

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

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CITY OF JOLIET

PUBLIC WORKS & UTILITIES DEPARTMENT
921 E. WASHINGTON STREET
JOLIET, ILLINOIS 60433-1267



SEVENTH ANNUAL DRINKING WATER QUALITY REPORT

Quality

June, 2005
Joliet, Illinois

Dear City of Joliet Water Customer,

I am pleased to present the 7th Annual Drinking Water Quality Report. This report is intended to inform the users of the Joliet Public Water Supply about the quality of the water delivered to you. The City of Joliet values you as a customer and takes pride in delivering a high quality product.

This year, as in years past, your tap water was tested according to USEPA and state drinking water health standards. Our system vigilantly safeguards its groundwater supply and we are working hard to continue providing the best water possible. This report summarizes the quality of water that we provided last year and informs you of the problems we are working on overcoming. Included are details about where your water comes from, what it contains and how it compares to standards set by regulatory agencies. We are committed to providing you with information because informed customers are our best allies.

We test over 2,000 water samples a year, for over 120 substances including microbial organisms, inorganic compounds (including lead and copper), organic compounds (including pesticides and herbicides) and radioactive material. Our capable, experienced staff, as well as state and federal regulators, routinely monitor our operations, compliance and testing protocols to ensure that we deliver safe, high quality drinking water to our customers.

It is anticipated that next years' report will highlight the construction progress on the radium removal treatment plants that are necessary to improve the quality of the water provided to you.

Contact information for the City of Joliet Public Works and Utilities Department and for additional information about your water are provided on the next page of this report. We welcome your comments about the report to help us improve the report in future years.

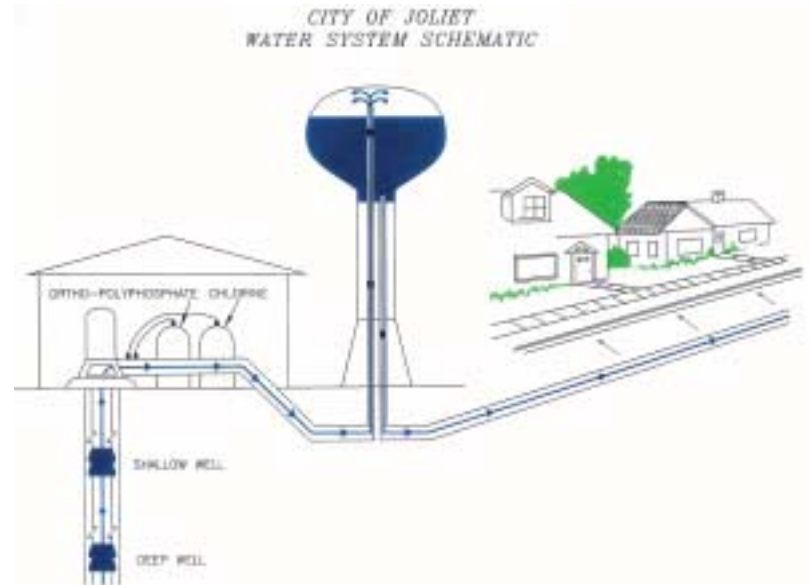
Sincerely,

Dennis L. Duffield, P.E.
Director of Public Works and Utilities,
City of Joliet

WHERE DOES YOUR WATER COME FROM?

The kitchen sink, that's easy! It often feels that simple, but our Joliet water supply has a somewhat more complicated route before we actually use it in our homes and businesses.

The City of Joliet draws its groundwater supply from sixteen deep (bedrock) wells (pumping water from 1,000 feet below the surface) and five shallow (gravel) wells (pumping water from 80 feet below the surface) located throughout the City.



After the raw water is pumped, it is treated with a blended ortho-polyphosphate, which is added for corrosion control, and chlorine is added for disinfection.

This treated water is then transported to various storage tanks throughout Joliet. Through a maze of mains, the water is then pumped to all areas of the city.

When the water comes into your neighborhood via 10-inch or larger diameter mains, it is then distributed to the homes through smaller mains, four to eight inches in diameter. These cast-iron mains are interconnected to form grids throughout the neighborhoods. Gate valves control these mains so that an individual piece of main can be serviced without disturbing the water supply to a large number of customers.

