Annual Water Quality Report

Water testing performed in 2007

City of East Moline
Water Filtration Plant

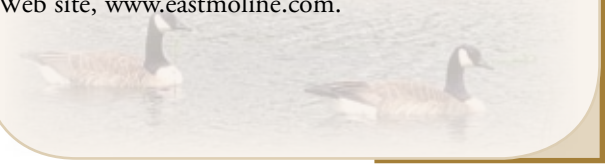
PWS ID#: IL1610250

Meeting the Challenge

We are once again proud to present to you our annual water quality report. This edition covers all testing completed from January 1, 2007 through December 31, 2007. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please share with us your thoughts about the information in this report. After all, well-informed customers are our best allies.

To help keep you informed, reports on plant upgrades (being made to meet the new U.S. EPA regulations and improve capacity) will be posted on the City's Web site, www.eastmoline.com.



Important Health Information

Some people may be more vulnerable to contaminants 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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.

Where Does My Water Come From?

East Moline gets it water for treatment from the Mississippi River, one of the largest river systems in the world. From it the water filtration plant can draw out and treat ten million gallons of water a day.

Our water supply is part of the Mississippi North watershed, which covers an area of roughly 875,000 acres. Most of the watershed is covered by agricultural land, with areas of urban and industrial development. To learn more about our watershed on the Internet, go to the U.S. EPA's Surf Your Watershed Web site at www.epa.gov/surf.

The Illinois EPA considers all surface water sources of community water supplies to be susceptible to potential pollution problems; hence, the reason for mandatory treatment for all surface water supplies in Illinois. Particular concerns for the Upper Mississippi watershed include manufacturing discharge, barge traffic of chemicals, agricultural runoff, and erosion.

Due to the diversity of activities along the Mississippi, we continue to monitor and treat the drinking water for possible contaminants. In an effort to bring East Moline the best-quality drinking water possible, we are also upgrading our equipment and trying new treatment techniques to improve water quality. The City is also involved with a multi-state group of water suppliers working to develop an early warning monitoring network on the Mississippi River. This network would enhance response time by providing water suppliers with early notification of spills on the Mississippi River.

"WELL-INFORMED CUSTOMERS ARE OUR BEST ALLIES."

Community Participation

Decisions concerning your drinking water are made at city council meetings. You are invited to participate in these meetings, held on the first and third Monday of each month beginning at 6:30 p.m. at East Moline City Hall, 915 16th Avenue, East Moline, Illinois.

Water Conservation

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are few tips:

Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.

Turn off the tap when brushing your teeth.

Check every faucet in your home for leaks. Just a slow drip can waste 15 gallons to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.

Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.

Use your water meter to detect hidden leaks. Simply turn off all taps and appliances that use water. Then check the meter after 15 minutes. If the meter moved, you have a leak.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Leath "Chip" Drake, Director of Water Filtration, or Howard Ross, Water Plant Chemist, at (309) 752-1520. You can also e-mail us at emwater@eastmoline.com or reach us through the City of East Moline Web page at www.eastmoline.com. When you e-mail, please be very specific in your subject line, so we can distinguish your request from spam.

Substances That Might Be in Drinking Water

To ensure that tap water is safe to drink, the U.S. 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.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, in some cases, radioactive material, and 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

How Is My Water Treated and Purified?

The City of East Moline uses a conventional treatment process that has multiple steps to ensure your water is safe. The steps are described in more detail below:

Intake/Preliminary Treatment

Water flows from the Mississippi River through a large mesh screen to remove debris. Chemicals are added to improve the taste and odor of the water. The water is then pumped to the water plant for further treatment. This site is continuously monitored at the water plant to ensure proper operation.

Disinfection

River water contains bacteria and viruses. A disinfectant is added to kill off the pathogenic organisms in a process called chloramination, which also hinders the formation of trihalomethanes, or THMs (which are suspected to aid in the formation of some cancers).

