

Definition/Description:

Residents of the Winnipeg Health Region (WHR) receive municipal water from three sources: the City of Winnipeg and the Rural Municipalities of East St. Paul and West St. Paul.

Regulations and Process

Drinking water quality in the province is regulated by Manitoba Health and Manitoba Conservation using *Guidelines for Canadian Drinking Water Quality* published by Health Canada. This document addresses recommended limits for substances and conditions affecting drinking water quality. Changes to the *Guidelines* are published regularly.

Method

Information for Water Quality was obtained by reviewing several documents and web sites from the City of Winnipeg, Water and Waste Department (www.winnipeg.ca/waterandwaste/water) and Manitoba Conservation (www.gov.mb.ca/conservation).

Source:

Information sources:

1. City of Winnipeg, Water and Waste Department. Winnipeg's Water Quality Report 2003
2. City of Winnipeg, Water and Waste Department. 2002 Water Test Results
3. City of Winnipeg, Water and Waste Department. Winnipeg's Water: Our Most Essential Resource, 2002
4. City of Winnipeg, Water and Waste Department. Assessing the Need to Treat Winnipeg's Water Supply, 2000
5. Manitoba Conservation. Annual Report-Water Quality, 1997

Findings:

City of Winnipeg

The City of Winnipeg provides water to the vast majority of its residents. A small number of homes within the City use private well water or have water trucked in. Trucked water is obtained, for the most part, from City of Winnipeg standpipes. Winnipeg's water flows by gravity through a 160 km long aqueduct (concrete pipe) from Shoal Lake, near the Manitoba-Ontario boundary. Water, up to 8800 million litres, is stored at the Deacon Reservoir and then moves by way of a complex water distribution system to smaller reservoirs and pumping stations throughout Winnipeg. On average, 225 million litres of water are delivered daily to approximately 270,000 homes, businesses and industries over an area of approximately 297 sq. km.

The City of Winnipeg Water and Waste Department conducts more than 46 different tests at over 70 different monitoring sites from Shoal Lake to the customer tap. Winnipeg's water usually meets the more than 80 guidelines in place for drinking water quality. However, the guidelines for turbidity, odour and trihalomethanes are not always met. Detailed information on testing and on water quality parameters can be found at:

http://www.winnipeg.ca/waterandwaste/water_quality.stm

Chlorine, the most widely used drinking water disinfectant in North America, is added to the water supply at three different locations to kill bacteria and viruses that can cause illness and death. Since the practice of chlorinating drinking water was introduced, typhoid fever, cholera and several other waterborne diseases have been nearly eliminated from the western world.

Fluoride has been added to the City's water supply for many years. Fluoride levels in the water are maintained at levels recommended by a number of health organizations to help prevent tooth decay.

Sodium orthophosphate, in the form of phosphoric acid, has been added to the water supply since 2000. It forms a protective coating inside water pipes and helps reduce lead content in tap water that might result from corrosion and the gradual wearing away of plumbing materials containing lead.

In 2003, the City initiated a program to flush out all approximately 2400 kilometres of water mains in Winnipeg. The flushing program, intended to remove most of the sediment that has built up in water pipes over time, will run yearly from May to September. It will take about five years to clean all the water mains once.

In 2004, the City plans to begin treating the water using ultraviolet light to protect against waterborne parasites such as *Cryptosporidium*. It is also planned to convert the water distribution disinfection system from free chlorination to chloramination by the end of 2005. This should allow the City to consistently meet Canadian guidelines for trihalomethanes. Finally, the City has approved the construction of a state-of-the-art water treatment plant that will further reduce the health risks of waterborne disease and illness and improve the aesthetic quality of the water. This facility is expected to be fully operational by the end of 2007.

Rural Municipality of East St. Paul

A municipal water plant, which draws its water from a well near the floodway, provides treated and chlorinated water to residents from Bird's Hill to Henderson Highway. Water samples taken from the municipal system generally meet all requirements. The remaining residents of the R.M. rely on private wells.

Rural Municipality of West St. Paul

A small municipal system provides water to the residents of the Rivercrest subdivision. Most residents of the R.M. rely on private wells.

Highlights:

- Water Quality within the Winnipeg Health Region generally meets all requirements recommended in the *Guidelines for Canadian Drinking Water Quality*.
- Winnipeg normally enjoys 'good' water quality when compared to other cities in Canada of similar size. Good water quality is typically described as "All water uses protected, with only a possible degree of impairment, no water uses interrupted, and conditions rarely depart from desirable quality" (Manitoba Environment).
- For more than 80 years, Winnipeg has enjoyed a safe, high quality, reliable and abundant water supply.
- Winnipeg has not had an outbreak of waterborne disease since 1919 when Shoal Lake became the water source.