CITY OF DANBURY
DEPARTMENT OF PUBLIC UTILITIES
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DANBURY, CT 06810

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November 22, 2019

Residents and Customers
City of Danbury Water System
Danbury, CT 06810

RE: Information about Manganese in Danbury Drinking Water

Dear Customer:

We are aware that some customers have noticed a slight discoloration in their water and apologize for any inconvenience or concern this may have caused. The discoloration is due to higher than normal manganese levels at the West Lake Reservoir for this time of year. Manganese is a naturally occurring mineral, which can change the color of drinking water. The recent change in color has not impacted the safety of your drinking water, and your drinking water is safe to drink.

While the levels are high enough to cause a change in color in the treated drinking water, they are well below the health advisory level of manganese in drinking water set by the U.S. Environmental Protection Agency (EPA) and the CT Department of Public Health (DPH). The City of Danbury's water supply continues to meet all primary guidelines set forth for drinking water standards.

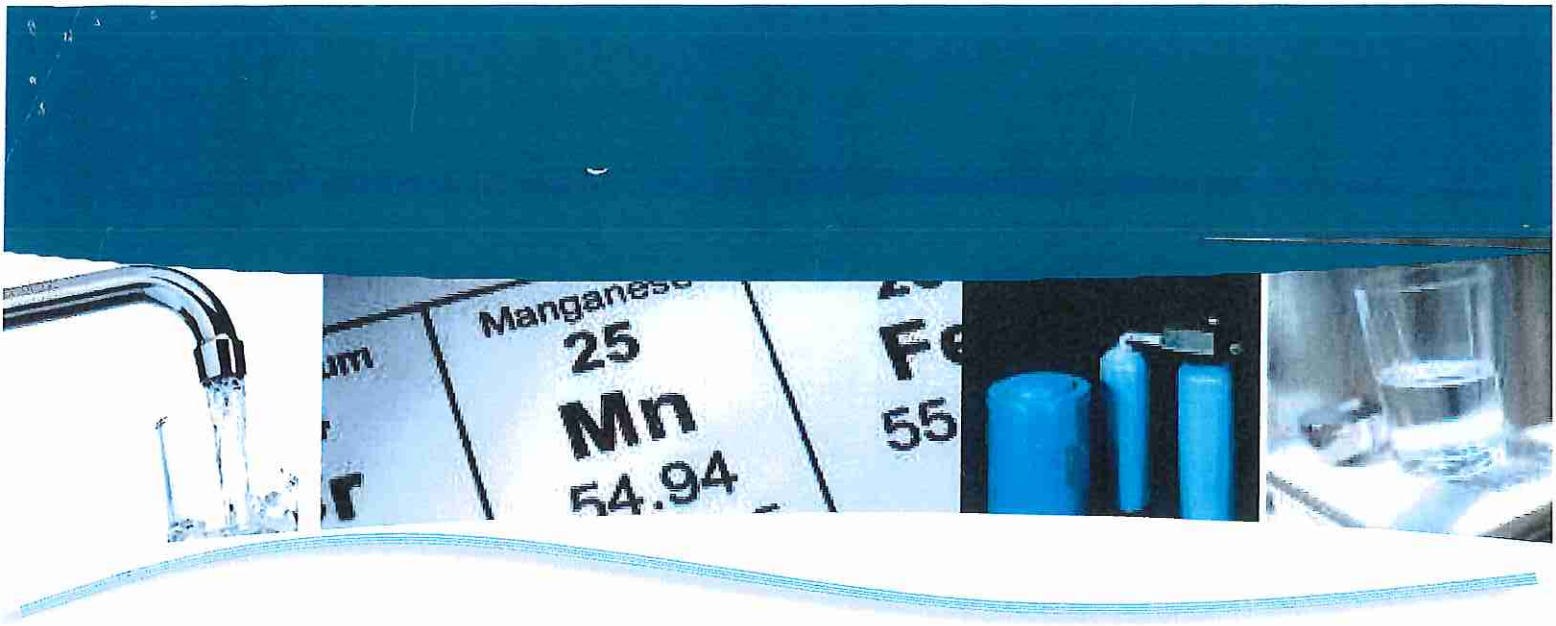
While Danbury does not have a history of experiencing high manganese levels in our drinking water, under the right conditions, manganese can be released from the reservoir's lake bottom into the water that is then used by our water treatment plants. We will continue to monitor manganese levels in our water supply. Additionally, we are reviewing treatment techniques that can be used to help better remove manganese from Danbury's drinking water.

