



KEWANEE ANNUAL WATER QUALITY REPORT FOR CALENDAR YEAR 2007 FACILITY IL-0730650

I l l i n o i s

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

This report is intended to provide you with important information about your drinking water and the efforts made by the Kewanee water system to provide safe drinking water. As begun in 2005, Kewanee's water system continues to provide high quality water treated with reverse osmosis filtration. The source of drinking water used by Kewanee is Ground Water. If you have any questions about this report, or questions concerning your water system, please contact, Kip Spear, Public Works Coordinator, 852-2371 extension 231.

SOURCE WATER ASSESSMENT SUMMARY

Based on information obtained in a Well Site Survey published in 1995 by the Illinois EPA, several potential secondary sources are located within 1,000 feet of the wells. The Illinois EPA has determined that the Kewanee Community Water Supply's source water is not susceptible to 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; and available hydrogeologic data on the wells.

Furthermore, in anticipation of the U.S. EPA's proposed Ground Water Rule, the Illinois EPA has determined that the Kewanee Community Water Supply is not vulnerable to viral contamination. This determination is based on the evaluation of the following criteria during the Vulnerability Waiver Process: the community's wells are properly constructed with sound integrity and proper siting conditions; a hydrogeological barrier exists which should prevent pathogen movement; all potential routes and sanitary defects have been mitigated such that the source water is adequately protected; monitoring data did not indicate a history of disease outbreak; and the sanitary survey of the water supply did not indicate a viral contamination threat. Because the community's wells are constructed in a confined aquifer, which should prevent the movement of pathogens into the wells, well hydraulics were not considered to be a significant factor in this determination. Hence, well hydraulics were not evaluated for this system's ground water supply.

SOURCE WATER PROTECTION EFFORTS

The Illinois Environmental Protection Act provides minimum protection zones of 200 feet for your wells. These minimum protection zones are regulated by the Illinois EPA. To further reduce the risk to source water, the water supply has implemented a wellhead protection program which includes the proper abandonment of potential routes of groundwater contamination and correction of sanitary defects at the water treatment facility. This effort resulted in the Kewanee community water supply receiving a special exception permit from the Illinois EPA which allows a partial reduction in monitoring. The outcome of this monitoring reduction has saved the community considerable laboratory analysis costs. As authorized by the Illinois Environmental Protection Act, Kewanee enacted a "maximum setback zone ordinance" for all five wells which allows county and municipal officials the opportunity to provide additional potential source prohibitions up to 1,000 feet from their wells.

To further minimize the risk to the community's groundwater supply, the Illinois EPA recommends that two additional activities be assessed. First, the water supply staff may wish to revisit their contingency planning documents. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a community will minimize their risk of being without safe and adequate water. And secondly, the water supply staff is encouraged to review their cross connection control program to ensure that it remains current and viable. Cross connections to either the water treatment plant (for example, at bulk water loading stations) or in the distribution system may negate all source water protection initiatives provided by the community.

GENERAL INFORMATION

1. 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 USEPA's Safe Drinking Water Hotline (1-800-426-4791).
2. 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).
3. 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 can dissolve naturally-occurring minerals

and, in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or human activity. Contaminants 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 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; and
 - Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.
4. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

VIOLATIONS, VARIANCES, EXCEPTIONS

A. Special Exception Permit Vulnerability Waiver

Due to favorable monitoring history, aquifer type, and an inventory of any potential routes of contamination, on April 28, 2005 Kewanee's water supply received a renewal of the Special Exception Permit granting a Vulnerability Waiver from monitoring for volatile and/or synthetic organic chemicals (VOC's & SOC's). This Special Exception Permit covers the period from January 1, 2005 through December 31, 2007. On October 4, 2006 IEPA revoked the VOC portion of the waiver for TAP 01 due to LUST sites at 400 N. Tremont and 525 N. Main Street. For 4 consecutive quarters, commencing in the fourth quarter of 2006, the City tested TAP 01 for VOC's. Results of these quarterly tests were favorable, and the VOC monitoring requirement for TAP 01 has been changed from one set of samples per quarter to one set of samples in only the fourth quarter of the year, for a three year period.

B. Total Trihalomethanes (TTHM) Maximum Contaminant Level (MCL) Exceeded

RULE OR CONTAMINANT	VIOLATION TYPE	VIOLATION DURATION
Total Trihalomethanes (TTHM) Violation W-2007-00299	MCL Quarterly	4/1/2007 to 6/30/2007 & 7/1/2007 to 9/30/2007
Health Effects: Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.		

Item B is a violation of the drinking water standards. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct the situation. We routinely monitor for drinking water contaminants. Follow-up testing throughout the City showed there was no widespread increase in TTHM levels in the drinking water. The violation occurred at an individual location that had water that was not indicative of the quality of drinking water in the system. The violation lasted for two quarters due to the quarterly averaging method used to determine compliance. Public Notices were previously distributed in July and October of 2007 to make consumers aware of the violation. The City has entered into a compliance commitment agreement with IEPA to establish and implement a systematic flushing program in 2008 to resolve violation W-2007-00299.

