2009 ANNUAL DRINKING WATER QUALITY REPORT

City of Storm Lake, Iowa -- Water System

Treatment Plant Operated by Veolia North America Operating Services

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We are pleased to provide you with this year's Annual Drinking Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Where does my water come from?

Your water comes from 11 water wells located in three different aquifers. The Glacial Alluvial aquifer at 80 to 120 feet deep (7), the Dakota Sandstone aquifer at 450 to 500 feet deep (3), and the Jordan aquifer at 1500 feet deep (1). One new well went on in the fall of 2009 to ensure the City's water supply into the future. The well is in the Glacial Alluvial.

Water Treatment Plant Upgrade and Rehabilitation

The water treatment plant was under construction for two years ending in 2004. Treatment capacity was raised from 4.65 Million Gallon per Day to 5.9 MGD. Two new filters were added, as well as a solids contact basin. These additions not only increase capacity, but improve the reliability of the treatment system. This means if one unit is inoperable or down for repair, the remaining units will continue to treat and supply water for commercial and residential use.

A state of the art SCADA (Supervisory Control and Data Acquisition) system was installed to allow better and more efficient monitoring and control of the treatment system.

A new disinfection system was installed to meet EPA rules regarding Disinfection Byproducts, as well as to control nitrite formation in the distribution system. This system will destroy pathogenic bacteria in your drinking water to protect you from disease.

Wellhead Protection

A Wellhead Protection was developed and implemented in 2001 for the purpose of protecting our source water; e.g. groundwater wells, from contamination. The City of Storm Lake worked with VWNA/Storm Lake, concerned citizens, and professionals and developed such a plan.

Potential sources of contamination were identified, and working with IDNR a program can be developed for land use and protection of groundwater at these sites. The Storm Lake City Engineer submitted the plan to IDNR. The plan was accepted and will be further developed as required by needs and regulations. The "Source Water Protection Evaluation" portion of this document was developed by IDNR and is an integral part of the Wellhead Protection Plan. The language used in the "Source Water Protection Evaluation" is a mandatory requirement for this report.

Is my water safe to drink?

We conduct hundreds of water quality tests every year for over 80 different contaminants. In 2001, Nitrites above the MCL were a concern. Within a few weeks of that MCL, Nitrites were under control, and have been below the MCL ever since. There were no exceptions to water quality in 2009.

This means that our drinking water is safe to drink.

What are contaminants in my water?

All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800-426-4791).

How likely are these contaminants to effect me?

MCL's (Maximum Contaminant Levels) are set at very stringent levels. A person would have to drink 2 liters of water everyday at the MCL level for a lifetime to have a one in a million chance of having an adverse health effect.

Do I need to take special precautions?

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 microbiological 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. The City of Storm Lake 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.

How do I get involved?

Our City Council meets the 1st and 3rd Monday of every month at 5:00pm. Please feel free to participate in these meetings.

What period does this report cover?

This report covers from Jan. 1, 2009 to Dec. 31, 2009 (except where noted).

For additional information contact:

City Administration at: 732-8000
VWNA/Storm Lake Water Plant at: 732-8031
e-mail: shane.stewart@veoliawaterna.com

Definitions:

MCLG: Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

MCL: Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

TT: Treatment Technique or a required process intended to reduce the level of a contaminant in drinking water.

ND (Non-Detects): Laboratory analysis indicates that the constituent is not present, or is less than the method detection limit.

Abbreviations:

PPM: Parts per million, one part per million corresponds to one minute in two years, or a single penny in $10,000.

PPB: Parts per billion, one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

PPT: Parts per trillion, one Part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

pCi/L: Picocuries per liter, picocuries per liter is a measure of the radioactivity of water.

Maximum Residual Disinfectant Level (MRDL) – (mandatory language) 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) – (mandatory language) 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.

