

***Annual Drinking Water Quality Report for 2013***  
***Cairo Water District***  
***P.O. Box 728, Cairo, New York 12413***  
***(Public Water Supply ID# 1900025)***

## **INTRODUCTION**

To comply with State regulations, Cairo 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. 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 The Water Administrator at 518-622-0052. 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 meetings are held the 1<sup>st</sup> Monday of each month at 7:00PM in the Town Hall located at 512 Main Street.

## **WHERE DOES OUR WATER COME FROM?**

In general, 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, 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 system serves both commercial and residential consumers. Our water source is ground water drawn from the well located at the Cairo Town Park and is treated with Chlorine and Soda Ash. Chlorine is used as a disinfectant which protects us from harmful bacteria and soda ash is used for corrosion control of lead, copper and galvanized plumbing. We have a reserve well that is used mainly for emergencies and is identified as Well#3. Well#3 is located at the old reservoir property in a Stand-By state.

## **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, haloacetic acids, radiological and synthetic organic compounds. 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 per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking 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 **New York State Department of Health, Oneonta District Office at (607)432-3911.**

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Table of Detected Contaminants							
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
Lead	N	07/18/2011	.001-.015	Mg/L	0	.015	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	N	07/18/2011	0.25-1.48	Mg/L	0	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Nitrate	N	02/07/2013	.25 Well#1	Mg/L	0	10	Runoff from fertilizer use; Leaching from septic tanks. sewage; Erosion of natural deposits.
Arsenic	N	02/07/2013	7.5 Well#3	ug/L	0	10	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	N	02/07/2013	.237 Well#3	Mg/L	0	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	N	02/07/2013	.16 Well#3	Mg/L	0	2.2	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nickel	N	02/07/2013	.0018 Well#3	Mg/L	0	N/A	N/A
THM	N	08/09/2013	12	Ug/L		80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Sodium	N	06/04/2013	13.4	Mg/L	0	N/A	Naturally occurring; Road salt; Water softeners; Animal waste.
Manganese	N	06/04/2008	.01	Mg/L	0	.300	Naturally occurring; Indicative of landfill contamination.
Chloride	N	06/04/2008	20	Mg/L	0	N/A	Naturally occurring; Road salt; Water softeners; Animal waste.
Radium 226 & 228 Combined	N	06/30/2008	.99	pCi/l		5	Erosion of natural deposits.
Gross Alpha Activity	N	06/30/2008	.665	pCi/l	0	15	Erosion of natural deposits

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 on (give date) (0.9 NTU). State regulations require that turbidity must always be below 1 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU. Although (give date) was the month 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 10 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, (include number of samples, e.g. ten samples) samples were collected at your water system and the 90th percentile value was the (include what sample had the highest value, e.g. second highest) value 0.97 mg/l. The action level for copper was not exceeded at any of the sites tested.

3 – The level presented represents the 90th percentile of the 10 samples collected. The action level for lead was not exceeded.

4-No health effects. The MCL for chloride is the level above which the taste of water may become objectionable. In addition, to the adverse taste effects, high chloride concentration levels in the water contribute to the deterioration of domestic plumbing and water heaters. Elevated chloride concentrations may also be associated with the presence of sodium in drinking water.

5-Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

## 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 per 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.

## 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 current federal drinking water requirements. Although arsenic was detected below the MCL, it was detected at 7.5ug/L in Well#3 which is greater than one-half of the MCL. It should be noted that Well#3 is not our primary source and is used for reserve only. Therefore, we are required to present the following information on arsenic in drinking water:

“NYS and EPA have promulgated a drinking water arsenic standard of 10 parts per billion. While your drinking water meets the standard for arsenic, it does contain low levels of arsenic. The standard balances the current understanding of arsenic’s possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effect of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.”

## WHY SAVE WATER AND 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 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.

## 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 all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.

## NYSDOH SOURCE WATER ASSESSMENT

The NYSDOH has completed a source water assessment for this system, based on available information. Possible and actual threats to the drinking water sources were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells.

The susceptibility rating is an estimate of the potential for contamination of the source water. It does not mean that the water delivered to consumers is, or will become contaminated. While nitrates (and other inorganic contaminants) were detected in our water, it should be noted that all drinking water, including bottled drinking water, might be reasonably expected to contain at least small amounts of some contaminants from natural sources. The presence of contaminants does not necessarily indicate that the water poses a health risk. The nitrate levels in our sources are not considered high in comparison with other sources in this area. See section "Are there contaminants in our drinking water?" for a list of the contaminants that have been detected.

As mentioned above, our main water supply is from one drilled well. The source water assessment has rated this well as having a very high susceptibility to microbials and nitrates and a high susceptibility to industrial solvents, and other industrial contaminants. These ratings are due primarily to the close proximity of permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government), low intensity residential activities and manure piles within the assessment area. In addition, the well draws from an unconfined aquifer of unknown hydraulic conductivity. While the source water assessment rates our well as being susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

During 2013, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements. Our water is monitored daily by Department personnel and is tested monthly by JH Consulting Group Inc. Plans are moving forward to drill an additional well near the vicinity of the current well located at the Town Park property.