Most customers receive service through copper service pipes that are connected to the main. The copper service then runs from the main to the property line where a curb stop is installed with a box for access. The pipe is installed with sufficient cover to protect against Illinois' freezing winter temperatures. The household plumbing connects from the curb stop to the customer's home. Immediately inside the home, the customer provides a valve on the service line. A meter is installed after this valve and then another valve is installed so that the meter can be removed for maintenance without difficulty.

The City of Joliet has installed meters with remote registers that can be read with a handheld device carried by meter readers. Using this instrument, it becomes unnecessary for the technicians to gain access inside your home.



Technicians at the West Side Wastewater Treatment Plant operate Joliet's computerized water system. Each of the well pumping or storage sites are connected to the storage system through telephone connections. Information concerning pressure, flows and tank levels are transmitted to this plant where the control computer starts and stops booster pumps and wells, as necessary, to maintain desired tank levels.

Levels in storage tanks do not remain constant throughout the day. During the night and early morning hours, the tank levels are at their highest. When usage increases during the day, tank levels decrease. This cycle allows constant pumping rates and minimizes the number of starts and stops on the pumping equipment.

Although the Joliet public water supply primarily serves residents within the corporate limits of the city, some provisions are in effect for shared resources with other municipalities. Joliet provides wholesale service to a portion of the Village of Channahon, which in turn distributes this water to its consumers. Joliet also provides water to the Village of Rockdale and the Southeast Joliet Sanitary District systems during times when their supplies are not able to meet the demands of the users of their systems. An interconnection is also maintained with the Village of Shorewood. This interchangeable connection was last used in the summer of 1998 to provide water from the Shorewood system to the Joliet system.



BILLS

Water Meters are read every other month and billed monthly. Customer's sewer charges for the July through October bills (for usage in June through September) are based on their winter sewer use average. Customer's actual usage is billed outside this four-month period. In addition, customers can now automatically pay their water bills by direct debit from their checking accounts. An informational bill is still sent to the customer so they are able to record the debit to their checking account, but the money is automatically withdrawn alleviating the need to send a check on a monthly basis. For more information regarding billing contact 815-724-3820.

SYSTEM MANAGEMENT

The Joliet Public Water Supply is owned by the City of Joliet. The Mayor and City Council of the City of Joliet establish the policies that control the operations of the water supply. The public is welcome to attend regular City Council meetings on the first and third Tuesday of every month at 6:30 p.m. in the City Council Chambers at the Joliet Municipal Building, 150 West Jefferson Street, Joliet, Illinois.

SOURCE WATER ASSESSMENT

The Safe Drinking Water Act (SDWA) has established the criteria for determining the vulnerability of a source water to potential sources of contamination. The tool used to apply these criteria is the source water assessment. The source water assessments for Illinois have been prepared by the Illinois EPA and the City of Joliet's source water assessment follows:

WHERE CAN YOU GET MORE INFORMATION OR PROVIDE COMMENTS?

For questions about this report contact

CITY OF JOLIET UTILITIES DIVISION

921 E. Washington St.
Joliet, IL 60433
Phone: (815) 724-4230



For questions about your bill call

CUSTOMER SERVICE

150 W. Jefferson St.
Joliet, IL 60432
PHONE: (815) 724-3820



For maintenance questions call

UTILITIES DIVISION

(815) 724-4220
(24 hours)



VISIT OUR WEB PAGE AT

[www.cityofjoliet.info/
click on forresidents/water.htm](http://www.cityofjoliet.info/clickonforresidents/water.htm)



EPA SAFE DRINKING WATER HOTLINE

800-426-4791



"The Illinois EPA considers the gravel wells of this facility to be susceptible to Synthetic Organic Contaminant contamination and does not consider the bedrock wells to be susceptible to Inorganic Contaminant, Synthetic Organic Contaminant or Volatile Organic Contaminant contamination. This determination is based on a number of criteria including: monitoring conducted at the wells, monitoring conducted at the entry point to the distribution system, the available hydrogeologic data on the wells, and the land-use activities in the recharge area of the wells. The Illinois Environmental Protection Act established minimum protection zones for Joliet's active community water supply wells. The sixteen bedrock wells have minimum setback zones of 200 feet and the five gravel wells have minimum setback zones of 400 feet. These minimum protection zones are regulated by the Illinois EPA. In addition to the minimum setback zones, five-year recharge areas have been delineated for the five gravel wells.

