

**ANNUAL DRINKING WATER QUALITY REPORT FOR 2007**  
**KENSICO WATER DISTRICT**  
FORMERLY HAWTHORNE, THORNWOOD AND VALHALLA WATER DISTRICTS  
**119 Lozza Drive • Valhalla, New York 10595**  
(PUBLIC WATER SUPPLY NO. 5930082)

**INTRODUCTION**

To comply with State regulations, the Kensico Water District will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact Robert Guena, P.E., Superintendent, Town of Mount Pleasant Water and Sewer Department, at 831-1062. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Town Board meetings. The Town Board of the Town of Mount Pleasant serves as the Board of Commissioners for the Kensico Water District. The Board meets on the second and fourth Tuesday of each month in Town Hall at 8:30 pm. Please feel free to participate in these meetings.

**WHERE DOES OUR WATER COME FROM?**

In general, the sources of drinking water (both tap 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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water is purchased from The New York City Water Board. The water is drawn from the Catskill Aqueduct, south of the Kensico Reservoir, which is an unfiltered surface water source. The Catskill Aqueduct, south of Kensico, delivers high quality water and has sufficient capacity to supply the District.

These improvements included the construction of a connection to the Catskill Aqueduct, Pump Station, dedicated transmission main and two (2) two-million-gallon water storage tanks. With these improvements, the raw water from the Catskill Aqueduct will be treated to achieve at least 99.9 percent inactivation of Giardia Lamblia cysts and 99.99 percent inactivation of enteric viruses. This treatment consists of:

#### Extended Disinfection

The Kensico Water District disinfects the water received from the Catskill Aqueduct with chlorine initially as it leaves the Commerce Street Pump Station, and again at the water storage facilities to achieve the inactivation criteria described above.

Prior to entering the distribution system the chlorine residual is again analyzed and adjusted as required to maintain a detectable level of chlorine in the distribution system in order to maintain disinfection.

#### Corrosion Control Treatment

In order to inhibit leaching of lead and copper from household plumbing, the finished water is treated with sodium hydroxide to adjust the pH and with a polyphosphate corrosion inhibitor. This treatment is performed to comply with the lead and copper rule.

#### Fluoridation

Prior to purchase from New York City, fluoride is added for the prevention of dental caries.

### **FACTS AND FIGURES**

Our water system serves approximately 17,857 people through approximately 5102 service connections. In 2007, the Kensico Water District purchased approximately 874 million gallons of water from New York City. Approximately 631 million gallons were billed to consumers, and approximately 42.2 million gallons were billed to the Old Farm Hill Water District. The volume of unaccounted-for water in 2007 was approximately 176.8 million gallons, which represents 20.2 percent of the total amount of water pumped. Unaccounted-for water includes water lost due to water main breaks, hydrant flushing, street cleaning, fire fighting, sewer flushing and other un-metered water uses. Also, a significant amount of water was required for water main flushing in conjunction with a cleaning and cement-mortar lining project, in the Thornwood area.

All accounts are billed on a quarterly basis. In 2007, water customers were billed \$23.00 per 1000 cubic feet of water. One cubic foot of water is equal to 7.48 gallons. For accounts with meters from 1.5 inches to 8 inches, there is also a meter charge included on each bill. The meter charge ranges from \$2.75 to \$108.00 for a 1 inch and 10 inch meter, respectively. Also, for those accounts that have either a separate sprinkler service or private fire hydrants, there is a charge of \$37.10 per service or hydrant. In addition to the quarterly bill, each account received a tax levy of approximately \$36.51 per \$1000 of assessed valuation, on their 2007 April tax bill.

**ARE THERE CONTAMINANTS IN OUR DRINKING WATER?**

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. In 2007, the District was not in violation of any maximum contaminant level (MCL) for TTHM, microbial, organic or inorganic contaminants.

The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once a year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Included as a supplement to this notice is a report of analytical testing results for contaminants required to be tested for by the United States Environmental Protection Agency and the New York State Department of Health. This supplement is available to consumers of the Kensico Water District upon request.

It should be noted that all drinking water, including bottled water, may be reasonably 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 EPA’s Safe Drinking Water Hotline (800-426-4791) or the Westchester County Department of Health at 813-5000.

