



# CITY OF KENT

## Division of Water

### 2011 Drinking Water Consumer Confidence Report

The City of Kent remains committed to providing our residents with a safe and reliable supply of the highest-quality drinking water. We continue to test our water using sophisticated equipment and advanced procedures. We have a current, unconditional license (OH6701812) to operate our water system. The City of Kent water meets all state and federal standards for both appearance and safety. As a matter of record, all City of Kent Water Plant Operators possess Ohio EPA Operator Certification. In addition, two personnel are Ohio EPA certified to do bacteria testing. This annual "Consumer Confidence Report," required by the Safe Drinking Water Act (SDWA), tells you where your water comes from, what our tests show about it, as well as other things you should know about drinking water.

**We are proud to report that the water provided by the City of Kent continues to "meet or exceed" all established water-quality standards.**

We encourage public interest and participation in our community's decisions affecting your drinking water. Regular City Council Meetings are held on the 1st and 3rd Wednesday of each month, at 325 South Depeyster Street, in the Kent Council Chambers at 7:30 p.m.. We invite and welcome the public at these meetings.

#### Overview

The year, 2011 was another productive and busy year at the Kent Water Treatment Plant.

Our biggest accomplishments were in the area of energy savings. As a result of a grant and subsequent

study by the Brewer-Garrett Company, all the lighting at the Kent Water Plant was upgraded and/or replaced with high efficiency and more brilliant lighting. Part of the contract included better management of heating and cooling zones and motion activated sensors for fans and designated lighting. Another big savings was realized by removing electrical services from seven metering pits which now rely on battery operated controls to transmit meter readings.

We continue to search for a high quality water source/backup to supplement our forty year old well field. We have investigated a new well cleaning technique called Bore-Blast, which uses controlled high energy pulsations of inert nitrogen gas to loosen the debris and fines that eventually reduce the output of any pumped aquifer. We are treating our #10 well with this new technique at this writing as we have seen good results in other communities.

#### Water Source Information

The City of Kent is supplied by groundwater, which is pumped from several wells located very close to the water plant. Our well field is known as the "Breakneck Creek Well field", which taps into the "Buried Valley Aquifer". The exception is Well No. 13. It is considered a rock well, as it taps into a formation of water bearing sandstone. The high purity well water is first delivered to your water plant where it is treated. The treatment includes softening, filtration, stabilization (to prevent it from being corrosive), disinfection, and fluoridation, for your benefit.

A Source-Water Assessment has been performed for our area to provide baseline data about the quality of water before it is treated and distributed to customers. This Source-Water Assessment was

completed as a part of the wellhead delineation area and pollution source inventory in our Wellhead Protection Plan. This is important because it identifies the origins of contaminants within our area and indicates the susceptibility of our water system to such contaminants. The aquifers that supply drinking water to the City of Kent's Breakneck Creek Well field, and Well 13 have a high susceptibility to contamination, due to the sensitivity of the aquifer in which the drinking water wells are located, and the existence of several potential contaminant sources within the

protection zone. This does not mean that either well field will become contaminated, only that conditions are such that ground water could be impacted by potential contaminant sources. Future contamination may be avoided by implementing protective measures. The City of Kent has taken some proactive steps to monitor and protect this precious resource. More information is available by contacting the Ohio E.P.A., Northeast District Office, 2110 E. Aurora Road, Twinsburg, Ohio 44087-1969.

## *Water Quality Data*

The following table lists the only drinking water contaminants that were found during or prior to the 2011 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. It is important to understand that the treatment process our water undergoes, makes it far safer than most water supplies anywhere in the world. Unless otherwise noted, the data presented in this table is from testing performed January 1<sup>st</sup> through December 31<sup>st</sup>, 2011. The state 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. Some of the data, though representative of the water quality, is more than one year old.

### **How to Read This Table**

It's easy! Our water is tested to assure that it is safe and healthy. The column marked "Level Found" shows the highest test results during the year. A "Source of Contaminant" shows where this substance usually originates. Footnotes explain important details. Columns headed MCL, AL and MCLG refer to:

**Maximum Contaminant Level or MCL:** 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.

**Maximum Contaminant Level Goal or 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.

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

The data presented in this report is from the most recent testing done in accordance with regulations.