To further minimize the risk to the city's water supply, the Illinois EPA recommends that the following activities be assessed. First, the supply may wish to petition Joliet City Council to enact a maximum setback zone ordinance. These ordinances are authorized by the Illinois Environmental Protection Act and allow county and municipal officials the opportunity to provide additional protection up to 1,000 feet from their wells. Second, Joliet should adopt a wellhead protection plan to reduce the risk of contamination to the water supply. Third, a recharge area management program should be developed. Fourth, Joliet should continue to evaluate additional source water protection management options to address the regulatory and non-regulatory land use activities within the community wells' recharge area. Specifically, these management options should include potential effects from non-point sources related to agricultural land uses.

In addition to source water contamination prevention, Joliet should also consider the following efforts to protect the finished water supply. First, a cross connection control ordinance should be adopted and a program designed to implement the ordinance. Cross connections to either the water treatment (for example, at bulk water loading stations) or in the distribution system may negate all source water protection initiatives provided by the supply. Second, contingency-planning documents should be developed to ensure the water department and emergency response staff are aware of and adequately trained to implement emergency procedures. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a water supply will minimize their risk of being without safe and adequate water."

Additional information on our community's water supply source water assessment is available from the Department of Public Works and Utilities (815) 724-4220.



The City of Joliet is currently developing an emergency response plan based on the completed vulnerability assessment to assure emergency preparedness. Other elements of the source water assessment will be evaluated during the preparation of this plan.

WATER QUALITY

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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (1-800-426-4791).

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, individuals with HIV/AIDS or other immune system disorders, some elderly and infants may be particularly at risk to infections. These people should seek advice about drinking



water from their health care providers. EPA/CDC guidelines on the appropriate means to lessen risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive materials and can pick up substances resulting from the presence of animals or from human activity. Possible contaminants consist of:

- 💧 **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 may be naturally occurring or 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 can also come from gas stations, urban stormwater runoff and septic systems;
- 💧 **Radioactive contaminants:** which may be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA prescribes regulations that limit the amount of certain contaminants in water provided by public water supply systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

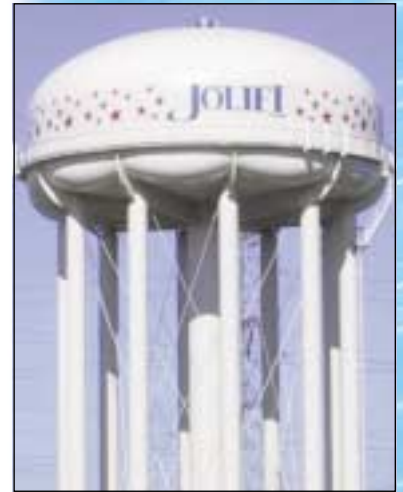
VIOLATIONS

During the 2004 calendar year, the Joliet Public Water Supply exceeded the level for radium and gross alpha activity due to the naturally occurring radium in the deep groundwater supply.

The City of Joliet plans to correct this problem by constructing new treatment works for the existing well supply. The USEPA published standards in December 2000. The project development report was completed in May 2004 and submitted to Illinois EPA for review at that time. Pilot testing, water quality sampling and design proceeded in 2004 and will be completed in 2005. It is anticipated that the project construction will start in 2005 after issuance of the necessary permits. Compliance is anticipated in 2007.

VARIANCES

A variance is state permission not to meet a state regulation. Illinois regulates the construction of water supply facilities by issuing construction permits. Water supplies providing water that is not in compliance with the maximum contaminant levels are placed on restricted status by the Illinois EPA so that the water distribution system is not expanded to serve more users. The City of Joliet Public Water Supply exceeds the maximum contaminant level for radium. The Illinois Pollution Control Board approved a regulation that allowed all water supplies in Illinois that exceed the maximum contaminant level for radionuclides to continue to extend their



water distribution systems provided the systems have entered into a compliance schedule for the construction of the necessary facilities which results in compliance by 2009. The City of Joliet Public Water Supply has proposed a compliance schedule to the Illinois EPA which provides for compliance in 2007. This schedule is currently being reviewed by the Illinois EPA.

