitchener	Angela Mick
City of Medicine Hat	John Michalopoulos
City of Montreal	Carole Fleury
City of Ottawa	Tammy Rose
City of Regina	Kurtis Doney
City of Regina	Pat Wilson
City of Surrey	Tara Macrae
City of Thunder Bay	Michelle Warywoda
City of Toronto	William Fernandes
City of Toronto	Lou Di Gironimo
City of Vancouver	Andrea Becker
City of Vancouver	Michael Irvine
City of Vancouver	Sam Li
City of Winnipeg	Tim Shanks
CWN Board	Carl Yates
EPCOR	Susan Ancel
EPCOR	Stephan Craik
Halifax Water	Cathie O'Toole
Halifax Water	Wendy Krkosek
Metro Vancouver	Heidi Walsh
Metro Vancouver	Andjela Knezevic-Stevanovic
Metro Vancouver	Sean Smyth
Township of Langley	Larry Massier
Union Water Supply System	Rodney Bouchard
Utilities Kingston	Allen K. Lucas
York Region	David Szeptycki
Polytechnique Montréal	Michèle Prévost

Agenda

Agenda: COVID-19 Peer-sharing – Water Utility Management Response	
Friday April 24, 2020 1:00 – 2:30 pm EDT	
1:00 – 1:10 pm	<p>Welcome and Introductions</p> <ul style="list-style-type: none"> Review call structure, update on action items, reaching out to your neighboring municipalities
1:10 – 1:20 pm	<p>Topic 1: Guest Expert Presentation Recommissioning water systems and operations following shut down of public buildings Michèle Prévost, Professor, Polytechnique Montréal</p> <ul style="list-style-type: none"> Flushing guidance for large buildings Water quality concerns and monitoring needs
1:20 – 1:30 pm	<p>POLL Questions:</p> <ol style="list-style-type: none"> Does your municipality/utility have a plan to manage water quality in the recommissioning of public or private buildings as we emerge from lockdown? <ol style="list-style-type: none"> Yes – for public/utility-owned buildings only Yes – for private and public/utility-owned buildings Yes – for private buildings only No If you have a water quality management plan for buildings (public or private), what elements does it include? Select all that apply. <ol style="list-style-type: none"> Flushing public mains in vicinity Flushing building plumbing system Disinfection of building plumbing Coordination of flushing across the city Testing water quality in buildings Other <p>Q&A</p> <ul style="list-style-type: none"> Enter your name in the chat box to raise your hand

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1:30 – 1:55 pm	<p>Topic 2: Return to Work Protocols for Staff and Criteria to Support Decision Making</p> <p>Business as usual will likely not occur for some time due to the projected epidemiological ‘curve’ of the pandemic. Thus, municipalities/utilities will need to continue their planning efforts to scale back up when the time comes. Please describe the return-to-work considerations or protocols you have in place, including for:</p> <ul style="list-style-type: none"> • Staff who have contracted, been in direct contact with a COVID-19 patient or have been in a household quarantined for COVID-19; • Staff who are currently working from home or on modified duties or schedules.
1:55 – 2:15 pm	<p>Topic 3: Open Q&A</p> <ul style="list-style-type: none"> • Use the chat box to raise your hand
2:15 – 2:25	<p>Update on Coronavirus Wastewater Effluent Research in Canada</p> <ul style="list-style-type: none"> • Expert panel to be struck on WW Surveillance as a Public Health Tool
2:25 – 2:30 pm	<p>Wrap-up</p> <ul style="list-style-type: none"> • Next Meeting – Friday May 8th @ 1:00 PM EDT <p>Proposed Focus: Financial impact assessment and/or forecasting of the pandemic on utilities</p>