Frequently Asked Questions – Lead Water Service Pipes

What is lead?
Lead is a bluish-grey soft, malleable metal that is found in small amounts on earth's outer layer. Since lead is highly resistant to corrosion and very malleable, it is used in the construction of piping to transport corrosive liquids, in building construction, lead-acid batteries, bullets and shot, weights, and is part of solder, pewter, fusible alloys and radiation shields.

Where is lead most commonly found?
Lead is present almost everywhere in nature. It can be found in air, soil, dust, drinking water, food and various consumer products. Lead can be taken in by the body through ingestion and/or inhalation.

Is Wetaskiwin's drinking water safe?
Yes. The City of Wetaskiwin maintains modern drinking water systems that provide reliable and safe drinking water to residents. Water is drawn from Coal Lake and is purified using modern filtration techniques, UV light and chlorination at the City's water treatment plant. During the year, over 200 water samples are taken for bacterial analysis. The results demonstrate that the City of Wetaskiwin residents receive high quality drinking water that meets or exceeds federal and provincial standards.

Is there lead in the drinking system?
The drinking water leaving the City of Wetaskiwin Water Treatment Plant and in the distribution system is virtually lead free. However, lead may be present in household tap water due to its presence in the service connection or in household plumbing systems that contain lead, including solder and brass fittings.

How does lead get into our water?
Lead can get in water from water-mains, service lines, and household plumbing parts that contain lead (e.g., pipes, solder, fixtures). It enters drinking water as a result of corrosion over a long period of time. The most common source of lead is from lead pipes used to deliver water to homes built before 1950, as the lead from older service connections and plumbing can leach into tap water. Leaching can happen when water flows through older lead service connections or plumbing, particularly if they are corroding, or through brass fittings that may have high lead content. The most common sources are:

- Lead-based solder used to join copper pipe, faucets made of brass and chrome-plated brass, and in some cases, pipes made of lead that connect a home to the water main (service lines).
- Lead paint and the contaminated dust and soil it generates are the leading source of lead exposure in older housing.
- Lead has historically been used as a component of paint, piping, solder, brass, and as a gasoline additive.

Does the age of my home affect the level of lead in drinking water?
Older homes (generally ones built before 1950) are more likely to have lead parts. Many homes constructed in the early 1950s still utilized lead water service lines. Both lead and copper piping were used up until this time when copper water service lines became the standard in the plumbing industry.

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How can I tell if I have a lead service pipe?
Many homes built before the early 1950s used 5/8 inch diameter lead piping in their construction. Here are the steps to check if your home has lead piping:

1. Locate the emergency water shut-off valve or water meter (usually found in the basement).
2. Check the colour of the pipe coming out of the ground
3. Lead is grey.
    a. It does not echo if you gently strike it
    b. It scratches easily
    c. It leaves metallic marks when you rub the scratched area against paper

Does Alberta have a drinking-water quality standard for lead?
Yes. Alberta follows the Canadian Drinking Water Quality Guidelines. The maximum acceptable concentration for lead in drinking water to protect public health is 10 micrograms per litre (0.010 mg/L or 10 µg/L).

How can I tell if my water contains lead in excess of the maximum acceptable concentration in the Guidelines for Canadian Drinking Water?
Lead dissolved in water cannot be seen, and has no taste or smell. Laboratory analysis is necessary to determine lead levels in your water.

Is lead in my drinking water a health concern?
The health risks of high levels of lead in tap water are low for most of the population, but are of concern to pregnant women and children under 6 years of age. Lead in drinking water poses a potential health threat only to unborn babies and children six years of age and younger. Young children have the highest risk for health effects because they're still developing and they absorb lead easier than adults. Pregnant women can pass lead in their blood to their unborn babies. It is also important for breastfeeding women to lower lead exposure as much as they can.

Why is lead in drinking water of concern for children and pregnant women?
Lead in drinking water is considered a low health risk, especially compared to other environmental sources. However, children six years of age or younger are developing quickly, and the volume of water they consume compared to their body size could lead to elevated blood lead levels. Young children also absorb lead more easily than older children and adults. Babies who have formula or juice prepared with tap water are at risk of being exposed to high lead levels because the water used makes up 40 to 60 per cent of a baby's intake. The water that older children and adults drink only makes up 10 to 20 per cent of their intake. Pregnant women can pass lead in their blood to their baby during pregnancy. Lead levels for pregnant women should be kept as low as possible.

What if my child has been drinking water from the tap and we have lead service lines? Should I be concerned?
The major sources of lead exposure for children have decreased significantly over the years because of the elimination of lead in gasoline, paint and solder in tin cans. The current level of lead found in our drinking water is a minor contributor to overall lead intake and does not constitute an immediate concern. Parents are advised to discuss specific health concerns with their physicians.

