

Our Fresh Water Resources



The Great Lakes

The Great Lakes basin is home to 96% of Ontario's population. It contributes to approximately 37% of Canada's economic activity in Gross Domestic Product. The Great Lakes are the largest system of fresh surface water on earth, containing roughly 21% of the world's fresh surface water. However, less than 1% of Great Lakes water is renewed annually by precipitation and snow melt.ⁱ

Lake Ontario: Toronto's Waters

Toronto's water comes from Lake Ontario, the 14th largest lake in the world. While it is the smallest of the five Great Lakes in surface area, its average depth is second to that of Lake Superior. It is the source of drinking water to 9 million people in Ontario and New York State. Lake Ontario's deep cool waters, is the reason for the development and success of En Wave's Deep Lake Water Cooling system which harnesses underwater low temperatures for sustainable cooling. To learn more about the technology and its use at Commerce Court, [click here](#).ⁱⁱ

Toronto's Watersheds

Toronto lies within a series of nested drainage basins, with six main river watersheds running from east to west, and the Lake Ontario watershed along the shoreline. There are eleven watersheds in total located in Toronto and Region.



According to the United States Geological Survey, "A watershed is the area of land where all of the water that falls in it and drains off of it goes to a common outlet."ⁱⁱⁱ Commerce Court is located in the Lake Ontario Waterfront watershed because the rainwater that falls in it drains off into Lake Ontario.^{iv} To see what watershed your home belongs to, [click here](#).

Image: Toronto's Watersheds^v



Freshwater Issues

According to Environment and Climate Change Canada, 50% to 90% of coastal wetlands in many areas have been lost as a result of development, pollution, invasive species, water level fluctuations and climate change impacts.^{vi}

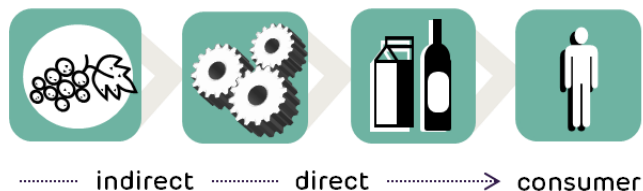
- **Water quality:** High pollution from wastewater overflow, industry and agriculture causes ongoing threats to the quality of Lake Ontario's waters. Pollution affects the drinkability of water, recreation and ecological viability of plants and animals.
- **Water quantity:** The effects of warm winters place a heavier dependency on rainfall patterns to replenish the Great Lakes, due to the low rate of regeneration. Typically snowmelt provides some of the Lakes' water replenishment quota. In past years, low amounts of snow melts and a dry summer have jeopardized lake levels.^{vii} While recently heavy rains have created an overabundance that has interfered with the transportation and tourism industry in Ontario.
- **Invasive species:** Ontario has the highest risk of species invasions compared to other Canadian provinces. The cost of invasive species in the Great Lakes is estimated at over \$100 million annually. Most recently Asian Carp has been found in the Great Lakes which pose a significant risk to the viability of native fish and plants.^{viii}
- **Water and Climate Change:** The unpredictability of future weather patterns due to climate change poses risks that are and will continue to be felt through water. Flooding in some parts of Canada such as Southern Ontario and Quebec, while droughts are expected in the Prairie region.^{ix}

Our Water Footprint

Canadians are among the highest consumers of water in the world. Our water footprint includes the actual water we use for bathing and drinking, as well as the embedded or virtual water that is associated with the food we eat and products we use (see info box below for more on Virtual Water).

Our water footprint also relates to how we use energy. The second highest energy use in the City of Toronto is associated with the delivery and treatment of domestic water. That does not include heating and cooling the water we use. This relationship between water and energy is known as the Water-Energy Nexus.

VIRTUAL / EMBEDDED WATER^x



Virtual / Embedded Water

The virtual-water content of a product is the volume of freshwater used to produce it, measured at the place where the product was actually produced. For example, water scarce regions are better able to grow grapes for wine or olives, than oranges or avocados.

The Water Footprint Network



More Information

- To learn about how you can save water at home and work, visit the Sustainability Resources section, by [clicking here](#)
- Contact us with your questions and/or suggestions:
 Phone: 416.364.0758
 Email: ccto-sustainability@quadreal.com

End Notes

-
- ⁱ Environment and Climate Change Canada: Great Lakes Quick Facts. <https://www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En&n=B4E65F6F-1>
- ⁱⁱ Lake Ontario Waterkeeper: Lake Ontario. <http://www.waterkeeper.ca/lake-ontario/>
- ⁱⁱⁱ U.S. Geological Survey's (USGS) Water Science School. <https://water.usgs.gov/edu/watershed.html>
- ^{iv} Text box: TRCA: Watershed Management. <https://trca.ca/conservation/watershed-management/>
- ^v Image: Evergreen: Watershed Toolkit. https://www.evergreen.ca/downloads/pdfs/watershed-toolkit/GTAwatersheds_FINAL.pdf
- ^{vi} Environment and Climate Change Canada: Great Lakes Quick Facts. <https://www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En&n=B4E65F6F-1>
- ^{vii} Ontario Farmers Association <http://www.ofa.on.ca/issues/overview/water-issues.aspx>
 Government of Ontario <https://www.ontario.ca/page/managing-your-water-well-times-water-shortage>
 The Globe and Mail: Low Water Levels Keep Boat in Dock (2010) by Anna Mehler Paperny
<http://www.theglobeandmail.com/news/toronto/low-water-keeps-boats-in-dock/article1210829/>
- ^{viii} Environment and Climate Change Canada: Great Lakes Quick Facts. <https://www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En&n=B4E65F6F-1>
- ^{ix} Environment and Climate Change Canada: The Science of Climate Change, <http://www.ec.gc.ca/sc-cs/Default.asp?lang=En&n=A5F83C26-1>
- ^x The Water Footprint Network: What is a Water Footprint? <http://waterfootprint.org/en/water-footprint/what-is-water-footprint/>