Again, we apologize for any inconvenience this may have caused you. Providing quality water is our highest priority and we will continue to work at addressing any problems or concerns until they are fully resolved. Attached for your reference is a fact sheet from CT DPH that provides additional general information about Manganese in Drinking Water. If you have any further questions we encourage you to call the Danbury Water Department (DWD) office during the week at 203-797-4539 (from 7:30 AM to 4:00 PM) or the DWD West Lake Water Treatment Plant at 203-797-4615 (staffed 24 hours/day 7 days/week).

Sincerely,

David M. Day, P.E.
Superintendent

CC: Antonio Iadarola, P.E., Public Works Director / City Engineer
Lisa Morrissey, MPH, Director of Health and Human Services
David Scalzo, Chief of Water Quality and Technical Services



Manganese in Drinking Water

Introduction

Manganese is a mineral that naturally occurs in rocks and soil and is a normal constituent of the human diet. It exists in well water in CT as a naturally occurring groundwater mineral, but may also be present due to underground pollution sources. Manganese may become noticeable in tap water at concentrations greater than 0.05 milligrams per liter of water (mg/l) by imparting a color, odor, or taste to the water. However, health effects from manganese are not a concern until concentrations are approximately 6 times higher.

The CT Department of Public Health (DPH) recently set a drinking water Action Level (AL) for manganese of 0.3 mg/l to ensure protection against manganese toxicity. This AL is consistent with the United States Environmental Protection Agency's (US EPA) lifetime health advisory level for manganese in drinking water. The CT AL provides guidance for prudent avoidance of manganese concentrations of potential health concern.

This fact sheet is intended to help individuals who have manganese in their water understand the health risks and the precautions that can be exercised while the water supply is being upgraded to reduce the manganese levels.

What Health Effects can Manganese Cause?

Manganese is necessary for good health; it aids digestion, increases bone strength and strengthens immune system function. As such, too little or too much intake of manganese may be harmful. Breathing high concentrations of manganese dust and fumes (e.g., welding) over the course of years has been associated with toxicity to the nervous system in workers, producing a syndrome that resembles Parkinson's Disease. It is not clear if drinking water with high concentrations of manganese can also cause harm to the nervous system.

Is Manganese of Particular Concern for Young Children?

Yes, and especially so for bottle-fed infants. Infant formulas contain manganese, and if prepared with water that also contains manganese, the infant may get a higher amount than the rest of the family. In addition, infants appear to absorb more manganese than older people but excrete less. This adds up to a greater potential for exposure in the very young. Since manganese's effects on the developing nervous system have not been adequately studied, it is especially important for pregnant women and young children to have drinking water that is below the manganese Action Level of 0.3 mg/L.

How Do I know if I have Manganese in My Water?

You may suspect that manganese is in your water if the water is discolored (brownish-red), causes staining of plumbing fixtures (faucets, sinks) or clothing, or has an off-taste or odor. If this is the case, you should contact your public water provider to have your water tested by a state-certified laboratory for manganese.

How Else Can I be exposed to Manganese?

Manganese exposure can come from air, food, and water. Manganese is a common trace element found in foods (e.g., nuts, beans, grains and teas). Manganese is also added to some dietary supplements. People usually get enough manganese through their diet alone. When infant formulas are prepared with water that contains high concentrations of manganese (above 0.3 mg/L), the infant may get more manganese than their bodies need. Bathing and showering in manganese-containing water does not increase your exposure since manganese is poorly absorbed across the skin and doesn't get into the air from water.

How Can I Decrease My Family's Exposure to Manganese?

If the water concentration is greater than 0.3 mg/l then bottled water should be used for water consumption by pregnant mothers and children under the age of one. Bottled water should also be used for making infant formula. Point of use treatment such as Reverse Osmosis (RO) can be considered while the public water provider is working on a permanent solution to the elevated manganese levels.

Are There Federal Standards for Manganese in Drinking Water?

There are no enforceable federal drinking water standards for manganese. The US Environmental Protection Agency has a secondary standard of 0.05 mg/l, which is intended to let the public know that manganese can affect water quality at this level. This secondary standard is not health-based and is not enforceable. In the absence of a federal standard, CT DPH has adopted the US EPA's lifetime advisory level of 0.3 mg/L as our Action Level.

Where Can I get More Information?

For Health Questions: CT Dept. of Public Health Environmental Health Section Environmental & Occupational Health Assessment Program (860) 509-7740

For Technical Questions: CT Dept. of Public Health – Drinking Water Section at 860-509-7333