C. Reduced Lead/Copper Monitoring

Lead/Copper sampling was conducted at sixty locations in Kewanee in both January and July of 2007. Results of this sampling showed the water to be in compliance with the Lead/Copper Action Levels. This compliance resulted in the IEPA notifying the City it would go on a reduced sampling schedule for 2008 and 2009. This means having to sample at only 30 locations one time in the third quarter of 2008 and one time in the third quarter of 2009. If the 2008 and 2009 sampling does not exceed the action level for lead/copper, monitoring frequency will be reduced to once every three years.

2007 Regulated Contaminants Detected

In addition to the proceeding information sections, included for your review is a table to give you a better picture of the contaminants that were detected in your water.

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

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.

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

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

Maximum Contaminant Level Goal (MCLG): 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.

mg/l: milligrams per litre or parts per million - or one ounce in 7,350 gallons of water.

ug/l: micrograms per litre or parts per billion - or one ounce in 7,350,000 gallons of water.

na: not applicable.

Avg: Regulatory compliance with some MCLs is based on running annual average of monthly samples.

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLG's allow for a margin of safety.

ppm: parts per million; **ppb:** parts per billion; **ppt:** parts per trillion; **pCi/l:** picoCuries per liter (measurement of radioactivity)

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination:
0	1 positive monthly sample	0	Fecal Coliform or E. Coli MCL: A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. Coli positive.	0	No	Naturally present in the environment

Lead and Copper Sample Date January & July 2007

Lead MCLG	Lead Action Level (AL)	Lead 90 th Percentile	#Sites Over Lead AL	Copper MCLG	Copper Action Level (AL)	Copper 90 th Percentile	# Sites Over Copper AL
Jan. — 0 ppb	15 ppb	7 ppb	2	1.3 ppm	1.3 ppm	0.020 ppm	0
July— 0 ppb	15 ppb	11 ppb	4	1.3 ppm	1.3 ppm	0.046 ppm	0
Likely Source of Contamination:		Corrosion of household plumbing systems; Erosion of natural deposits.					

Regulated Contaminants

CONTAMINANT	COLLECTION DATE	HIGHEST LEVEL DETECTED	RANGE OF LEVELS DETECTED	UNIT OF MEASUREMENT	MCLG	MCL	VIOLATION?
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Disinfectants & Disinfection By-Products

Total Haloacetic Acids (HAA5)	2/19, 4/18, 7/27, 10/12	<14	0 – 14	ppb	N/A	60	No
Likely Source of Contamination: By-product of drinking water chlorination.							
THMs(Total Trihalomethanes)	2/19, 4/18, 7/27, 10/12	170	<2 - 170	ppb	N/A	80	Yes
Likely Source of Contamination: By-product of drinking water chlorination. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.							
Chlorine	numerous	2.13	0.12-2.13	ppm	MRDLG=4	MRDL=4	No
Likely Source of Contamination: Water additive used to control microbes.							

Inorganic Contaminants

Barium	4/18/2006	0.004	0.003-0.004	ppm	2	2	No
Likely Source of Contamination: Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.							
Fluoride	4/18/2006	0.97	na	ppm	4	4	No
Likely Source of Contamination: Erosion of natural deposits; Water additive which promotes strong teeth; Fertilizer discharge.							
Nitrate – Nitrite	7/31/2006	0.12	0.071-0.12	ppm	10	10	No
Likely Source of Contamination: Run-off from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.							
Nitrate (As N)	8/7/2007	0.25	0.24-0.25	ppm	10	10	No
Likely Source of Contamination: Run-off from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.							
Selenium	4/18/2006	2	1-2	ppb	50	50	No
Likely Source of Contamination: Discharge from petroleum and metal refineries; Erosion of natural deposits.							

Radioactive Contaminants

Alpha Emitters	7/18/2006	2.9	0-2.9	pCi/L	0	15	No
Likely Source of Contamination: Erosion of natural deposits.							
Alpha Emitters (Adjusted)	1/23/2006	1.13	na	pCi/L	0	15	No
Likely Source of Contamination: Erosion of natural deposits.							
Combined Radium	7/18/2006	1.6	0.488-1.6	pCi/L	0	5	No
Likely Source of Contamination: Erosion of natural deposits.							

Volatile Organic Contaminants

Total Xylenes	12/7/2007	<0.0005	0 - <0.0005	ppm	10	10	No
Likely Source of Contamination: Discharge from petroleum factories; Discharge from chemical factories.							
Ethylbenzene	12/7/2007	<0.5	0 - <0.0005	ppb	700	700	No
Likely Source of Contamination: Discharge from petroleum refineries.							

State Regulated Contaminants

Iron	4/18/2006	34	16-34	ppb	n/a	1000	No
Likely Source of Contamination: Erosion of naturally occurring deposits. 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.							
Sodium	4/18/2006	89	79-89	ppm	n/a	n/a	No
Likely Source of Contamination: Erosion of naturally occurring deposits; used in water softener regeneration. 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 the level of sodium in the water.							

Note: The state requires monitoring of certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of this data may be more than one year old.