



# SODIUM IN DRINKING WATER

*The Corporation of the Town of St. Marys – Environmental Services*

The following information has been prepared to assist customers of the St. Marys Water Supply in understanding the composition of the water supplied by the Town regarding Sodium. For more information on water quality, please contact the Town of St. Marys at 519-284-2340 ext. 209. Additionally, you can contact the Huron Perth Health Unit at 1-888-221-2133 for health related issues and water intake.

## **BACKGROUND INFORMATION ON SODIUM:**

Sodium is a mineral that can be found in a variety of foods and drinking water supplies. Sodium (Na) is one of the chemical elements found in table salt (known as sodium chloride). Sodium is not considered a toxic element. The human body needs sodium in order to maintain blood pressure, control fluid levels and for normal nerve and muscle function. Sodium occurs naturally in all foods, and sodium levels vary considerably for different types of food. Food processing can add significant amounts of sodium.

Analysis of sodium testing conducted over the past 20 years in St. Marys, has shown no measureable increase. As such, no direct correlation can be made between road salt usage / well intrusion and our elevated sodium levels. Naturally occurring sodium is common in our geographical area.

The amount of sodium present in water supplied by the Town of St. Marys is not a health concern for most people. A small percentage of the population may have been advised to follow severe sodium-restricted diets, such as patients with heart failure, kidney failure, or severe hypertension. Sodium levels in water may be something they need to consider.

## **GUIDELINES FOR CANADIAN DRINKING WATER QUALITY:**

The Ontario Drinking Water Systems Regulation 170/03 under the Safe Drinking Water Act 2002 requires reporting to the local Medical Officer of Health when sodium levels in public drinking water supplies exceed 20 mg/L. At this point, the local Medical Officer of Health informs local physicians so that doctors may advise their patients accordingly, who are on sodium-restricted diets.

The aesthetic objective for sodium in drinking water is  $\leq 200$  mg/L. The taste of drinking water is generally considered offensive at sodium concentrations above the aesthetic objective. Therefore, our bodies provide a natural “built-in” restriction on the amount you will drink.

## **AVERAGE DAILY INTAKE:**

Most people consume more sodium than they need. While the average daily intake of sodium for healthy adults is about 3,100mg, this is well above the 2,300mg that is considered the maximum amount an adult should consume in a day. The main source of sodium in most diets comes from processed foods, such as snack foods, fast foods, processed meats, soups, crackers, and condiments.

Sodium content of some common foods and beverages (approximate levels):

Approximate Sodium Levels of some Common Foods and Beverages			
Item	Sodium Level	Item	Sodium Level
Table Salt (1 tsp.)	2350 mg	Baked Beans (1 cup)	790 mg
Bagel, Plain	379 mg	Cheese, Processed (1 slice)	250 mg
Breakfast Cereal (1 cup)	300 mg	Lunch Meats (1 oz.)	350 mg
Tomato Juice, Processed (1 cup)	691 mg	Bottled Water (varies)	36 mg

(Reference: Canada Nutrient File, 2005)

### **SODIUM AND WATER SOFTENERS:**

When water is softened at home, it is done by passing the water through a bed of ion-exchange media that replaces hardness minerals (calcium and magnesium) with sodium chloride (salt) or potassium (sodium chloride being the most common). While this reduces the hardness of your water, it can possibly add significant amounts of sodium at your tap. It is recommended that a separate, un-softened supply be used for drinking and cooking purposes. Further, softened water should not be given to infants and not be used in preparing infant beverages, including formula and juice.

### **SODIUM REMOVAL IN THE HOME:**

Neither pitcher-type filtration units nor the boiling of water will remove sodium from the water. Some home owners, especially those sensitive to sodium, have chosen to use reverse osmosis or distillation devices to remove or reduce the sodium and other unwanted minerals from their water supply.

When purchasing a treatment device, look for one that has been certified by an organization accredited by the Standards Council of Canada (SCC). In addition, the treatment device should meet the NSF/ANSI Standard 62 on drinking water distillation systems or Standard 58 on reverse osmosis systems.

Always be wary of door-to-door sales people who try to sell you a water purification device. These people do not represent the town. If someone approaches you to do a free drinking water test, keep in mind that this could be a tactic to sell a very "over-priced" water purification device. While selling water treatment devices is not a crime, improper testing of drinking water can be. If you are interested in purchasing a water treatment device, many local, reputable companies can assist you.

