

THE CITY OF

# DUBUQUE

*Masterpiece on the Mississippi*



## 2010 WATER QUALITY REPORT

# Purpose of the Water Quality Report

The City of Dubuque Water Department is proud to present you with our annual water quality report. We are dedicated to producing drinking water that meets or exceeds all state and federal drinking water standards. The purpose of this report is:

- **To provide you with information about your drinking water.**
- **To comply with the United States Environmental Protection Agency (EPA) reporting requirements.**

Through the federal Safe Drinking Water Act (SDWA), the U.S. Environmental Protection Agency (EPA) sets national limits for hundreds of substances in drinking water and also specifies various treatments that water systems must use to remove these substances. Each system continually monitors for these substances and reports to the EPA if the substances are detected in the drinking water. The EPA uses this data to ensure that consumers are receiving clean water and to verify that states are enforcing laws that regulate drinking water.

This publication conforms to the SDWA requirement that water utilities annually provide detailed water quality information to each of their customers. We are committed to providing you with this information about your water supply because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

For more information about this report, or for any questions relating to your drinking water, please contact Bob Green, Water Department Manager, at 563.589.4291 (bgreen@cityofdubuque.org) or Jacqueline Rodriguez, Water Plant Manager, at 563.589.4290 (jrodrigu@cityofdubuque.org).

## Special Health Information

Thanks to the Safe Drinking Water Act, the United States has the safest water supply and distribution system in the world. However, if you have special health requirements, you should know some people may be more vulnerable to contaminants found in drinking water than the general population. Immunocompromised 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 Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 800.426.4791.

## Information Concerning Lead

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 Dubuque Water Department 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 at 800.426.4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

The Dubuque Water Department sampled 31 sites for lead in 2009. The results indicated that one sample exceeded the Action Level. According to EPA regulations, utilities must have 90% of their lead samples below the Action Level. 97% of the samples taken were in compliance with this regulation.

## Water Sources

The Dubuque Water Department obtains water from two groundwater aquifers. The Alluvial aquifer is considered to be highly susceptible to contamination, while the Cambrian-Ordovician aquifer has a low degree of susceptibility to contamination. Every aquifer has a degree of susceptibility to contamination because of the characteristics of the aquifer, overlying materials, and human activity. 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 source water was completed by the Iowa Department of Natural resources, and is available on our website at <http://www.cityofdubuque.org/water> or by e-mail at [jrodrigu@cityofdubuque.org](mailto:jrodrigu@cityofdubuque.org). You may also call 563.589.4291 to obtain a copy of the report.



## Substances Found in Drinking Water

To ensure that tap water is safe to drink, the EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these 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.

Public water systems and water bottlers use a variety of water sources. These sources include rivers, lakes, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, radioactive material (if present), and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

**Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and herbicides**, which may come from sources such as agriculture, urban storm water runoff, and residential uses.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

**Radioactive contaminants**, which can be naturally occurring or be the result of oil and mining activities.

# 2009 Drinking Water Summary

The City of Dubuque Water Department is proud of the high quality of our water supply, which meets or exceeds all state and federal drinking water quality requirements. We are pleased to inform you that Dubuque had no drinking water violations for 2009. The table below lists substances that were detected in our water. Some of these substances have maximum contaminant levels (MCLs) established by the Safe Drinking Water Act. The EPA also requires us to monitor for certain unregulated substances while they consider whether or not to enforce limits on them. Testing is not required for each parameter every year. For more information concerning your drinking water, please contact the Eagle Point Water Treatment Plant by

phone at 563.589.4291, by e-mail at [jrodrigue@cityofdubuque.org](mailto:jrodrigue@cityofdubuque.org) or by mail at 1902 Hawthorne Street, Dubuque, IA 52001.

A violation involving Fecal Coliform and E. coli occurs when a routine and a repeat sample are positive for Total Coliform and Fecal Coliform or E. coli positive. We had one routine sample that was positive for Total Coliform and E. coli, but the repeat sample was negative for both Total Coliform and E. coli, therefore there was no violation.

A violation involving Total Coliform occurs when more than 5% of the monthly samples taken are found to be Total Coliform positive. We had one (1) sample out of 60 that tested positive in the month of July, 2009. This is only 1.7% of the samples taken, therefore there was no violation.

