# SaskH<sub>2</sub>

# **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.

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Oct/09



# **Turbidity**

(For Private Water and Health Regulated Public Water Supplies)

# What Is Turbidity?

There is some danger and confusion regarding turbidity and the colour of some drinking water. Turbidity is the lack of clarity or brilliance in water. Some waters may have a great deal of color -- it may even be dark brown -- and still be clear and without suspended matter. When water has a large amount of suspended particles, it is seen as unappealing. While it may be safe to drink, it can be aesthetically unpleasing.

# **How Does Turbidity Get Into Water?**

While turbidity may be due to a single foreign substance in water, chances are it is probably due to a mixture of several or many substances. These particles may range in size from fine materials to coarse grains of sand that remain in suspension only as long as the water is agitated. Turbidity may also increase due to the presence of organisms and chemicals.

# **How Does Turbidity Affect My Health?**

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated illnesses.

#### Other Considerations

It is very important to measure the turbidity of domestic water supplies, as these supplies often undergo some type of water treatment, which can be affected by turbidity. For example, during the rainy season when mud and silt are washed into rivers and streams, high turbidity can quickly block filters and stop them from working effectively. High turbidity may also fill tanks and pipes with mud and silt, and can damage valves and taps. Even quite low turbidity can prevent chlorine from killing organisms in the water efficiently. When the source of turbidity is organic material, some disinfection (chlorination, ozone) may produce harmful byproducts.

#### How Can I Lower Turbidity In My Drinking Water?

Some treatment systems involving sedimentation, coagulation and gravel filtration are designed to remove turbidity. It is important for operators of both large and small treatment systems to know how well these systems are working and maintain them. Measuring the turbidity of the water before and after each part of the system can assist the operator to show where maintenance or cleaning is needed.

# What Is The Standard For Turbidity In Drinking Water?

Current standards are based on treatment techniques. If you have a concern with turbidity in your drinking water, you should also consider testing for bacteria..

#### How Can I Find Out If There Is Turbidity In My Water?

Most water quality testing laboratories can determine how much parameter is present in a water supply. 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.

### **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 turbidity impacts on human health contact your local health region office. For information on how turbidity 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).

Government of Saskatchewan	Water Inquiry Line
Water Information website	Questions about water? Call 1-866-SASK H2O
www.SaskH20.ca	(1-866-727-5420) to be referred to proper agency.
Saskatchewan Ministry of Health	Health Canada Website: http://www.hc-sc.gc.ca
http://www.health.gov.sk.ca/environmental-health	First Nation and Inuit Health – Saskatchewan
	Phone: (306) 780-6561//FAX (306) 780-7733
Regional Health Offices	First Nations Environmental Health Providers
Saskatoon: Saskatoon (306) 655-4605	BTC Indian Health Services Inc.
Sunrise: Yorkton (306) 786-0600	Phone: (306) 937-6700
Kelsey Trail: Melfort (306) 752-6310	File Hills Qu'Appelle Tribal Council Health Services
Five Hills: Moose Jaw (306) 691-1500	Phone: (306) 332-8241
Sun Country: Weyburn (306) 842-8618	Meadow Lake Tribal Council, Health and Social
Heartland: Rosetown (306) 882-6413	Development Phone: (306) 236-8261
Prairie North: North Battleford (306) 446-6400	Northern Inter-Tribal Health Authority
Prince Albert Parkland: Prince Albert (306) 765-6600	Phone: (306) 765-2421
Cypress: Swift Current (306) 778-5280	Prince Albert Grand Council, Health and Social
Regina Qu'Appelle: Regina (306) 766-7755	Development Phone: (306) 953-7248
Mamawetan Churchill River: La Ronge (306) 425-8512	Saskatoon Tribal Council, Health, and Family
Keewatin Yatthe: Buffalo Narrows (306) 235-5811	Services Inc. Phone: (306) 956-6100
Saskatchewan Ministry of Health	Saskatchewan Ministry of Agriculture
Saskatchewan Disease Control Laboratory, Regina	General Inquiry 1-866-457-2377
General Inquiry 1-866-450-0000	Agricultural Operations Regina (306) 787-4680
Phone: (306) 798-2125 // Fax (306) 798-0071	Irrigation Development Outlook (306) 867-5500
Website: http://www.health.gov.sk.ca/lab	Website: www.agriculture.gov.sk.ca
Saskatchewan Watershed Authority,	Prairie Farm Rehabilitation Administration
Head Office, Moose Jaw (306) 694-3900	(PFRA) - Agriculture and Agri-Food Canada
Website: www.swa.ca	Website <a href="http://www.agr.gc.ca/pfra/water/intro_e.htm">http://www.agr.gc.ca/pfra/water/intro_e.htm</a>
Regional Offices:	Regional Offices:
http://www.swa.ca/AboutUs/Contact.asp?type=Offices	http://www.agr.gc.ca/pfra/sask_e.htm
Sask Water Corporation	Saskatchewan Ministry of Environment
Head Office, Moose Jaw	Toll-Free 1-800-567-4224 or (306) 953-3750
Customer Service 1-888-230-1111	Spill Emergency Toll-Free 1-800-667-7525
Website: http://www.saskwater.com	Website: <a href="http://www.environment.gov.sk.ca">http://www.environment.gov.sk.ca</a>