

December 2014

### ***Arsenic and manganese in private well water***

#### **What are arsenic and manganese?**

Arsenic and manganese are naturally occurring elements found in the earth's crust. These elements are often found in groundwater naturally.

#### **If arsenic and manganese are naturally occurring, do I need to be concerned?**

There are established guidelines for many naturally occurring elements in drinking water, including arsenic and manganese. These guidelines recommend the optimal levels to be included in drinking water that will be consumed over a lifetime.

#### **I have a private well within the affected areas and have been consuming the water. Am I going to get sick?**

The levels of naturally occurring arsenic and manganese that have been detected in the private well water samples tested to date do not pose any immediate risks to health. Long-term consumption – over many decades or a lifetime – of elevated levels of these two elements can be associated with health effects.

#### **What are the health effects associated with long-term consumption of arsenic at levels higher than recommended guidelines?**

Long-term consumption (over many decades or a lifetime) of arsenic at levels that exceed drinking water guidelines has been associated with increased incidences of certain cancers, including lung, liver and bladder. Skin, digestive, cardiac/circulatory issues and decreased production of blood cells are also known long-term risks of consumption (over many decades or a lifetime) of water containing higher than recommended levels of arsenic.

#### **What are the health effects associated with long-term consumption of manganese at levels higher than recommended guidelines?**

Long-term consumption (over many years or decades/a lifetime) of manganese at levels that exceed drinking water guidelines has been linked to issues with the nervous system and associated with a syndrome with effects similar to Parkinson's disease.

#### **I have a private well but I am not inside the areas you have outlined. Can I have my well water tested?**

Alberta Health Services (AHS) is only providing one-time, scheduled, free testing to residents with private well water supplies located in areas east of Range Road 30, south of Twp Road 544, north of Twp Road 502 and west of Range Road 250 (with the exception of those residing in Lac Ste. Anne County). However, AHS and Alberta Health recommend that all Albertans who use water from a private well regularly test their water for heavy metals (every three to five years) to ensure safe consumption. These tests can be completed through an accredited lab at a cost.

**I live within the affected areas but do not own the property. Can I still submit a sample for testing?**

The registered owner of the property/water well will need to submit the water sample in order for it to be eligible for free testing. If you are renting/residing on the property and are not the registered owner, please contact the owner of the property and advise them of this issue and the opportunity for this one-time testing.

**What do I do if my private well water test does show higher than recommended levels of arsenic and manganese?**

If your test results indicate higher than recommended levels of arsenic and/or manganese, you will receive information, by mail, outlining recommended actions/options for water treatment. If you require further information, you can contact the Environmental Public Health Office in Spruce Grove at: 780-342-1330.

**If my test results do NOT indicate levels of arsenic and manganese that exceed guidelines, can I drink my water safely or do I need to test my water again?**

If your test results do not indicate higher than recommended levels of arsenic and/or manganese levels, your water is safe to consume without any additional treatment. AHS and Alberta Health always recommend that residents have private well water tested for heavy metals every three to five years to ensure safe consumption. This would be a routine process to undertake as a private well owner/user.

**I have questions about my test results. Who do I call?**

If you require further information now, or have questions about your results after you receive them, please contact the Spruce Grove Public Health Office at: 780-342-1330.

**How do I know if my water comes from a municipal supply?**

If you have water transported from another location or you are billed for water usage, your water comes from a municipal supply.

**I live within the affected areas but my drinking water comes from a municipal supply. Am I at risk?**

No. Water from municipal supplies within the affected areas is not impacted by this issue. Only private well water within the affected areas could be impacted by this issue.