Do breastfeeding moms need to use filtered water if they have lead service pipes? Breastfeeding is always the best choice for babies and lead transfer from breast milk is minimal. If you are breastfeeding and your home has lead service pipes and the level of lead in the water is below drinking water guidelines, you do not need to use filtered water. However, if you're breastfeeding and your home has lead service pipes and confirmed high levels of lead in the tap water, do not use tap water without a water filtration device. Filtration devices must meet the National Sanitation Foundation 053 guideline (NSF-053), American National Standards Institute (ANSI), Underwriters Laboratories (UL), or Water Quality Association (and Canadian chapter CWAQ) certification to remove lead.

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What should households with older children and non-pregnant adults do if they have lead service connections?
Older children and adults are at very low risk of adverse health effects from lead in drinking water. Health risks are generally associated with long-term exposure to lead from other environmental sources. Nevertheless, concerned homeowners with homes built in or before 1950 can have their water tested for lead levels.

How can I get my water tested?
You cannot see, smell or taste lead in water. Testing at the tap is the only way to determine the lead levels in your home. To arrange for testing, please contact the City of Wetaskiwin at 780-361-4436 to arrange to sample your water at a time that is convenient for you.

What should I do if I live in a house with a lead service connection?
Lead service connections are only of concern in homes where pregnant women and/or children six years of age or younger reside. For non-pregnant adults and children older than six years of age, lead in drinking water is a minimal risk. In homes where lead levels in drinking water do not exceed the acceptable limit, it may be that no further action is required.

While lead in drinking water poses a minimal health risk, pregnant women and parents or guardians of children six years of age and younger living in older homes can further reduce the health risk by:

- Installing and ensuring proper maintenance of an approved filtering device;
- Using cold, flushed water for drinking and preparing food; and
- Avoiding hot tap water for cooking and drinking as hot water may contain higher concentrations of lead.

How can you limit your exposure to lead?
If you are concerned about lead in your drinking water, take the following preventive steps to further limit possible exposure:

- Flush standing water in pipes each morning by first flushing the toilet, washing your hands or letting the water run for five minutes or until it is cold to the touch. Flushing clears water from the plumbing and home service line to ensure the drinking water comes from the main service line.
- Use cold water for drinking and cooking. Hot water dissolves more lead from plumbing. Boiling water DOES NOT remove lead.
- Some home water treatment devices remove lead, but not all do. Before buying, check the various models and their specifications.

What about drinking water consumed in public facilities?
Lead service connections were not used in the development of public facilities. Until 1960, only service connections from water mains to households and housing complexes of eight units or less were made of lead.

I lived in an older home for years before moving. Should I be worried about the lead I may have consumed in the tap water in my old home?
Lead levels in blood decline after the source of the lead has been removed. So if you grew up in a house with high lead levels in the water supply but do not live there now it is unlikely you have elevated levels of lead in your body.

If my water tests higher for lead than the national standard, what should I do?
If test results indicate the water has 10 or more micrograms per litre (0.010 mg/L or 10 ug/L) of lead present, pregnant women, infants and children under six must not drink the tap water without a water filtration device. In older homes where the water test indicates that lead levels in the drinking water exceed the guidelines, the following is recommended:

- Run or flush the drinking water tap for five minutes before use, especially when the water has been sitting in the pipes for longer than six hours.
- Use cold water for drinking and cooking
- Use ready-to-use infant formula

- Install a water filtration device. Water filtration devices must meet the National Sanitation Foundation 053 guideline (NSF-053), American National Standards Institute (ANSI), Underwriters Laboratories (UL) or Water Quality Association (and Canadian chapter CWAQ) certification for removing lead.
- If you're pregnant or have children younger than 6 years old, see your doctor for a follow-up and blood lead level testing. Take a copy of your water test results.

Do I need a blood test?
Individuals in high risk groups (i.e., pregnant women, infants, children under six years of age) will be referred to their physician for blood lead level testing. Please take a copy of your water test results to your physician to assist them in making an informed decision regarding the need for blood testing.

Who is responsible for the lead pipes?
The *Municipal Government Act* makes the residential property owner responsible for the water service connection on their property as well as the plumbing in their home. Typically, lead service connections are found in older homes built before the early 1950s. The City of Wetaskiwin is only responsible for the service connection pipes between the property line and the water main in the street.

Who will pay to replace lead pipes?
The section of service pipe between the water main and the curb stop is owned by the municipality / water utility. The municipality / water utility is responsible for the costs associated with this portion of the line.

The section between the curb stop and the house is owned by the homeowner. The homeowner is responsible for costs associated with this portion of the line. Homeowners can work with their municipality / water utility to undertake the replacement project.

If I have lead service lines, can I use the water for bathing, cleaning dishes and washing clothes?
Yes, for any age group, activities such as bathing, cleaning dishes and washing clothes will not cause undue exposure to lead, regardless of the water lead level. Lead in water isn't easily absorbed through the skin or mucous membranes.

Where do I go for more information?
For more information about your water service lines, call your water utility provider.

For information on drinking water quality in Alberta, call Alberta Environment and Parks toll free at 1-877-944-0313 or visit their website at http://aep.alberta.ca/.

To find out more about the lead service pipe testing program, please call the City of Wetaskiwin at 780-361-4436.