

Acknowledgement:

This Fact Sheet is one of a series developed by an Interagency Committee with representatives from Saskatchewan Ministry of Health, Regional Health Authorities, Saskatchewan Watershed Authority, Saskatchewan Ministry of Environment, Saskatchewan Ministry of Agriculture, Agriculture and Agri-Food Canada – PFRA and Health Canada.

Responsibility for interpretation of the content of this fact sheet rests with the user. Information in this fact sheet is provided solely for the user's information and, while thought to be accurate, is provided strictly as is and with out warranty of any kind, either express or implied. The Province of Saskatchewan hereby disclaims any liability or responsibility for any injury or damage resulting from the use, directly or indirectly, of the information contained herein.



Iron Bacteria

(For Private Water and Health Regulated Public Water Supplies)

What are Iron Bacteria?

Iron bacteria are small living organisms that naturally occur in soil, surface water, and groundwater. Iron bacteria combine iron (or manganese), present in water with oxygen and can form large masses of an orange-brown slime. Iron and sulphur bacteria can also exist naturally in groundwater, iron bacteria being the more common, as iron is more abundant in groundwater. Bacteria can be found everywhere in nature.

How Does Iron Bacteria Get Into Water?

Iron is a very common element in our soils. In general, wherever there is oxygen, water, and iron there is potential for iron bacteria to develop.

How Does Iron Bacteria Affect My Health?

Iron bacteria normally do not pose a health threat. If there are complaints, it is often considered to be aesthetic.

Other Considerations

Iron bacteria can create problems such as undesirable colour, stains or deposits, which will stain plumbing and laundry. Many people will complain of unpleasant tastes and odours such as stale or "old water". Water with high levels of iron bacteria is often described as having a "cucumber," "sewage," "rotten vegetation," or "musty," odour. These odours are more noticeable when the water has not been run for several hours.

Iron bacteria can also restrict water flow in distribution lines and plug water treatment equipment.

The problems listed above are typical of iron bacteria. However, high levels of sulphate, hydrogen sulphide, or manganese may also cause these or similar problems.

How Can I Remove Iron Bacteria From My Drinking Water?

The best treatment for an iron bacteria problem is prevention such as routine shock chlorination of the well (See high level and low level well disinfection fact sheets). Analyzing soils for iron content before exposing it or using it as fill can reduce the development of iron bacteria. In home water treat system that are appropriate for iron removal may help to reduce iron bacteria growth in home plumbing systems.

Unfortunately, once present, iron bacteria problems are difficult, if not impossible to correct. Since iron bacteria are not harmful, sometimes the only feasible thing that people can do is simply to accept it for the natural occurrence it is.

What Is The Standard For Iron Bacteria In Drinking Water?

Health Canada has not established a limit but acknowledges that iron bacteria cause aesthetic effects in drinking water.

How Can I Find Out If There Is Iron Bacteria In My Water?

Most water quality testing laboratories can determine iron bacteria for a water supply. For information on sampling instructions and containers, you should contact an accredited laboratory.

Need More Information?

Health Regulated Public Water Supply

For more information on this fact sheet and/or other water quality issues relating to health regulated public water supplies contact your local health region public health inspector.

Private Water Supply

For more information on how iron bacteria impact on human health contact your local health region office. For information on how iron bacteria impact agricultural operations contact Saskatchewan Ministry of Agriculture through your Agricultural Business Centre or the Agricultural Knowledge Centre at 1-866-457-2377 or on the internet (<http://www.agriculture.gov.sk.ca/AKC>).

<p>Government of Saskatchewan Water Information website www.SaskH2O.ca</p>	<p>Water Inquiry Line Questions about water? Call 1-866-SASK H2O (1-866-727-5420) to be referred to proper agency.</p>
<p>Saskatchewan Ministry of Health http://www.health.gov.sk.ca/environmental-health</p> <p>Regional Health Offices Saskatoon: Saskatoon (306) 655-4605 Sunrise: Yorkton (306) 786-0600 Kelsey Trail: Melfort (306) 752-6310 Five Hills: Moose Jaw (306) 691-1500 Sun Country: Weyburn (306) 842-8618 Heartland: Rosetown (306) 882-6413 Prairie North: North Battleford (306) 446-6400 Prince Albert Parkland: Prince Albert (306) 765-6600 Cypress: Swift Current (306) 778-5280 Regina Qu'Appelle: Regina (306) 766-7755 Mamawetan Churchill River: La Ronge (306) 425-8512 Keewatin Yatthe: Buffalo Narrows (306) 235-5811</p>	<p>Health Canada Website: http://www.hc-sc.gc.ca First Nation and Inuit Health – Saskatchewan Phone: (306) 780-6561//FAX (306) 780-7733</p> <p>First Nations Environmental Health Providers <i>BTC Indian Health Services Inc.</i> Phone: (306) 937-6700 <i>File Hills Qu'Appelle Tribal Council Health Services</i> Phone: (306) 332-8241 <i>Meadow Lake Tribal Council, Health and Social Development</i> Phone: (306) 236-8261 <i>Northern Inter-Tribal Health Authority</i> Phone: (306) 765-2421 <i>Prince Albert Grand Council, Health and Social Development</i> Phone: (306) 953-7248 <i>Saskatoon Tribal Council, Health, and Family Services Inc.</i> Phone: (306) 956-6100</p>
<p>Saskatchewan Ministry of Health Saskatchewan Disease Control Laboratory, Regina General Inquiry 1-866-450-0000 Phone: (306) 798-2125 // Fax (306) 798-0071 Website: http://www.health.gov.sk.ca/lab</p>	<p>Saskatchewan Ministry of Agriculture General Inquiry 1-866-457-2377 Agricultural Operations Regina (306) 787-4680 Irrigation Development Outlook (306) 867-5500 Website: www.agriculture.gov.sk.ca</p>
<p>Saskatchewan Watershed Authority, Head Office, Moose Jaw (306) 694-3900 Website: www.swa.ca <i>Regional Offices:</i> http://www.swa.ca/AboutUs/Contact.asp?type=Offices</p>	<p>Prairie Farm Rehabilitation Administration (PFRA) - Agriculture and Agri-Food Canada Website http://www.agr.gc.ca/pfra/water/intro_e.htm <i>Regional Offices:</i> http://www.agr.gc.ca/pfra/sask_e.htm</p>
<p>Sask Water Corporation Head Office, Moose Jaw Customer Service 1-888-230-1111 Website: http://www.saskwater.com</p>	<p>Saskatchewan Ministry of Environment Toll-Free 1-800-567-4224 or (306) 953-3750 Spill Emergency Toll-Free 1-800-667-7525 Website: http://www.environment.gov.sk.ca</p>