Although not officially identified as a variance from restricted status, this regulation has the same effect as a variance.

The following tables identify the contaminants that were detected in the water supply. In addition, to the following contaminants that were detected in the water supply, over 100 contaminants were tested for and were NOT DETECTED in the water supply.

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, if exceeded, triggers treatment or other requirements that a water system must follow.

Abbreviations: **mrem/yr** - millirems per year (used to measure radiation absorbed by the body). **nd** - not detectable at testing limits. **n/a** - not applicable. **ppm** - parts per million or milligrams per liter. **ppb** - parts per billion or micrograms per liter. **pCi/l** - picocuries per liter, used to measure radioactivity.

2004 Regulated Contaminants Detected

Lead and Copper

Date Sampled: 12/31/2002 (Lead & Copper sampling frequency varies based on USEPA regulations)

Definitions:

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

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALG's allow for a margin of safety.

Lead MCLG	Lead Action Level (AL)	Lead 90th Percentile	# Sites Over Lead AL	Copper MCLG	Copper Action Level (AL)	Copper 90th Percentile	# Sites Over Copper AL	Likely Source of Contamination
0	15 ppb	12 ppb	0	1.3 ppm	1.3 ppm	0.75 ppm	0	Corrosion of household plumbing systems; Erosion of natural deposits

Disinfectants & Disinfection By-Products

Disinfection of drinking water is one of the major public health advances in the 20th century. One hundred years ago, typhoid and cholera epidemics were common throughout American cities and disinfection was a major factor in reducing these epidemics. However, the disinfectants themselves can react with naturally-occurring materials in the water to form unintended byproducts which may pose health risks.

Regulated Contaminants

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
TTHMs (Total Trihalomethanes)	8/3/2004	0	Not Applicable	N/A	80	ppb	No	By-product of drinking water chlorination
Total Haloacetic Acids (HAA5)	8/3/2004	0	Not Applicable	N/A	60	ppb	No	By-product of drinking water chlorination
Chlorine		0.1677	0 - 0.1677	MRDLG=4	MRDL=4	ppm		Water additive used to control microbes

INORGANIC CHEMICALS

Inorganic chemicals (IOCs) include salts, metals, minerals and nutrients which can be naturally occurring or which can result from stormwater runoff, wastewater discharges, or farm activities. Because our source of drinking water is groundwater, a significant amount of naturally occurring minerals are dissolved in the water. These dissolved minerals account for the "hardness" of our water which is an average of 300 parts per million as calcium carbonate (or approximately 18 grains per gallon).

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Barium	2/24/2004	0.092	0.026 - 0.092	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cadmium	2/23/2004	3.1	Not Applicable	5	5	ppb	No	Corrosion of galvanized pipes; Erosion of natural deposits; runoff from waste batteries and paints
Fluoride	2/23/2004	1.41	0.89 - 1.41	4	4	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Fertilizer discharge

RADIONUCLIDES

Radionuclides are man-made or natural elements that emit radiation. A picocurie per liter is a unit of radioactivity. A curie is the amount of radioactivity in a gram of radium. A picocurie is one trillionth of a curie.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Combined Uranium	5/31/2004	5	0.3 - 5	0	30	ppb	No	Erosion of natural deposits
Alpha Emitters	5/31/2004	24.4	1.3 - 24.4	0	15	pCi/L	Yes	Erosion of natural deposits
Combined Radium	3/22/2004	24.4	0.3 - 24.4	0	5	pCi/L	Yes	Erosion of natural deposits
Alpha Emitters (Adjusted)	5/31/2004	20.8	1 - 20.8	0	15	pCi/L	No	Erosion of natural deposits

STATE REGULATED CONTAMINANTS

In addition to enforcing the Safe Drinking Water Act, the Illinois EPA enforces state regulations. Iron and manganese stain bathroom fixtures and impart objectionable tastes to water in high concentrations. Sodium in drinking water with a concentration greater than 20 mg/l is of concern to persons on a sodium restricted diet of 500 mg per day or lower. For these reasons, the Illinois EPA has elected to regulate these contaminants.