WATER QUALITY DATA RESULTS						
Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform Bacteria *	N	1 0.81% of samples	percent	0	presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
Inorganic Contaminants						
Copper (2007 testing)	N	<0.02 – 0.994 90^{th} percentile=0.643	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Fluoride (2009 Testing average)	N	1.069	ppm	4.0	4.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (2007 testing)	N	<0.40 – 0.0285 90^{th} percentile =0.00782	ppm	N/A	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Sodium (3/9/2007 testing)	N	80	ppm	N/A	N/A	Erosion of natural deposits; Added to water during treatment process.
Alpha emitters(2000 testing)	N	<1.9	pCi/l	0	15	Erosion of natural deposits
Nitrate [as N] (2007 testing)	N	ND	ppm	10.0	10.0	Conversion from naturally occurring ammonia in the well source water
Nitrate+Nitrite [as N] (2007 testing)	N	ND	ppm	N/A	N/A	Conversion from naturally occurring ammonia in the well source water
Nitrites (2008 testing)	N	ND	ppm	1.0	1.0	Conversion from naturally occurring ammonia in the well source water
TTHM (2009 testing average)	N	ND	ppb	N/A	80	By-product of drinking water disinfection
HAA5 (2009 testing average)	N	ND	ppb	N/A	60	By-product of drinking water disinfection
Total Chlorine (2009 Testing average)	N	3.56	ppm	MRDLG 4.0	MRDL 4.0	Drinking water disinfectant
Ethylbenzene (5/09/06) (SOC)	N	ND	ppb	700	700	Discharge from petroleum refineries
Toluene (5/09/06) (SOC)	N	ND	ppb	1	1	Discharge from petroleum factories
Xylenes (5/09/06) (SOC)	N	ND	ppb	10	10	Discharge from petroleum factories; discharge from chemical factories

One coliform bacteria sample tested positive on February 10, 2009. According to EPA and IDNR rules, a recheck sample was taken and tested for coliform bacteria. This sample tested negative and no further action was necessary.

Nitrite in drinking water at levels above 1 ppm is a health risk for infants of less than six months of age. High nitrite levels in drinking water can cause blue baby syndrome. Nitrite levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

A new disinfection system was installed in 2004 as part of the upgrade and rehabilitation of the water treatment system. This system eliminates ammonia in your drinking water and controls the formation of nitrites. It also allows the facility to meet new disinfection rules that require an annual average of less than 4 ppm of total chlorine in the drinking water. In July, 2008 the City changed from Break Point Chlorination method to Chloramination disinfecting method. The Chloramination method is a blend of chlorine and natural ammonia. Break Point chlorination is a method where all natural ammonia has been removed.

With new controls in place Chloramination will be a longer lasting disinfecting product while ensuring the levels of Total Trihalomethanes and Total Haloacetic Acid (a by product of chlorine) are well below the MCL.

Source Water Protection Evaluation

The Storm Lake water supply obtains part of its water from the Pleistocene Aquifer. The Pleistocene Aquifer was determined to be slightly susceptible to contamination because the characteristics of the aquifer and overlying materials limit the rate at which contaminants can move through the aquifer. Storm Lake's Pleistocene wells will be somewhat susceptible to land-use activities such as gas stations.

The Storm Lake water supply obtains part of its water from the Dakota Aquifer. The Dakota Aquifer was determined to be not susceptible to contamination because the characteristics of the aquifer and overlying materials prevent easy access of contaminants to the aquifer. Storm Lake's Dakota wells will not be susceptible to most contaminant sources except through pathways to the aquifer such as abandoned or poorly maintained wells.

The Storm Lake water supply obtains part of its water from the Cambrian-Ordovician Aquifer. The Cambrian-Ordovician Aquifer was determined to be not susceptible to contamination because the characteristics of the aquifer and overlying materials prevent easy access of contaminants to the aquifer. Storm Lake's Cambrian-Ordovician wells will not be susceptible to most contaminant sources except through pathways to the aquifer such as abandoned or poorly maintained wells.

A detailed evaluation of your source water was completed by the Iowa Department of Natural Resources, and is available from the Storm Lake Water Department at 732-8000 or VWNA/Storm Lake at 732-8031.

~~~~~~~~~~~~ About the Data ~~~~~~~~~~~~~

This report covers the data collected during the 2009 calendar year, except if noted. The State of Iowa requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year.
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