## SUBSTANCES TESTED FOR AT THE TREATMENT PLANT

| SUBSTANCE          | YEAR SAMPLED | UNITS OF MEASURE | MCL        | MCLG        | AMOUNT DETECTED | RANGE (LOW - HIGH) | VIOLATION | TYPICAL SOURCE  |  |  |
|--------------------|--------------|------------------|------------|-------------|-----------------|--------------------|-----------|---|--|--|
| <b>Chlorine</b>    | 2009         | ppm              | MRDL = 4.0 | MRDLG = 4.0 | 1.16            | 0.42 - 2.17        | NO        | Water additive used to control microbes   |  |  |
| <b>Fluoride</b>    | 2009         | ppm              | 4.0        | 4.0         | 1.03            | 0.67 - 1.92        | NO        | Water additive that promotes strong teeth   |  |  |
| <b>Gross Alpha</b> | 2009         | pCi/L            | 15.0       | 0           | 2.4             | 2.4                | NO        | Erosion of natural deposits   |  |  |
| <b>Nitrate</b>     | 2009         | ppm              | 10         | 10          | 0.3             | 0.3                | NO        | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |  |  |
| <b>Sodium</b>      | 2009         | ppm              | N/A        | N/A         | 13.8            | 13.8               | NO        | Erosion of natural deposits   |  |  |

## SUBSTANCES TESTED FOR IN THE DISTRIBUTION SYSTEM

| SUBSTANCE                            | YEAR SAMPLED | UNITS OF MEASURE | MCL/AL  | MCLG | COMPLIANCE      |        | DETECT |        | SAMPLES |        | VIOLATION | TYPICAL SOURCE   |
|--------------------------------------|--------------|------------------|---|------|-----------------|--------|--------|--------|---------|--------|-----------|--|
|                                      |              |                  |   |      | TYPE            | VALUE  | MIN    | MAX    | TOTAL   | EXCEED |           |  |
| <b>Fecal Coliform and E. coli</b>    | 2009         | P/A              | A routine sample and a repeat sample are total coliform positive and one is also fecal coliform or E. coli positive | 0    | TCR             |        | N/A    | N/A    | 5       | 1      | NO        | Human and animal fecal waste   |
| <b>Total Coliform Bacteria</b>       | 2009         | P/A              | Presence of coliform bacteria in >5% of monthly samples   | 0    | TCR             |        | N/A    | N/A    | 720     | 1      | NO        | Naturally present in environment   |
| <b>Chlorine</b>                      | 2009         | ppm              | 4.0   | 4.0  | RAA             | 0.8    | 0.06   | 1.92   | 1992    | 0      | NO        | Water additive used to control microbes  |
| <b>Copper</b>                        | 2009         | ppm              | AL = 1.3  | 1.3  | 90th percentile | 0.0186 | 0      | 0.0335 | 31      | 0      | NO        | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| <b>Lead</b>                          | 2009         | ppb              | AL = 15   | 0    | 90th percentile | 4      | 0      | 22     | 31      | 1      | NO        | Corrosion of household plumbing systems; Erosion of natural deposits                                   |
| <b>Total Trihalomethanes (TTHM)</b>  | 2009         | ppb              | 80  | N/A  | RAA             | 49.4   | 68.0   | 74.8   | 35      | 0      | NO        | By-products of drinking water disinfection   |
| <b>Total Haloacetic Acids (HAA5)</b> | 2009         | ppb              | 60  | N/A  | RAA             | 12.1   | 5.6    | 17.4   | 35      | 0      | NO        | By-products of drinking water disinfection   |

## Table Definitions

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

**Amount Detected:** This column represents an average of sample result data collected during the reporting year

**MGD:** Million Gallons Daily

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water

**Maximum Contaminant Level Goal (MCLG):** 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

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health

**N/A:** Not Applicable

**P/A:** Presence Absence test

**pCi/L:** pico Curies per Liter

**ppb:** Parts per billion (or micrograms per liter)

**ppm:** Parts per million (or milligrams per liter)

**RAA:** Running Annual Average

**Range (Low - High):** This column represents a range of individual sample results, from lowest to highest, that were collected during the reporting year

**TCR:** Total Coliform Rule

## Sustainability

Sustainability is defined by a community's ability to meet the environmental, economic, and social equity needs of today without reducing the ability of future generations to meet their needs.

Sustainable Dubuque is a holistic approach to making our community sustainable. Our model involves a three-part approach that looks at:

- Environmental and Ecological Integrity
- Economic Prosperity
- Social and Cultural Vibrancy

Each of these pieces is important individually and helps contribute to a sustainable community. Find out more about how the model works, contact Cori Burbach, Sustainable Community Coordinator at 563.690.6038 or by e-mail at [cburbach@cityofdubuque.org](mailto:cburbach@cityofdubuque.org).

## Community Participation

The Dubuque City Council meets the first and third Monday of each month in the Council Chambers on the second floor of the Historic Federal Building at 350 West 6th Street.

The meetings begin at 6:30 p.m. and are broadcasted live on CityChannel 8, Dubuque's local government access channel on the Mediacom cable system. It is also streamed on our website at [www.cityofdubuque.org/media](http://www.cityofdubuque.org/media). In the event of a holiday, meetings are held on the following Tuesday.

Please feel free to participate in these meetings or call Bob Green, Water Department Manager, at 563.589.4291 for more information. For additional information, visit the city's website at [www.cityofdubuque.org](http://www.cityofdubuque.org).

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