



# Where Does My Water Come From?

**D**rinking water comes from either underground or surface water sources.

Groundwater is found in the tiny spaces between soil particles and in cracks in underground rock. Aquifers are the underground areas of soil or rock where substantial quantities of water are found, and are the water source for wells and springs. Of all the fresh water in the world, two thirds is underground, making groundwater one of the Earth's most valuable resources.

## London District Chiefs Council Drinking Water Source Protection

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[www.sfns.on.ca](http://www.sfns.on.ca)

This project is a communications tool provided by the LDCC, funded through the Ontario Drinking Water Stewardship Program. This grant is to help raise awareness within the First Nation communities regarding their sources of drinking water.



## First Nations with the London District Chiefs Council



Surface water is the water found in oceans lakes, rivers streams and ponds. Most Canadians get their drinking water from surface water sources. These two water sources – groundwater and surface water – are interconnected and affect each other. If one water source becomes contaminated, there is a good possibility that the contaminant will eventually make its way into, and contaminate, the other water source.

In Ontario about 80 per cent of residents get their drinking water from surface water and 20 per cent from groundwater sources.



**A**side from Caldwell First Nation members and Aamjiwnaang First Nation purchasing municipal water, the remaining six First Nations manage their own drinking water supplies. Chippewas of Kettle and Stony Point First Nation have their drinking water source from Lake Huron. Bkejwanong Territory (Walpole Island First Nation) has their supply drawn from the St. Clair River. Chippewas of the Thames, Oneida Nation of the Thames and Delaware Nation rely on groundwater as their communal drinking water source. Munsee-Delaware First Nation purchases some service from Chippewas of the Thames Water Treatment Plant but most community members rely on private wells.



# Chippewas of the Thames First Nation



Chippewas of the Thames First Nation falls within the Thames-Sydenham and Region Source Protection Region.

The drinking water source for the First Nation is determined to be 'Groundwater Under Direct Influence of Surface Water' or GUDI. Groundwater is water found beneath the Earth's surface between the cracks and space in soil, sand and rock.

Groundwater is Under Direct Influence of surface water (GUDI) where it has:

1. physical evidence of surface water contamination (eg. insect parts, high turbidity);
2. surface water organisms (e.g. campylobacter, aerobic spores, cryptosporidium, giardia).

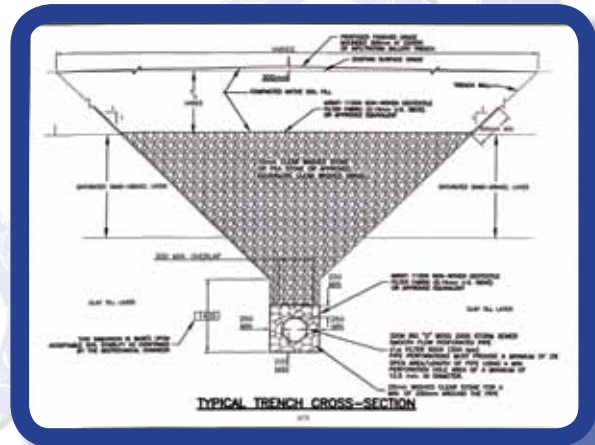
<http://www.ene.gov.on.ca/envision/techdocs/4167e.htm>

## HOW WATER IS TREATED

- Infiltration gallery filters the raw water
- Pump station sends water to the plant
- Water goes through 5 micro filters then through 1 micro filters
- Then proceeds to the UV filter for disinfection
- The water is then chlorinated
- Contact chambers outside of plant then moved out to distribution

## DISTRIBUTION SYSTEM

- 320 households are serviced on Chippewas of the Thames First Nation
- 26 households on Munsee-Delaware First Nation purchase service from COTTFN WTP
- There are approximately 54 kilometers of water line servicing the communities
- The water tower has a capacity of 681,000 liters
- There are 51 fire hydrants on the Chippewas of the Thames First Nation
- There are 14 fire hydrants on Munsee-Delaware First Nation
- These water lines are maintained by Chippewas Water Department.



Infiltration Galleries are capable of supplying large quantities of water, and are used where wells are unable to supply water needs, i.e. where an impermeable rock barrier affects well efficiency, or where surface water sources are too shallow for intake screens. Infiltration galleries are one or more horizontal screens placed adjacent to (on-shore), or directly underneath (bed-mounted), a surface water source.

[http://www.screenservices.com/Infiltration\\_Gallery.htm](http://www.screenservices.com/Infiltration_Gallery.htm)

If there are any queries or emergencies contact:

**Health Department - Heather Nicholas  
Tel. 519-289-5641**

If the problem is the physical lines:  
**Water Department - Tel. 519-264-9427**

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