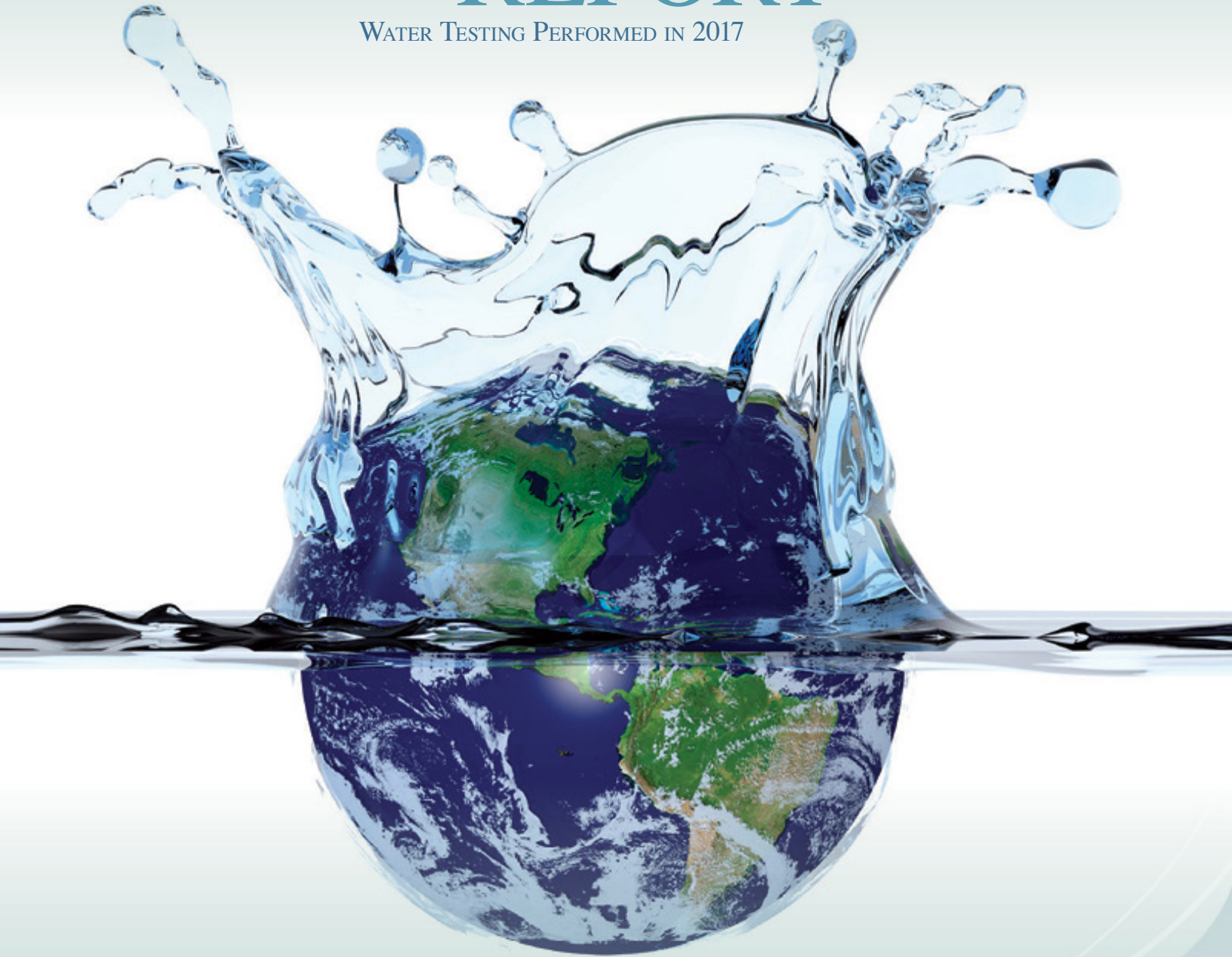


# ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2017



*Presented By*  
**Croton on Hudson**



## Quality First

Once again we are pleased to present our annual water quality report. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies.

Water treatment is a complex, time-consuming process.

