2009

SMU Spencer Municipal Utilities

# Consumer Confidence Report

Spencer Municipal Utilities is happy to provide you with this Consumer Confidence Report on water quality for the year 2008. SMU believes that providing an abundant supply of safe drinking water is important for the community. This report is designed to educate you about the steps SMU takes to ensure a safe, abundant water supply for your home and business, and to list the contaminants that were detected in SMU's water in 2008.

Only Tap Water Delivers℠

## SMU: Delivering Quality To Your Tap


*The Ocheyedan-Little Sioux aquifer occupies the river valleys of its two namesake rivers.*

**Water Source**

Spencer's water supply comes from wells which tap the Ocheyedan-Little Sioux aquifer. The Ocheyedan-Little Sioux aquifer is considered an "alluvial aquifer", consisting mostly of rocks and gravel left over from glacial deposits. Every aquifer has a degree of susceptibility to contamination because of the characteristics of the aquifer, overlying materials, and human activity. This aquifer has been identified as having a high susceptibility. Susceptibility to contamination generally increases with shallower aquifers, increasing permeability of the aquifer and overlying material, nearby development or agricultural activity, and abandoned or poorly maintained wells. A detailed evaluation of your water source was completed by the Iowa Department of Natural Resources, and is available from this water supply.

To help protect Spencer's ground water supply, SMU, the City of Spencer, and Clay County have implemented a Wellhead Protection Plan that provides guidelines for activities in the area around the wells. A copy of this plan, as well as a groundwater assessment conducted by the Iowa Department of Natural Resources, is available at SMU's office.

**Water Treatment Process**

Ground water from SMU's wells is pumped to the SMU water treatment plant. The water is considered hard, so SMU first aerates and then reduces hardness by adding lime to it. Next, the water flows into a basin where carbon dioxide is added to reduce the water's pH level. After flowing through sand filters to remove any particulate matter, chlorine and fluoride are added. A 1.5 million gallon tank provides water storage on site. From there, the water is pumped to the distribution system, filling the north and south water towers to maintain water pressure.

## Drinking Water and Your Health

Some people may be more vulnerable to contaminants in drinking water than the general population. Persons with compromised immune systems (cancer patients undergoing chemo-therapy, organ transplant patients, 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. The Environmental Protection Agency (EPA) and the Centers for Disease Control (CDC) have guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants that are available from the Safe Drinking Water Hotline.

In order to ensure that tap water is safe to drink, the EPA regulates the amount of certain contaminants in water provided by public water systems. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise shortly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from you health care provider.

Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Any bottled water that is labeled "drinking water" has to meet EPA's drinking water regulations. 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 poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline.

## Health Effects of Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water ins primarily from materials and components associated with service lines and home plumbing. Spencer Municipal Utilities 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.

## Cryptosporidium

Cryptosporidium is a microscopic organism found in rivers and streams that can cause diarrhea, fever, and gastrointestinal symptoms if ingested. It finds its way into the watershed through animal wastes. Cryptosporidium is effectively eliminated by treatment processes that include sedimentation, filtration, and disinfection.

**SMU has never detected cryptosporidium in your water.**

**EPA Safe Drinking Water Hotline:** (800) 426-4791
**Website:** www.epa.gov/OGWDW

# 2008 Water Quality Report

| Substance | Violation? | Highest Level Allowed (MCL) | Highest Detected Level | Utility Range | EPA MCLG (EPA Goal) | Sources of Contaminant |
|---|---|---|---|---|---|---|
| **Inorganic Chemicals** | | | | | | |
| Fluoride[1] (4/10/03) | NO | 4.0 | 0.83 | .83 | 4.0 | Additive to promote strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories |
| Sodium[1] (4/11/06) | NO | n/a | 5.2 | 5.2 | n/a | Erosion of natural deposits; Added to water during treatment process |
| Chlorine[1] | NO | MRDL = 4.0 | 2.34 | 0.3-2.34 | MRDLG=4.0 | Additive used to control microbes |
| **Volatile Organic Contaminants** | | | | | | |
| Total Trihalomethanes[2] (7/21/2008) | NO | 80 | 35 | 0.0-35 | n/a | By-products of drinking water chorlination |
| Total Haloacetic Acids[2] (7/21/2008) | NO | 60 | 6.0 | 0.0-6.0 | n/a | By-products of drinking water disinfection |
| **Synthetic Organic Chemicals** | | | | | | |
| Atrazine[2] (7/5/2006) | NO | 3 | 0.1 | 0.0-0.1 | 3 | Runoff from herbicide used on row crops |
| **Copper and Lead-Regulated At Customer Tap** | | | | | | |
| Substance | Violation? | Action Level | Max. 90% Detection (AL) | Utility Samples | EPA MCLG | Sources of Contaminant |
| Copper[1] 30 samples, 6/1/06 to 9/30/06 | NO | 1.3 | .06 | 0.0-0.08 | n/a | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| Lead (2006)[1] 30 samples, 6/1/06 to 9/30/06 | NO | 15.0 | 0.0 | 0.0-5.0 | n/a | Corrosion of household plumbing systems; Erosion of natural deposits |

[1]-measured in parts per million [2]-measured in parts per billion

**NOTE**: The EPA requires monitoring of over 80 drinking water contaminants. Those listed above are the only contaminants detected in your drinking water. For a complete list, contact Spencer Municipal Utilities.

## Definitions

**Action Level (AL):** The concentration of a contaminant that, if exceeded, triggers a treatment or other requirement that a water system must follow

**Inorganic Chemicals:** Chemical substances of a mineral origin, such as lead and copper

**Maximum Contaminant Level (MCL):** The highest level of a contaminant allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal (MCGL):** The level of a contaminant in drinking water below which there is no known or expected risk to health

**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

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants

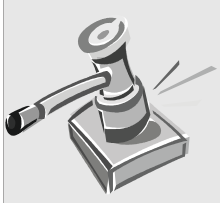
**Microbial Contaminants:** Very small organisms, such as bacteria, algae, plankton, and fungi

**N/A:** Not applicable

**N/D:** Not detected at testing limit

**Organic Contaminants:** Naturally occurring or synthetic substances containing mainly carbon, hydrogen, nitrogen, and oxygen. This includes most pesticides and industrial chemicals

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water



### Public Meeting Information

We encourage customers to attend and participate in the meetings the SMU Board of Trustees. Board meetings are held monthly in our Operations Center Meeting Room. These meetings are open to the public. Meeting dates and times are listed in the Spencer Daily Reporter, and agendas are posted in our office lobby.

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***For more information about this Consumer Confidence Report, call, visit our Customer Service Center, or visit our website!***