
BRIEFING NOTE

LEAD IN DRINKING WATER

Background:

- Lead seldom occurs naturally in water sources such as rivers and lakes. The City's drinking water supply consistently meets or surpasses all provincial drinking water standards.
- Health Canada has established a maximum acceptable concentration of lead in drinking water of 10 ppb (parts per billion) in a free flowing sample of water. Ontario has adopted the same concentration level as an Ontario Drinking Water Quality Standard (ODWQS) for lead. Tests for lead concentration at the City's plants, reservoirs and watermains are always below 1 ppb.
- Lead enters drinking water primarily as a result of the corrosion or wearing away of materials containing lead that may be found in service lines and household plumbing. Toronto has a lead service pipe replacement program, which aims to remove all known lead service connections (from the watermain to the residential property lines) from its distribution system.
- As part of its Water Quality program, the City will analyse water from residents' taps for lead content when requested. Results with lead levels above the Ontario standard and the federal guideline are an indication of the impact of the plumbing.

Key Points:

- The most common sources of lead in drinking water are lead-based solder used to join copper pipe, faucets made of brass and chrome-plated brass and pipes made of lead that connect a home to the watermain. Other sources of lead in the environment include soil, paint, pottery, traditional folk medicines or cosmetics, some sports equipment such as fishing weights and ammunition.
- The Ontario Plumbing Code prohibits the use of lead-based solder. However, lead-based solder was used to connect plumbing in homes constructed prior to the mid to late 1980s. Homes constructed before 1955 often contained lead water service lines.
- Toronto has almost 500,000 water service connections and approximately 65,000 of these are made of lead. The City replaces approximately 3,500 service connections each year. The City replaces substandard service lines prior to beginning capital works projects (i.e. watermain construction).
- Drinking water produced at Toronto's water plants is significantly better than Health Canada's standards. However, drinking water quality can decline if water sits too long in the service line or plumbing system of older homes.

- During 2006, of the 205 samples from private properties that were analyzed for lead, 12 (5.9%) exceeded the Ontario Drinking Water Quality Standard of 10 ppb.
- For the period of January 1 to June 2, 2007, 160 samples from private properties were analyzed and only twelve (7.5%) exceeded the Ontario Drinking Water Quality Standard of 10 ppb. Samples were collected from fire hydrants, (which are representative of the water in the distribution system) near the homes that had the elevated lead levels and all the results were well below the Ontario Drinking Water Quality Standard.
- An Order was issued by the Ministry of the Environment to 36 municipalities, including the City of Toronto, requiring the municipalities to collect samples from 20 private residences and 5 hydrants in an area known to have lead services. The samples were tested for lead, pH and temperature and the results reported to the Ministry by June 6, 2007.
- Toronto Water complied with the requirements of the Order and out of the 20 homes tested, only 2 (10%) of the homes had samples that exceeded the Ontario Drinking Water Quality Standard of 10 ppb. This average is in line with the results of our customer-based lead sampling program. The results from the fire hydrant samples (represents the Distribution System) were well below limits.
- In addition to the requirements specified in the MOE order, the City has received over 600 requests from homeowners for lead testing and we will be completing all of them.

Comments:

- Toronto Water provides free testing for lead in drinking water in homes with lead service pipes or where there is reason to believe that lead levels may be elevated. The system is checked from the street to the kitchen sink. To access this free lead testing service residents may call the water quality line at 416-392-2894.
- Concerned residents can take the following precautionary steps to limit possible exposure to lead:
 - Flush standing water in your pipes each morning by first flushing the toilet, washing your hands or letting the water run for five minutes; and
 - Use cold water for drinking, cooking or preparing baby formula. Hot water dissolves more lead from plumbing.
- Homeowners whose test results indicate that the lead levels in their water collected from the tap are above the Ontario Drinking Water Quality Standard should have their lead pipes replaced. For further details on replacement of the lead water service call 416-392-7625.
- While homeowners with lead levels above the Ontario Drinking Water Quality Standard are waiting for the replacement of their service they are being advised to reduce the lead in drinking water by using a water filter or bottled water. Water filters should state that they remove lead and be certified as meeting the appropriate drinking water standards. Residents are advised to check the label on bottled water to ensure it does not contain lead.
- Residents with health-related questions or concerns can contact their doctor or call Toronto Public Health at 416-338-7600.

- The City of Toronto is committed to providing residents and businesses with high-quality, safe, clean drinking water. To reduce customer exposure to lead from drinking water, the City:
 - communicates to the public about methods to reduce exposure to lead;
 - has a lead service line replacement program (on demand replacement or as part of the watermain replacement capital program);
 - participates in research with other North American water utilities aimed at minimizing exposure to lead through drinking water; and
 - reports all lead sample results that exceed the ODWQS of 10 ppb to the Medical Officer of Health and the Ministry of the Environment.

**Further Information: Lou Di Gironimo, General Manager Toronto Water, 416-392-8200
Dr. David McKeown, Medical Officer of Health, 416-338-7820**

Date: June 7, 2007

Questions & Answers:

How can residents get rid of lead pipes in their homes?

Free to single family homes, the City will replace substandard water service connections leading to the house that are constructed of a non-copper material (lead or galvanized iron). Lead service lines are considered sub-standard and receive priority attention.

Multi-unit properties, new construction, redeveloped or partially demolished properties are not eligible for this program.

Property owners with substandard pipes are urged to consider replacement of the private portion of the water service and/or upgrade their home's internal plumbing.

For more information about this program call at 416-392-7625.

Do we conduct lead testing in areas with lead service lines?

As stated above, Toronto Water provides free testing for lead in drinking water in homes with lead service pipes or where there is reason to believe that lead levels may be elevated. The system is checked from the street to the kitchen sink. For an evaluation of lead levels in residential pipes inside their homes, residents will have to arrange to have their tap water tested by a private laboratory. The City recommends that residents use an accredited and licensed lab for the test.

Do we have a public education program about lead in drinking water?

Information about ways to flush lead from water pipes is distributed in the residential newsletter Water Watch, in water bill inserts, on the city's web site, and on a recorded message on the Water Information Line.

Are there any plans to test drinking water lead levels in schools?

Ontario Regulation makes it mandatory for schools to flush their plumbing systems following an extended period of non-use. Boards of Education are responsible for minimizing exposure to lead within their facilities.