

## Acknowledgement:

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

Responsibility for interpretation of the content of this fact sheet rests with the user. Information in this fact sheet is provided solely for the users 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.



# Coliform Bacteria

(For Private Water and Health Regulated Public Water Supplies)

## What Are Coliform Bacteria?

Coliform bacteria can result from the environment naturally or be fecal in origin. Not all coliform bacteria are harmful. However, if found in water, their presence suggests other disease causing organisms may exist in your drinking water supply. For example, fecal coliform are found in the intestinal tract of warm-blooded animals such as humans, dogs, and deer. Coliform bacteria have been selected as the most widely used indicator for the bacterial quality of drinking water. The presence of these bacteria in drinking water may signify the well (source) is defective, or that there may be problems with the water treatment, or the water distribution system.

## How Do Coliform Bacteria Get Into Water?

It is common to have contamination when maintenance has been performed on the water supply system. Faulty in-ground sewage disposal systems may also be the source of contamination. Coliforms from animal waste can enter directly into water supplies but can also migrate through the soil and contaminate the groundwater. This process is accelerated during spring flooding or heavy rainfall.

## How Do Coliform Bacteria Affect My Health?

Coliform bacteria are used as an indicator to suggest the water is not safe to consume. Their presence is of concern in that disease-causing organisms, such as E. coli, fecal coliforms or parasites, may be present. The symptoms from disease causing organisms may include diarrhea, nausea, vomiting, cramps or other gastro intestinal distress and in severe cases can be fatal. Most susceptible are infants, elderly and others with compromised immune systems.

## How Can I Remove Coliform Bacteria From My Drinking Water?

Water containing coliform bacteria should not be consumed. As a precautionary measure, until additional testing confirms the safety of the water or otherwise advised by the authorities, the water should be boiled, at a rolling boil, for one minute prior to consumption. Bacteria and other harmful disease causing microorganisms can be reduced or eliminated from water by disinfection (chlorine, ozone or ultraviolet light treatment) and distillation. In some cases filtration in addition to disinfection will be required. Treatment systems should carry the National Sanitation Foundation certification for microbiological removal (NSF Standard 55 Class A for disinfection units, NSF Standard 62 for distillation units).

For groundwater sources, appropriate well maintenance may help to minimize problems with coliform bacteria. Refer to procedures described in the *High Level Well Disinfection Fact Sheet* or *Low Level Well Disinfection Fact Sheet*.

## Health Regulated Public Water Supplies

A positive water sample test result, for the presence of coliforms, in a Health regulated public water supply may result in the local health region issuing an advisory or emergency boil water order for the supply. If issued, the advisory/order will remain in effect until all required corrective action is completed and subsequent water test results indicate that the water supply is safe.

## What Is The Standard For Coliform Bacteria In Drinking Water?

The Saskatchewan Drinking Water Quality Standards and Health Canada's Guidelines for Canadian Drinking Water Quality state that the maximum acceptable concentration (MAC) for coliform in drinking water is zero organisms detectable per 100 mL.

## How Can I Find Out If There Are Coliforms In My Water?

For information on sampling instructions and containers, you should contact an accredited laboratory. If using the Saskatchewan Disease Control Laboratory, sample containers are available from the laboratory, local Health Regions, or rural municipalities.

Before consuming water from a new well, disinfect and flush the entire system (see *High Level Chlorine Well Disinfection Fact Sheet*) and then sample for coliform bacteria. In general, all private systems should be analysed frequently, at least once or twice a year, or whenever there is reason to believe that the water supply may have become contaminated (e.g. flooding). Health regulated public water supplies must sample as required by the health region.

## 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 coliforms impacts on human health contact your local health region office. For information on how coliforms impacts 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><b>Government of Saskatchewan</b> Water Information website <a href="http://www.SaskH2O.ca">www.SaskH2O.ca</a></p>	<p><b>Water Inquiry Line</b> Questions about water? Call 1-866-SASK H2O (1-866-727-5420) to be referred to proper agency.</p>
<p><b>Saskatchewan Ministry of Health</b> <a href="http://www.health.gov.sk.ca/environmental-health">http://www.health.gov.sk.ca/environmental-health</a> <b>Regional Health Offices</b> 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><b>Saskatchewan Watershed Authority,</b> Head Office, Moose Jaw (306) 694-3900 Website: <a href="http://www.swa.ca">www.swa.ca</a> <i>Regional Offices:</i> <a href="http://www.swa.ca/AboutUs/Contact.asp?type=Offices">http://www.swa.ca/AboutUs/Contact.asp?type=Offices</a></p> <p><b>Sask Water Corporation</b> Head Office, Moose Jaw Customer Service 1-888-230-1111 Website: <a href="http://www.saskwater.com">http://www.saskwater.com</a></p> <p><b>Prairie Farm Rehabilitation Administration (PFRA)</b> - Agriculture and Agri-Food Canada Website <a href="http://www.agr.gc.ca/pfra/water/intro_e.htm">http://www.agr.gc.ca/pfra/water/intro_e.htm</a> <i>Regional Offices:</i> <a href="http://www.agr.gc.ca/pfra/sask_e.htm">http://www.agr.gc.ca/pfra/sask_e.htm</a></p>
<p><b>Saskatchewan Ministry of Health</b> <b>Saskatchewan Disease Control Laboratory, Regina</b> General Inquiry 1-866-450-0000 Phone: (306) 798-2125 // Fax (306) 798-0071 Website: <a href="http://www.health.gov.sk.ca/lab">http://www.health.gov.sk.ca/lab</a></p>	<p><b>Saskatchewan Ministry of Agriculture</b> General Inquiry 1-866-457-2377 Agricultural Operations Regina (306) 787-4680 Irrigation Development Outlook (306) 867-5500 Website: <a href="http://www.agriculture.gov.sk.ca">www.agriculture.gov.sk.ca</a></p>
<p><b>Health Canada</b> First Nation and Inuit Health Branch, Regina (306) 780-6561 Website: <a href="http://www.hc-sc.gc.ca">http://www.hc-sc.gc.ca</a></p>	<p><b>Saskatchewan Ministry of Environment</b> Toll-Free 1-800-567-4224 Spill Emergency Toll-Free 1-800-667-7525 Website: <a href="http://www.environment.gov.sk.ca">http://www.environment.gov.sk.ca</a></p>