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
<b><u>Microbiological Contaminants</u></b>							
Turbidity (Note 1)	No	01/07 04/07	1.9 NTU 1.9 NTU	NTU	N/a	TT=<5.0 NTU	Soil Runoff
Coliform	No	08/07	1 Positive	N/a	0	MCL= 2 or more positive samples	Naturally present in the environment.
<b><u>Inorganic Contaminants</u></b>							
Copper	No	08/07	.153 (Note 2) (.012 - .303)	mg/l	1.3	AL= 1.3	Corrosion of galvanized pipes; Erosion of deposits.
Lead	No	08/07	<LOQ (Note3) (<LOQ-23.7)	ug/l	15	AL= 15	Corrosion of household plumbing systems; Erosion of deposits.
Barium	No	09/07	.0151	mg/l	n/a	MCL=2.0	Erosion of deposits.
Chloride	No	09/07	8.84	mg/l	n/a	MCL= 250	Erosion of deposits.
Chromium	No	09/07	1.1	ug/l	100	MCL= 100	Erosion of deposits.
Iron	No	09/07	30.8	ug/l	n/a	MCL= 300	Erosion of deposits.
Fluoride	No	09/07	.327	mg/l	n/a	MCL= 2.2	Erosion of deposits; water additive that promotes strong teeth.
Hardness	No	09/07	19 mg/l as CaCO3	mg/l	n/a	MCL= N/A	Erosion of deposits.
Manganese	No	09/07	17.8	ug/l	n/a	MCL= 300	Erosion of deposits.
Nickel	No	09/07	2.4	Ug/l	N/a	MCL=	Erosion of deposits
Sodium	No	09/07	8.45	mg/l	n/a	MCL= 20	Erosion of deposits.

Nitrate	No	09/07	.482	mg/l	n/a	MCL=10	Runoff from fertilizer use.
Zinc	No	09/07	10.5	ug/l	n/a	MCL = 5000	Naturally occurring.
<b><u>Disinfection Byproducts</u></b>							
Total Trihalomethanes	No	2007	35.5	ug/l	n/a	MCL= 80	By-product of drinking water chlorination.
Haloacetic Acids	No	2007	46.3	ug/l	n/a	MCL= 60	By-product of drinking water chlorination.

### **Notes:**

1 – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement for the year occurred in January and April (1.9 NTU). State regulations require that turbidity must always be below 5.0 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.5 NTU (or below 0.3 NTU if you serve 10,000 or more people. Although January and April were the months when we had the fewest measurements meeting the treatment technique for turbidity, the levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation.

2 – The level presented represents the 90th percentile of the 30 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, thirty samples were collected at your water system and the 90th percentile value was the 27<sup>th</sup> highest value (.153 mg/l). The action level for copper was not exceeded at any of the sites tested. The action level for copper is 1.3 mg/l.

3 – The level presented represents the 90th percentile of the 30 sites tested. In this case, thirty samples were collected at your water system and the 90th percentile value was the 27<sup>th</sup> highest value (<LOQ ug/l). The action level for lead was not exceeded at any of the sites tested. The action level for lead is 15ug/l.

### **Definitions:**

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

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

**Maximum Residual Disinfectant Level (MRDL):** 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.

**Maximum Residual Disinfectant Level Goal (MRDLG):** 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 contamination.

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

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

**Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.

**Nephelometric Turbidity Unit (NTU):** A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Milligrams per liter (mg/l):** Corresponds to one part of liquid in one million parts of liquid (parts per million – ppm).

**Micrograms per liter (ug/l):** Corresponds to one part of liquid in one billion parts of liquid (parts per billion – ppb).

**Nanograms per liter (ng/l):** Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion – ppt).

**Picograms per liter (pg/l):** Corresponds to one part of liquid to one quadrillion parts of liquid (parts per quadrillion – ppq).

**Picocuries per liter (pCi/L):** A measure of the radioactivity in water.

**Millirems per year (mrem/yr):** A measure of radiation absorbed by the body.

**Million Fibers per Liter (MFL):** A measure of the presence of asbestos fibers that are longer than 10 micrometers.

**Variance and Exemption:** State or EPA permission not to meet a MCL or treatment technique under certain conditions.

**n/a:** not applicable, **ppb:** part per billion or microgram per liter, **ppm:** parts per million or milligram per liter, **TTHM:** (total trihalomethane) means the sum of the concentration of trichloromethane (chloroform), dibromochloromethane, bromodichloromethane and tribromomethane (bromoform).