State Regulated Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Iron This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.	2/23/2004	1000	85 - 1000	N/A	1000	ppb	No	Erosion from naturally occurring deposits
Manganese This contaminant is not currently regulated by USEPA. However, the state has set an MCL for this contaminant for supplies serving a population of 1000 or more.	2/23/2004	44	22 - 44	N/A	150	ppb	No	Erosion from naturally occurring deposits
Sodium There is not a state or federal MCL for sodium. Monitoring is required to provide information to consumers and health officials that are concerned about sodium intake due to dietary precautions. If you are on a sodium-restricted diet, you should consult a physician about this level of sodium in the water.	2/23/2004	92	29 - 92	N/A	N/A	ppm	No	Erosion of naturally occurring deposits; used in water softener regeneration
Zinc	2/23/2004	130	Not Applicable	N/A	5000	ppb	No	Naturally occurring; discharge from metal factories

2004 Violation Summary Table:

This table is intended to assist you in the identification of year 2004 violation(s) that are required to be reported and explained in your CCR. The table does NOT include the required explanation of the noted violation(s) and you will need to provide this information as explained in the CCR Guidance Manual.

Rule or Contaminant	Violation Type	Violation Duration
Gross Alpha Particle Activity, Total	MCL, Average, Without No Exceedance	1/1/2004-12/31/2004
Radium Combined (226, 228)	MCL, Average, Without No. Exceedance	1/1/2004-12/31/2004
Gross Alpha, including RA, EXCLDNG RN & U	Monitoring, Routine, Major	7/1/2004-9/30/2004
Radium Combined (226, 228)	Monitoring Routine, Major	7/1/2004-9/30/2004
Uranium, Combined	Monitoring Routine, Major	7/1/2004-9/30/2004
Public Notice Rule	Public Notice Linked to Violation	9/30/2004-1/18/2005
Iron	Monitoring (State Violation Only)	7/1/2004-9/30/2004
Manganese	Monitoring (State Violation Only)	7/1/2004-9/30/2004
Chlorine	Monitoring Routine (DBP), Minor	12/1/2004-12/31/2004
Coliform, Total (TCR)	Monitoring (TCR), Routine Minor	12/1/2004-12/31/2004

The City of JOLIET has taken the following actions specific to the VIOLATION(S) listed above:

The City of Joliet has taken the following actions specific to the Gross Alpha and Combined Radium violations listed above: The City of Joliet plans to correct this problem by constructing new treatment works for the existing well supply. The project development report was completed in May 2004 and submitted to Illinois EPA for review at that time. Pilot testing water quality sampling and design proceeded in 2004 and will be completed in 2005. It is anticipated that the project construction will start in the Fall of 2005 after issuance of the necessary permits. Compliance is anticipated in 2007. Some people who drink water containing radium 226/228 in excess of the MCL over many years may have an increased risk of getting cancer.

The monitoring violations for Gross Alpha, Radium Combined, and Uranium are the result of laboratory error. The City has entered into contract with a certified laboratory that will manage the quarterly samples so there is no problem in the future.

The Public Notice Rule violation is a result of failing to notify the Illinois EPA in a timely manner. The City has instituted a Response Plan that is acceptable to the agency. Public notice of the actual MCL exceedance is provided monthly to our users.

Iron and Manganese monitoring violations were due to our Jasper Street Well being out of service. The well is in service and samples have been submitted to the agency.

During December 2004, 98 samples were collected and tested for Total Coliforms and Chlorine. With Joliet's increase in population, 100 samples should have been collected. This has been corrected by collecting more samples in succeeding months. Additional sampling sites were added to our list.



**THANK YOU FOR YOUR COOPERATION IN WATERING
YOUR LAWN ACCORDING TO THE AUTHORIZED HOURS.**



**Call JULIE
Before You Dig!
1-800-892-0123**



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