

2009 WATER QUALITY REPORT FOR SIRWA'S Creston Source Area

This report contains important information regarding the water quality in our water system. The source of our water is surface water. Our surface water is purchased from Creston City Water Works who draws from Three Mile Lake and Twelve Mile Lake.

Our water quality testing shows the following results:

| CONTAMINANT | MCLG | MCL | DETECTED LEVEL | DATE SAMPLED | RANGE OF DETECTION | VIOLATION | SOURCE |
|--|----------------|----------|--------------------|-------------------------|-----------------------------------|-----------|---|
| Chlorine (ppm) | MRDL G =4.0 | MRDL=4.0 | 2.1 | RAA | 0.79-2.9 | No | Water additive used to control microbes |
| Copper (ppm) | 1.3 | AL=1.3 | 0.56 | 6/1/2006 – 9/30/2008 | ND-1.7 1 sample exceeded AL | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead (ppb) | 0 | AL=15 | 3 | 6/1/2006 – 9/30/2008 | ND-4 | No | Corrosion of household plumbing systems; erosion of natural deposits |
| TTHM (ppb) [Total trihalomethanes] | N/A | 80 | 62 | RAA | 43-94 | No | By-products of drinking water disinfection |
| TTHM (ppb) [Total trihalomethanes] IDSE Monitoring | N/A | 80 | | 2009 | 43-98 | No | By-products of drinking water disinfection |
| Haloacetic Acids (HAA5) (ppb) IDSE Monitoring | N/A | 60 | 55 | 2009 | 34-98 | No | By-products of drinking water disinfection |
| Haloacetic Acids (HAA5) (ppb) | N/A | 60 | | RAA | 31-97 | No | By-products of drinking water disinfection |
| Turbidity (NTU) | N/A | TT | 1.53 | Daily | 0.057-1.53 | Yes | Soil runoff |
| Fluoride (ppm) | 4 | 4 | 1.10 | 2009 | 1.01-1.17 | No | Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Nitrate [as N] (ppm) | 10 | 10 | 1.0 | 6/29/2009 | NA | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Atrazine (ppb) | 3 | 3 | 0.80 | 2009 | ND-1 | No | Runoff from herbicide used on row crops |
| Di (2-ethylhexyl)phthalate (ppb) | 0 | 6 | 0.80 | 4/14/2009 | ND-3 | No | Discharge from rubber and chemical factories |
| Sodium (ppm) | N/A | N/A | 16 | 4/14/2009 | NA | No | Erosion of natural deposits; Added to water during treatment process |
| Chlorine and Chloramines (ppm) | MRDLG =4 | MRDL=4.0 | 2.8 | RAA | 1.4-3.3 | No | Water additive used to control microbes |
| Chlorine dioxide (ppb) | MRDLG =800 | MRDL=800 | 360 | 2009 | 40-360 | No | Water additive used to control microbes |
| Chlorite (ppm) | 0.8 | 1.0 | 0.64 | 2009 | 0.19-0.64 | No | By-product of drinking water disinfection |
| Total Organic Carbon (TOC) (ppm) | N/A | TT | Removed RAA 43% | 2009 | 33%-76% Removed | No | Naturally present in the environment |

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

DEFINITIONS

- Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- Maximum Contaminant Level Goal (MCLG) -- The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- ppb -- parts per billion.
- ppm -- parts per million.
- N/A – Not applicable
- ND -- Not detected
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- RAA- Running Annual Average

- NTU- Nephelometric Turbidity Units
- IDSE- Initial Distribution System Evaluation sampling

GENERAL INFORMATION

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water posed a health risk. More information about contaminants or potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. SIRWA is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

CONTAMINANT VIOLATIONS

Total Coliform. Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

Turbidity. 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 headaches.

| Violation Type | Contaminant | Begin Date | End Date |
|---|-------------|------------|-----------|
| Single Combined Filter Effluent (IESWTR) | Turbidity | 1/01/2009 | 1/31/2009 |
| Monthly Combined Filter Effluent (IESWTR) | Turbidity | 1/01/2009 | 1/01/2009 |

Other Violations:

In January 2009 we received the following violations:

- Single Combined Filter Effluent (IESWTR) for Turbidity 1/01/2009 1/31/2009
- Monthly Combined Filter Effluent (IESWTR) Turbidity 1/01/2009 2/31/2009
- Failure to provide 99.9 percent removal or inactivation of Giardia lamblia cysts
- Failure to provide 99 percent removal of Cryptosporidium

The Creston City Water Works switched from 3 Mile to 12 Mile Reservoir December 15, 2008 for the purpose of repairing a 20 inch raw water transition main from 3 Mile to the treatment plant that was undermined with floods of June 2008. Our coagulation operation was not successful with the raw water being drawn out of 12 Mile. This caused the clarification blanket to lift and go on top of the filters and plug the filter so that we could not get enough water to filter through, so this forced us to change operations and this allowed an increased amount of turbidity to get through the filters. We exceeded the 1. NTU standard on December 26, 2008, the NTU was 1.39 and on the 29th 1.69, which was the highest reading. We decided that would be better to send lower quality water to the system than no water to the system. The problem continued until January 31, 2009 with a turbidity reading of 1.53 NTU.

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes *cryptosporidium*, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicated the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

OTHER HEALTH INFORMATION

Turbidity is an indicator of treatment filter performance and is regulated as a treatment technique.

Our water utility is making every effort to protect the water system from potential security threats. You, as customers, can also help. If you see any suspicious activity near the water tower, treatment plant, wells or fire hydrants, please contact us at 641-782-5744 or the local police/sheriff department. We appreciate your assistance in protecting the water system.

SOURCE WATER ASSESSMENT INFORMATION

The Creston water supply obtains its water from Three Mile and Twelve Mile Lakes. These lakes were determined to be highly susceptible to contamination because they are surface water supplies. The lakes will be most susceptible to activities such as land use patterns (urban and agricultural), petroleum pipeline, storage tanks, waste handling facilities, and truck accidents on public roadways. The Howard R. Green Company completed evaluation of your source water supply, and information is available from the Creston City Water Works at (641) 782-5817.

CONTACT INFORMATION

For questions regarding this information, please contact Matt Schultz at (641) 782-5744 during the following hours: Monday through Friday 8:00 a.m. to 4:00 p.m. or via e-mail at mschultz@sirwa.org. Decisions regarding the water system are made at the SIRWA board meetings. Please call the office for date and time as they are open to the public.

Este informe contiene informacion muy importante sobre su agua bebar. Traduzcalo o hable con alguien que lo entienda bien.