Substances That Could Be in Water

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**.

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. In order to ensure that tap water is safe to drink, the State and the U.S. EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the U.S. FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

About our Violation

During 2013 we received three notices of violation for failure to submit test results for Pesticides/SOCs. The first was for the Catskill Treatment Plant, the second was for the Jackson wells #1and #2, and the third was for the Blackrock Treatment Plant. Catskill Treatment Plant samples were taken on 02/25/2013 and results were submitted in April 2013. Samples were taken on 9/9/2013 from the Jackson wells #1 and #2, and results were filed in November 2013. After receiving notice of violation in February 2014, the results were refiled March 2014. The third notice was due to the Blackrock plant being offline and will be completed as soon as the plant is back online. At no time did this incident pose a threat to public health and safety, nor did it have any impact on the high-quality drinking water provided to our customers. To ensure that all reporting requirements are met in the future, all samples of this nature will be delivered separately from normal monthly reports.

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Annual WATER QUALITY REPORT

Reporting Year 2013

Presented By
Village of Cornwall on Hudson

There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2013. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

Community Participation

We want our valued customers to be informed about their water utility. If you would like to learn more, please attend any of our regularly scheduled meetings. They are held once a month on the third Monday at 7:00 pm at the Village Hall, 325 Hudson Street, Cornwall on Hudson.

Facts and Figures

Our water system serves 9,500 customers through 2,700 service connections. The total amount of water produced in 2013 was 450 million gallons. The daily average of water treated and pumped into the distribution system is 1.2 million gallons per day. A little more then half of the total (190 million gallons) was billed directly to consumers. The balance or unaccounted water was used for firefighting, hydrant use, Fire Department drills, and the filling of Town and Village street-cleaning equipment. Distribution system leaks (10) and water main brakes (nine) and unmetered public properties. The 2013 billing rate was $8.56 per 1,000 gallons in the village and $14.56 outside the village.

Where Does My Water Come From?

We have three water sources of water that we draw from, the first is the New York City Ashokan Reservoir in Ulster County and is delivered through the Catskill Aqueduct. The second that we obtain water from are two 65-foot deep wells in an aquifer in the Town of Cornwall. The third source of water comes from the Village reservoirs on Black Rock Mountain. During 2013, our system did not experience any restriction of our water source. The water from the Catskill Aqueduct has the chemical addition of alum to aid filtration, sodium hydroxide to adjust pH, zinc-orthophosphate for corrosion control, and sodium hypochlorite (chlorine) for sanitizing. The water we receive from our wells is treated with sodium hypochlorite (chlorine) for sanitizing, and the water from Black Rock Mountain reservoirs is treated with sodium hypochlorite (chlorine) for sanitizing and sodium hydroxide for pH control.

Important Health Information

Some people may be more vulnerable to disease causing microorganisms or pathogens 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 at (800) 426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. We are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about 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 (800) 426-4791 or at www.epa.gov/safewater/lead.

Water Conservation Tips

You can play a role in conserving water and saving yourself money in the process 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. Here are few tips:

- 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 an invisible toilet leak. 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.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Robert June, Water Superintendent, at (845) 534-4200. Or you may call the Orange County Health Department at (845) 291-2331.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Barium (ppm)	07/15/2013	2	2	0.0059	0.002–00088	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Haloacetic Acids–Stage 1 (ppb)	Quarterly	60	NA	1.9	1.0–58.1	No	By-product of drinking water disinfection needed to kill harmful organisms
Nitrate (ppm)	6/7/2013	10	10	012	0.12–0.52	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	Quarterly	80	NA	23	3.7–74	No	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter
Turbidity[1] (NTU)	Daily	TT=1 NTU	NA	0.03	0.02–0.03	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	Daily	TT=95% of samples <0.3 NTU	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	RANGE LOW-HIGH	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	06/12/2012	1.3	1.3	0.45	0.07–0.52	0/20	No	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	06/12/2012	15	0	2.5	1.0–3.6	0/20	No	Corrosion of household plumbing systems; Erosion of natural deposits

Facility Modification/System Improvements

During 2013, we implemented a water leak survey for our system. This survey was supported and partly supported by the Orange County Water Authority. This survey was completed in February 2014. As of this date, we are seeing a reduction in water production of approximately 400 thousand gallons of water per day. We will also be reporting on this later in the year.

Non-detected Contaminants

Contaminants that were tested for but not detected in the water include: Nitrate, Group 1 Inorganics, Group 2 Inorganics, Asbestos, POCs (VOC), Pesticides/SOCs, TTTHMs/HAA5s, Total Radium, Total Uranium, UR, Alpha Excl U, Radon, Lead and Copper, and Total Coliform Bacteria.

[1] Turbidity is a measure of the cloudiness of the water. It is tested because it is a good indicator of the effectiveness of the filtration system. Our highest single turbidity measurement for the year occurred as indicated in the table above. 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. (Note that TT is dependent upon filtration method: conventional, 0.3 NTU; slow sand, 1.0 NTU; or diatomaceous earth filtration, 1.0 NTU.) Although the month as indicated in the Date column 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.

How Is My Water Treated and Purified?

Our first water source is the New York City Ashokan Reservoir in Ulster County that is delivered through the Catskill Aqueduct. The water from the Catskill Aqueduct enters our water treatment plant and has the chemical addition of alum to aid filtration, sodium hydroxide to adjust pH, and sodium hypochlorite (chlorine) for sanitizing. The water then enters a settling tank, where larger particles are then settled out. The water is then filtered to remove smaller particulates. Zinc-orthophosphate is then added for corrosion control and sodium hypochlorite (chlorine) is added prior to distribution. The second supply is our well supply and has sodium hypochlorite added for sanitizing before the water is pumped directly to the system. Our third source of water is from the Black Rock Treatment Plant. As it enters the plant, it passes through a set of stainless steel strainers, before entering a set of microfilters. As the water leaves the microfilters, it is then treated with sodium hypochlorite (chlorine) for sanitizing and sodium hydroxide for pH control.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses over 180 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to www.h2oconserve.org or visit www.waterfootprint.org to see how the water footprints of other nations compare.

Definitions

90th percentile: The levels reported for lead and copper represent the 90th percentile of the total number of 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 lead and copper values detected at your water system.

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

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

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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 contaminants.

NA: Not applicable

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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

Radon

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 pCi/L or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your state radon program or call the U.S. EPA's Radon Hotline at (800) SOS-RADON.