

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 - AESB and Health Canada.

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Mar/10



Government of
Saskatchewan

Cadmium

(For Private Water and Health Regulated Public Water Supplies)

What Is Cadmium?

Cadmium is a metal that exists in natural deposits of zinc, lead and copper ores, as well as shale, coal and other fossil fuels.

Cadmium does not corrode easily. It is used for metal plating and coating operations including pipes, machinery and baking enamels. It is also used in some batteries and certain dyes, pesticides, and plastics.

How Does Cadmium Get Into Water?

Natural deposits can serve as sources to ground and surface waters. However, cadmium can be released to water from the corrosion of some galvanized plumbing and water main pipe materials. It may also enter water through industrial discharges; waste disposal and spills; and leaching from hazardous waste sites or certain fertilizers.

How Does Cadmium Affect My Health?

Consuming cadmium for a few days or weeks can cause nausea, vomiting, and diarrhea. People may also suffer muscle cramps, salivation, sensory disturbances, liver injury, convulsions, shock and kidney failure. Drinking water containing cadmium for years to decades at high levels may cause kidney disease, liver damage, fragile bones and blood damage, hypertension, and decrease immune functions. Over the long term there may also be an increased risk for prostate cancer.

Water containing cadmium can safely be used for bathing, hand washing and dishwashing as long as no water is ingested.

How Can I Remove Cadmium From My Drinking Water?

If the source of cadmium is corrosion of cadmium-containing plumbing materials, consider the following options:

- Remove the source of cadmium (e.g. replace the plumbing).
- Flush faucets until the water runs as cold as possible before using the water or drinking, cooking, or teeth brushing.
- Avoid using a hot tap water for drinking, cooking, or making baby formula.
- Adjust pH so water is less corrosive (contact a qualified professional for assistance).
- Use a treatment system to reduce cadmium levels.
- Use alternative water sources, such as bottled water or another well that has been tested and found to be safe.

Cadmium may be removed from water by distillation, ion exchange, reverse osmosis, lime softening, and coagulation/filtration. Please see the fact sheet on selecting a water treatment system.

What Is The Standard For Cadmium In Drinking Water?

The Health Canada's Guidelines for Canadian Drinking Water Quality and Saskatchewan Environment's Drinking Water Quality Standards and Objectives have established a maximum acceptable concentration (MAC) of 0.005 mg/L.

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

Most water quality testing laboratories can determine how much cadmium 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 cadmium impacts on human health contact your local health region office. For information on how cadmium impacts agricultural operations contact Saskatchewan Ministry of Agriculture through your Regional Office, the Agricultural Knowledge Centre at 1-866-457-2377 or on the internet (<http://www.agriculture.gov.sk.ca>).

<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 Regional Health Offices Saskatoon: Saskatoon (306) 655-4620 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) 882-6474a 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>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>Sask Water Corporation Head Office, Moose Jaw Customer Service 1-888-230-1111 Website: http://www.saskwater.com</p> <p>Agri-Environment Services Branch * Agriculture and Agri-Food Canada Website http://www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1187362338955&lang <i>Regional Office:</i> http://www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1254830746884&lang=eng</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>Health Canada First Nation and Inuit Health Branch, Regina (306) 780-5434 // FAX (306) 780-5107 Website: http://www.hc-sc.gc.ca</p>	<p>Saskatchewan Ministry of Environment Toll-Free 1-800-567-4224 Spill Emergency Toll-Free 1-800-667-7525 Website: http://www.environment.gov.sk.ca</p>

* Agri-Environment Services Branch (AESB) is an integration of three existing components: Prairie Farm Rehabilitation Administration (PFRA), National Land and Water Information Service (NLWIS) and Agri-Environmental Policy Bureau (AEPB).