## Facts and Figures

The water system supplies approximately 8,060 people, primarily in residences but also in businesses and industries, through approximately 2,500 service connections.

During 2017, the total amount of water withdrawn from the aquifer was approximately 355 million gallons. The daily average volume of water treated and pumped into the distribution system was slightly less than 1.0 million gallons per day.

Approximately 93% of the total water produced was billed directly to consumers. The balance, or unaccounted-for water, was used for firefighting, hydrant use, distribution systems leaks, and unauthorized use.

The 2017 billing charge has five tiers:

- Tier 1 which is base service with zero usage or no reads has a base rate of \$12.50 per billing cycle (quarterly billing).
- Tier 2 is one gallon per year to 748,000 gallons per year at \$10.27 per 1,000 gallons.
- Tier 3 is 748,001 gallons per year to 3,740,000 gallons per year at \$11.30 per 1,000 gallons.
- Tier 4 is 3,740,001 gallons per year to 7,480,000 gallons per year at \$11.50 per 1,000 gallons.
- Tier 5 is greater than 7,480,001 gallons per year at \$12.33 per 1,000 gallons.

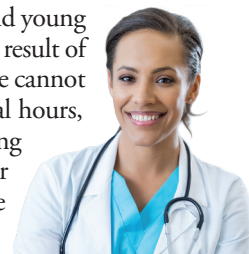
## Where Does My Water Come From?

The Village of Croton-on-Hudson's main water source is a well system located in the Croton River Valley downstream from the New Croton Dam. Treated water is pumped directly from the well field into the distribution system, which consists of a network of water mains, four storage tanks (reservoirs), control valves, booster pump stations, hydrants, and other water-related infrastructure. The Village's total distribution system storage capacity is 2.3 million gallons. Most residents receive water from the municipal water system; the remainder use private wells, which are not covered by this report. During 2017, fluridone, a herbicide used to control nuisance or invasive submerged aquatic vegetation, was applied to the Croton River below the New Croton Dam to control hydrilla. Fluridone was detected in the water supply and the results are included in the detected contaminants table in this report.

## Important Health Information

Some people may be more vulnerable to disease-causing microorganisms or pathogens in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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 providers 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 we 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](http://www.epa.gov/safewater/lead).



## Facility Modification and System Improvements

The water main improvements on Elliott Way were approved by Westchester County Health Department. The work was begun in the fall of 2017 and will be completed in early 2018. This new main will provide looping to the existing mains west of the Metro North Railroad tracks.

The corrosion control treatment system to reduce copper levels at the tap was substantially completed by the end of 2017. It received final approval from WCHD in early 2018 and has been in operation since April 13, 2018.

## Lead and Copper Rule Action Level Exceedance

**E**xplanation: In July - August 2017, the copper sampling 90th-percentile value for the 40 samples collected was 1.88 ppm, which exceeded the action level of 1.3 ppm.

Date and Length of Exceedance: Copper Action Level was exceeded in April 2012, and the AL has continued to be exceeded at every 6-month measurement on the monitoring schedule.

Steps Taken to Correct Exceedance: The new corrosion control treatment system is now complete and has been online since April 13, 2018. Lead and Copper monitoring at the standard number of sampling sites will continue every six months.

Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctors.

## Substances That Could Be in Water

**T**he 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 that limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the U.S. Food and Drug Administration's regulations establish limits for contaminants in bottled water that 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 or the Westchester County Department of Health at 914-813-5000.

## Community Participation

**Y**ou are invited to participate in our public forum and voice your concerns about your drinking water. The Village Board of Trustees meets on the first and third Mondays of each month, beginning at 8:00 p.m. at the Stanley H. Kellerhouse Municipal Building, One Van Wyck Street, Croton-on-Hudson, NY 10520.

## Count on Us

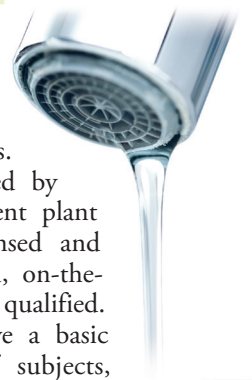
**D**elivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Maintaining optimal water chemistry;
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

So, the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call John Spatta, Water Foreman, at (914) 271-3775 or call Westchester County Department of Health at (914) 813-5000 or visit [www.westchestergov.com/health](http://www.westchestergov.com/health).