### **SODIUM RESTRICTED DIETS:**

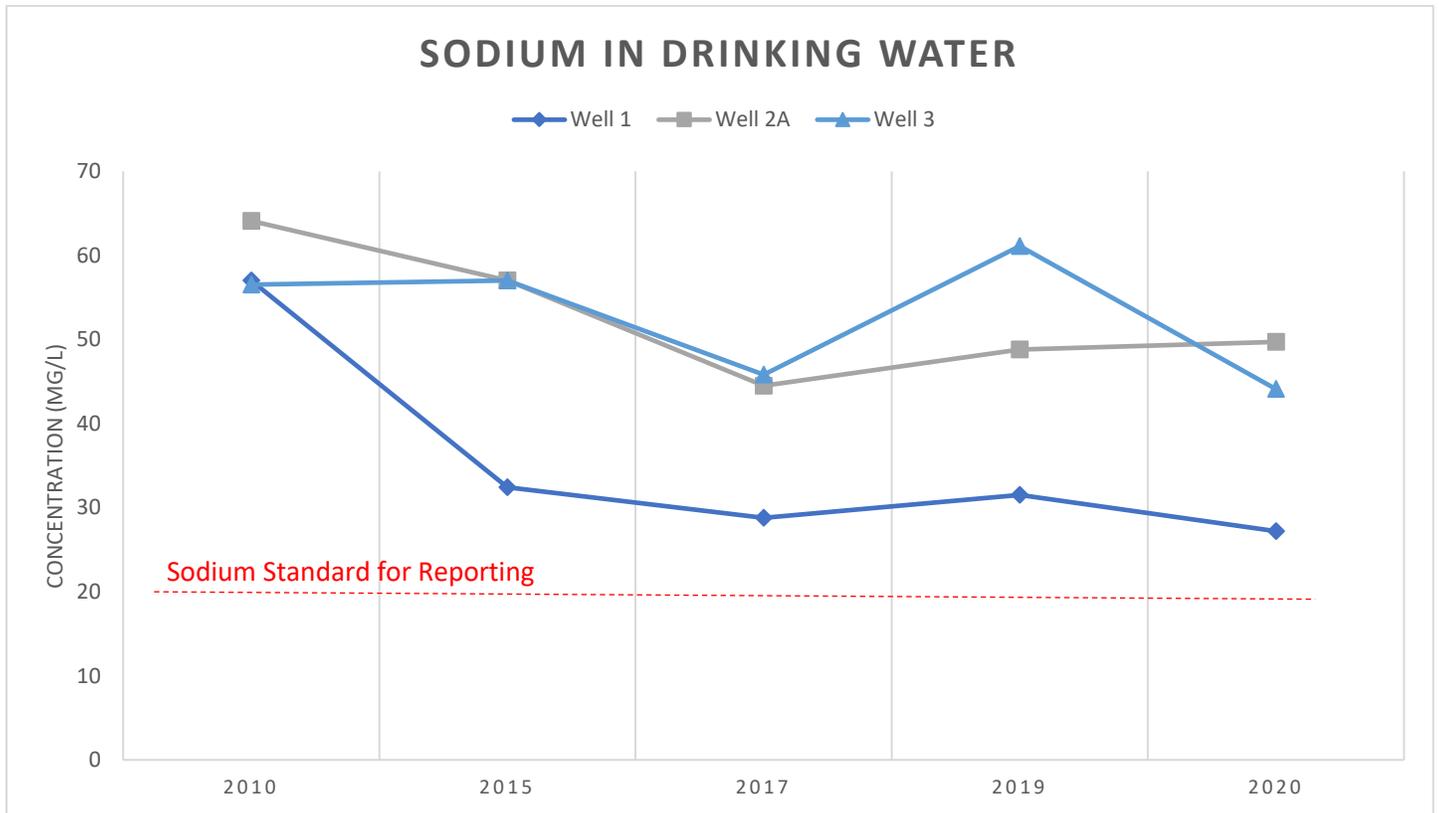
For healthy adults, sodium levels in drinking water does not pose a risk. Even for individuals on very strict sodium restricted diets of 500 mg/day, two litres of water would only account for a minor portion of their daily allotment of sodium.

If residents are concerned about the level of sodium in the Town's water supply, and their overall daily sodium intake, please contact the Town at 519-284-2340 ext. 209 to further discuss sodium levels and water consumption.

## HISTORICAL SODIUM LEVELS IN ST. MARYS:

Sodium levels are monitored across all three water supply wells for the Town of St. Marys and can have varying results. For this reason, the level of sodium that may be present within the municipal water supply could vary based on which well site is in operation.

The following is a graphical representation of sodium levels within the Town's drinking water from 2010 to 2020.



[Information Sources:](#)

Dietary Reference Intakes from Water, Potassium, Sodium, Chloride and Sulfate, The National Academies, 2004.  
Canadian Nutrient File, Health Canada, 2005., Health Canada, Canadian Water Quality Association, U.S.E.P.A.

For more information on water quality within the Town of St. Marys, please contact the Environmental Services Supervisor for the Town at 519-284-2340 ext. 209