Rapid Mixing

A chemical called "alum" is injected into the water. The alum causes the dirt, bacteria, algae, and other particles to bind together and form larger particles in a process called coagulation. This process is enhanced with an in-pipe mixing zone, which allows us to make more efficient use of the alum.

Flocculation Basins

In this process, the water goes through a series of tanks that allow the particles in the water to come together with the chemicals to form larger particles called "floc." The floc becomes heavy enough that it will settle on the bottom of the tank. Large propeller mixers in these basins improve floc formation.

Sedimentation Basins

These basins slow down the water flow. The heavy floc particles settle to the bottom of the basin and then are removed from the tank.

Filtration

After sedimentation, the water looks clean and clear but still contains some particles. Those particles are removed by passing the water through filters made from crushed coal, sand, and gravel. As more and more water goes through the filters, they will eventually become plugged by the particles. Before this happens, we force water up through the filter in a process called backwashing. The water quality from each filter is continuously monitored to ensure optimum operation.

Final Chemical Addition

After filtration, fluoride is added to the water to aid in physical and dental health. We also adjust the pH of the water using sodium hydroxide so that the water will not harm the distribution system or your household's plumbing systems.

Clear Well Storage

Finished water is stored in a 1.5-million-gallon ground storage tank that allows us to be prepared for extra water use, in the event of fires and main breaks.

Distribution System

The water is then pumped to five water towers throughout the city; the towers provide additional storage and maintain water pressure.

Naturally Occurring Bacteria

The simple fact is, bacteria and other microorganisms inhabit our world. They can be found all around us: in our food; on our skin; in our bodies; and, in the air, soil, and water. Some are harmful to us and some are not. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout the year, we tested over 250 samples (20+ samples every month) for coliform bacteria. In that time, none of the samples came back positive for the bacteria. Federal regulations now require that public water that tests positive for coliform bacteria must be further analyzed for fecal coliform bacteria. Fecal coliform are present only in human and animal waste. Because these bacteria can cause illness, it is unacceptable for fecal coliform to be present in water at any concentration. Our tests indicate no fecal coliform is present in our water.

Lead and Drinking Water

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 your home's plumbing. The City of East Moline Water Plant 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 two minutes before using the 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.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	2007	2	2	0.039	0.039–0.039	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloramines (ppm)	2007	[4]	[4]	2.60	2.41–2.73	No	Water additive used to control microbes
Fluoride (ppm)	2007	4	4	0.99	0.88–1.1	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2007	60	NA	20	18–22	No	By-product of drinking water disinfection
Nitrate (ppm)	2007	10	10	2.8	2.8–2.8	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2007	80	NA	20	17–23	No	By-product of drinking water chlorination
Total Organic Carbon (removal ratio)	2007	TT	NA	1.79	1.76–1.83	No	Naturally present in the environment
Turbidity[1] (NTU)	2007	TT	NA	0.18	0.02–0.18	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2007	TT	NA	100%	NA	No	Soil runoff

Tap water samples were collected from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	ACTION LEVEL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2005	1.3	1.3	0.09	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2005	15	0	10	1	No	Corrosion of household plumbing systems; Erosion of natural deposits

STATE REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Manganese[2] (ppb)	2007	150	NA	10	10–10	No	Erosion of naturally occurring deposits
Nickel (ppb)	2007	100	NA	11	11–11	No	Erosion of naturally occurring deposits
Sodium[2] (ppm)	2007	NA	NA	17	17–17	No	Erosion of naturally occurring deposits; Used in water softener regeneration

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Sulfate (ppm)	2007	250	NA	57	57–57	No	Runoff/leaching from natural deposits; Industrial wastes

[1] Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

[2] Manganese and sodium are not currently regulated by the U.S. EPA. However, the state has set MCLs for supplies serving a population of 1,000 or more.

Definitions

AL (Action Level): The concentration of a contaminant that triggers treatment or other required actions by the water supply.

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

removal ratio: A ratio between the percentage of a substance actually removed to the percentage of the substance required to be removed.

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