In addition to the detected contaminants listed above, the following thirteen (13) inorganic contaminants were sampled for but not detected: antimony, arsenic, beryllium, cadmium, chromium, cyanide, mercury, nickel, nitrite, selenium, silver, sulfate, and thallium. Also, the following one hundred and twelve (112) organic contaminants were sampled for but not detected: 2,3,7,8-TCDD (Dioxin), 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, Butachlor, Metolachlor, Metribuzin, Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Heptachlor Epoxide, Lindane, Methoxychlor, PCB's, Propachlor, Toxaphene, 2,4,5-T, 2,4-D, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 4,4-DDE, Dalapon, Dicamba, Dinoseb, Pentachlorophenol, Picloram, Silvex, THM-Bromodichloromethane, THM-Bromoform, THM-Chloroform, THM-Dibromochloromethane, 1,1,1,2-tetrachloroethane, 1,1,1-trichloroethane, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,1-dichloroethane, 1,1-Dichloroethene, 1,1-dichloropropene, 1,2,3-trichlorobenzene, 1,2,3-trichloropropane, 1,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, 1,2-dichlorobenzene, 1,2-dichloroethane, 1,2-dichloropropane, 1,3,5-trimethylbenzene, 1,3-dichlorobenzene, 1,3-dichloropropane, 1,4-dichlorobenzene, 2,2-dichloropropane, 2-butanone(MEK), 2-chlorotoluene, 4-chlorotoluene, Acetochlor, Benzene, Bromobenzene, Bromochloromethane, Bromomethane, Carbon tetrachloride, Chlorobenzene, Chlorethane, Chloromethane, cis-1,2-dichloroethene, cis-1,3-dichloropropene, DCPA (di-acid), Dibromomethane, Dichlorodifluoromethane, EPTC, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, Methyl iso-butyl ketone (MIBK), Methyl tert-butyl ether (MTBE), Methylene Chloride, N-butylbenzene, N-propylbenzene, Naphthalene, O-xylene, P & M-xylene, P-isopropyltoluene, SEC-butylbenzene, Styrene, TERT-butylbenzene, Tetrachloroethene, Toluene, trans-1,2-dichloroethene, trans-1,3-dichloropropene, Trichloroethene, Trichlorofluoromethane, Vinyl chloride, Alachlor, Atrazine, Benzo(a)pyrene, Bis(2-Ethylhexyl)adipate, Hexachlorobenzene, Hexachlorocyclopentadiene, Simazine, 3-Hydroxycarbofuran, Aldicarb, Aldicarb sulfone, Aldicarb sulfoxide, Carbaryl, Carbofuran, Methomyl, Molinate, Oxamyl, Glyosate, Endothall, Diquat, Nitrobenzene, Simazine, Terbacil. The following two (2) Radionuclides were sampled for in 2004, but not detected: Tritium and Strontium 90.

### **WHAT DOES THIS INFORMATION MEAN?**

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

### **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

During 2007, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

The results of lead and copper sampling continue to show that the 90<sup>th</sup> percentile levels for lead and copper are in compliance. This demonstrates that the treatment being provided to control the leaching of lead and copper from household plumbing has been optimized. Based upon these results sampling for lead and copper will be performed on an annual basis at a reduced number of sampling sites.

In 2007, the Kensico Water District collected samples on a quarterly basis to monitor for disinfection byproducts. The results of these sampling efforts show that the District is in compliance with the Stage 1 Disinfectant and Disinfection Byproduct Rule.

### **INFORMATION ON CRYPTOSPORIDIUM**

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. During 2007, as part of our routine sampling, 56 samples

collected at the Catskill lower effluent chamber and analyzed for *Cryptosporidium* oocysts. Of these samples, 3 *Cryptosporidium* oocysts were detected. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

### **INFORMATION ON GIARDIA**

*Giardia* is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. *Giardia* is removed/inactivated through a combination of filtration and disinfection or by disinfection. During 2007, as part of our routine sampling, 56 samples were collected at the Catskill lower effluent chamber and analyzed for *Giardia* cysts. Of these samples, 47 *Giardia* cysts were detected. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Giardia* may cause giardiasis, an intestinal illness. People exposed to *Giardia* may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The *Giardia* parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where handwashing practices are poor.

For more information on Cryptosporidiosis and Giardiasis see the attached Cryptosporidiosis and Giardiasis background information and Cryptosporidiosis fact sheet.

### **DO I NEED TO TAKE SPECIAL PRECAUTIONS?**

Although our drinking water exceeded state and federal regulations, the Safe Drinking Water Act requires that the following educational information be included in this notice.

- (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 EPA's Safe Drinking Water Hotline (1-800-426-4791).
- (2) Some people may be more vulnerable to disease-causing microorganisms 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the

risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

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 storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts 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 gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

**WHY SAVE WATER & HOW TO AVOID WASTING IT?**

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ✓ *Saving water saves energy and some of the costs associated with both of these necessities of life;*
- ✓ *Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and*
- ✓ *Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.*

You can play a role in conserving water 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.

Conservation tips include:

- ✓ *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 to 20 gallons a day. Fix it up 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 one of these otherwise invisible toilet leaks. 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 water-using appliances, then check the meter after 15 minutes. If it moved, you have a leak.*

## **SYSTEM IMPROVEMENTS**

In 2007, the third phase of water main cleaning and cement-mortar lining was completed in the Valhalla and Thornwood area. Cleaning and lining of water mains improves water quality, restores the fire flow capability of the system and upgrades the system as all shutoff valves and fire hydrants in the work area are replaced.

Also, the District commenced the second phase of a multiphase project to replace defective shutoff valves in the Hawthorne area. This will improve service to consumers, as the new water valves will enable the department to shut down water service to smaller areas, inconveniencing fewer consumers in the event of a water main break.

The District is pursuing a second source of supply, as the Catskill Aqueduct South is scheduled to be placed out of service for an extended period of time in the future. This second supply would also be provided by New York City, via the Delaware Aqueduct system.

## **CLOSING**

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that our customers help us protect our water sources, which are the heart of our community. All consumers are urged to report any suspicious activity observed in the vicinity of water system facilities to the Mount Pleasant Police at 769-1941. Please call our office if you have questions.

Contacts for more information:

Town of Mount Pleasant Water and Sewer Department, 831-1062

Westchester County Department of Health, 813-5000

New York State Department of Health, (518) 402-7713

PWS NO. 5930082

May 2008

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