### **Key To Table**

AL = Action Level            MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

MFL = million fibers per liter

pci/l = picocuries per liter (a measure of radioactivity)

ppm = parts per million, or milligrams per liter (mg/l)

ppb = parts per billion, or micrograms per liter (µg/l)

BDL = below detectable limits

**We have performed testing for many different potential contaminants, but only the listed substances were found.** Of those substances that were found, all are below the MCL limit. We also collected 625 samples for bacteriological examination throughout the city during the year of 2011. We are pleased to report that each of these samples was negative (no bacteria present).

Contaminant	Sample Year	Unit	MCL	MCLG	Level Found	Range of Detections	Sources of Contaminants	Violation
<b>Inorganic Contaminants</b> Fluoride	2011	ppm	4	4	0.94	0.84-1.05	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	<b>NO</b>
Lead	2011	ppb	AL = 15	0	<5.0	NA	Corrosion of household plumbing systems.	<b>NO</b>
Zero out of 30 samples was found to have lead levels in excess of the lead action level of 15 ppb.								
Copper	2011	ppb	AL = 1300	0	<50	NA	Corrosion of household plumbing systems.	<b>NO</b>
Zero out of 30 samples was found to have copper levels in excess of the copper action level of 1300 ppb.								
Nitrate	2011	ppm	10	10	<0.10	NA	Runoff from fertilizer use; Erosion of natural deposits.	<b>NO</b>
<b>Volatile Organic Contaminants</b> Total Trihalomethanes TTHMs	2011	ppb	80	0	52.4	37.5-63.7	By-product of drinking water chlorination	<b>NO</b>
Haloacetic Acids HAA5	2011	ppb	60	0	7.5	4.2-10.0	By-product of drinking water chlorination	<b>NO</b>
IDSE TTHM	2009	ppb	NA	NA	NA	11.2-88.4	By-product of drinking water chlorination	<b>NO</b>
IDSE HAA5	2009	ppb	NA	NA	NA	4.5-14.9	By-product of drinking water chlorination	<b>NO</b>
<b>Residual Disinfectants</b> Total Chlorine (ppm)	2011	ppm	4	4	1.23	1.13-1.34	Water additive to control microbes	<b>NO</b>

“Under the Stage 2 Disinfectants/Disinfection Byproducts Rule (D/DBPR), our public water system was required by the USEPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE), and is intended to identify locations in our distribution system with elevated disinfection byproducts concentrations. The locations selected for the IDSE may be used for compliance monitoring under Stage 2 DBPR, beginning in 2012. Disinfection byproducts are the results of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water. Disinfection byproducts are grouped into two categories, Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). USEPA sets standards for controlling the levels of disinfectants and disinfectant byproducts in drinking water, including both TTHMs and HAA5s.”

#### TTHM's 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 systems, and may have increased risk of getting cancer.

#### Additional Water Quality Monitoring

Our water system participates in the Ambient Ground Water Monitoring Program, which is administered by the Ohio E.P.A.'s Division of Drinking and Ground Waters. As a result, our ground water source is subjected to additional extensive analysis every six to eighteen months. While this analysis is not used to fulfill our monitoring requirements, it does provide us with additional assurance of the quality of our source water.

## **Additional Information That May Be Of Interest:**

### **Chemical Analysis** (Annual Average 2011)

	<b>Raw Water</b> (untreated)	<b>Tap Water</b> (treated)
Alkalinity	216 mg/l	49 mg/l
Hardness	325 mg/l	90 mg/l
Non-Carbonate	109 mg/l	41 mg/l
Calcium (as Ca)	94 mg/l	16 mg/l
Magnesium (Mg)	17mg/l	12 mg/l
Fluoride	0.13mg/l	0.94mg/l
P.H.	7.40	9.31

### **Sources of Contamination in Drinking Water and Additional Health Information**

To ensure that tap water is safe to drink, the EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water. 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 Safe Drinking Water Hotline (800-426-4791).

### **Source Water Protection**

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 and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can, also come from gas stations, urban storm water runoff and septic systems.
- (E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. 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.

### **Lead in 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 home plumbing. The City of Kent 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 several hours, you can minimize the potential for lead exposure by flushing your tap from 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about the 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>.”

**Special Information Available**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer who are undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune disorders, some elderly people, and infants can be particularly at risk from infection. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate ways to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). In order to insure that tap water is safe to drink, EPA prescribes regulations which limit 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.

**Additional Questions?**

In addition to the testing that we are required to perform, our water system voluntarily tests for hundreds of additional substances and microscopic organisms to make certain our water is safe and of high quality. For more information, call the City of Kent at (330) 676-6333. We are here to serve **YOU!** Please feel free to call us with any questions that you may have.

