

Major crises

Protecting the quality of drinking water also means protecting public health and safety as well as the environment. One only must think of certain crises such as the one that occurred in 2014, in the American city of Flint in Michigan, to understand it. As a result of a change in the source of drinking water supply, the city experienced significant lead contamination that affected the city's poorest community and created a serious public health problem. A state of emergency had to be declared. To this day, the population must use bottled water until the water mains are replaced.

The toxic algal bloom in Lake Erie in 2014 also created an emergency by depriving everyone of drinking water in and around Toledo, Ohio. It is the presence of phosphorus, among other sources of fertilizers used in agriculture, that has led to this proliferation and forced the population to stock up with bottled water, thus causing a shortage of the latter.

The causes of contamination can have multiple origins and have serious repercussions on human health. In addition to temporarily interrupting the water supply for part of the population, this type of event makes the sanitation process very complex and expensive.

Water at the heart of priorities

Realizing the importance of this resource is everyone's business. The will and commitment of decision-makers, managers, business owners, and municipal and government representatives are needed, especially since they have a wide and varied field of intervention. Water management should be at the heart of their priorities.

The City of Sherbrooke is a good example of this desire. To reduce its water consumption, it has focused on leak detection and the implementation of processes to optimize its water network. In addition, the efforts of citizens and leaders of institutions, businesses, and industries have enabled the municipality to achieve excellent results in terms of drinking water management. In fact, in 2016, the average drinking water consumption of a Sherbrooke resident was 395 liters per day, below the government target, which was less than 622 liters per person per day².

For sustainable water management

Companies are not left behind and must protect living environments through a respectful use of water. There are multiple processes and equipment to protect groundwater, treat wastewater before discharge and reduce water consumption. Standards also exist to preserve the drinking



nature of water and to ensure the health of the building users, including the obligation imposed on owners to prevent the cross contamination of the drinking water network. Another example is the requirements to limit the presence of lead in drinking water. In Quebec, since May 1, 2014, it is prohibited to install faucets and other plumbing accessories containing more than 0.25% lead.

More and more companies are deciding to modernize their facilities to better manage the use of drinking water. One can think of recirculation loops, or the banning of cooling devices connected continuously to drinking water. A refrigerated display with a single capacitor, for example, can consume nearly 3000 liters of drinking water per day³, which represents an annual consumption of more than one million liters. Thus, the use of air or water recirculation loop devices saves a significant amount of drinking water. The implementation of water recovery, recycling, and recirculation systems on certain types of equipment allows a great water saving.

Several municipal administrations have adopted regulations to define the permitted use of water from the aqueduct, in addition to programs for saving and optimizing infrastructure. For municipalities, water pricing can be a powerful incentive to initiate changes within the population and IBI.

In short, sustainable water management is as much about avoiding all forms of contamination as it is about using water wisely, without abuse. Water has long been regarded as a renewable resource. We know today that it must be preserved. As a citizen, organization, or company, what actions have you taken or are you taking daily to reduce the consumption of drinking water or to avoid its contamination?

Sources:

¹ <http://imagineadaywithoutwater.org/>

² City of Sherbrooke. (2017, August 21.) *Drinking water consumption: Sherbrooke among the leaders in Quebec!* Press release. Accessed online at: <https://www.ville.sherbrooke.qc.ca/salle-de-presse/actualites/communiqués-et-actualites/communiqués/communiqués/article/consommation-deau-potable-sherbrooke-parmi-les-leaders-au-quebec/>

³City of Montreal. (2016). *Water-using cooling devices*. Pamphlet 9964 (02-16). Accessed online at: http://ville.montreal.qc.ca/pls/portal/docs/PAGE_EAU_FR/MEDIA/DOCUMENTS/reglement_climatisation_HR.PDF