## Nondetected Substances

As required by state regulations, we routinely test our drinking water for numerous contaminants. In 2017 and previous years, the following substances were tested for and were not detected:

1,2-Dibromoethane, 1,2-Dichloroethane,  
1,1-Dichloropropane, 1,2-Dichloropropane,  
1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane,  
1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane,  
1,1-Dichloroethane, 1,2,3-Trichlorobenzene,  
1,2,3-Trichloropropane, 1,2,4-Trichlorobenzene,  
1,2,4-Trimethylbenzene, 1,2-Dibromo-3,  
1,2-Dichlorobenzene, 1,2-Dichloroethane,  
1,3,5-Trimethylbenzene, 1,3-Dichloropropane,  
1,3-Dichlorobenzene, 1,4-Dichlorobenzene,  
2,2-Dichloropropane, 2,4,5-Tp (Silvex),  
2,4-D,2-Chlorotoluene, 3-Hydroxycarbofuran,  
4-Chlorotoluene, 4-Isopropyltoluene.

Alachlor, Aldicarb, Aldicarb Sulfone, Aldicarb Sulfoxide, Aldrin, Antimony, Arsenic, Atrazine.

Benzene, Benzo(A)Pyrene, Beryllium, Bromobenzene, Bromochloromethane, Bromomethane, Butachlor.

Cadmium, Carbaryl, Carbofuran, Carbon Tetrachloride, Chlordane, Chlorobenzene, Chlorodifluoridomethane, Chloroethane, Chloromethane, Chromium, Color, Cumene, Cis-1,2-Dichloropropene, Cis-1,3-Dichloroethane, Cyanide.

Dalapon, Di(2-Ethylhexyl) Adipate, Di-(2-Ethylhexyl) Phthalate, Dibromochloropropane, Dibromomethane, Dicamba, Dichlorodifluoromethane, Dieldrin, Dinoseb, Dioxin, Diquat.

Endothall, Endrin, Ethylbenzene, Ethylene Dibromide.

Fluoride, Gamma-Chlordane, Glyphosate, Gross Beta, Heptachlor, Heptachlor Epoxide,

Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclopentadiene.

Iron (Fe), Isopropylbenzene, Lindane.

Manganese, MEK, Mercury, Methomyl, Methoxychlor, Methylene Chloride, Metolachlor, Metribuzin, Microextractables, Monobromoacetic Acid, Monochloroacetic Acid, MTBE (Methy Tert Butyl Ether).

Napthalene, Nickel, N-Butylbenzene, Nitrite, N-Propylbenzene, Odor, Organohalide, Oxamyl (Vydate), PCBs, Pentachlorophenol, Picloram, Propachlor.

Sec-Butylbenzene, Selenium, Silver, Simazine, Styrene.

Tert-Butylbenzene, Tetrachloroethene, Thallium, Toluene, Toxaphene, Trans-1,2-Dichloroethene, Trans-1,3-Dichloropropene, Trichloroethene, Trichlorofluoromethane, Vinylchloride, Xylene, Zinc.

## Source Water Assessment

The New York State Department of Health (NYS DOH) has completed a Source Water Assessment for this system. Based on available information, potential and actual threats to this drinking water source were evaluated. The State's 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. See the section Test Results for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

The Source Water Assessment has rated our three wells as having a medium-high susceptibility to microbials. These ratings are due primarily to the fact that the wells are high-yielding wells, drawing from a possible unconfined aquifer, which is a shallow aquifer that occurs immediately below the ground surface and has no overlying protective layer to prevent contamination from potential sources. While the Source Water Assessment rates our wells 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.

A copy of the Source Water Assessment can be obtained for a fee by contacting the Village Engineering Department at (914) 271-4783.



## How Is My Water Treated?

Groundwater pumped from the sand and gravel aquifer is treated with chlorine at the water treatment plant for disinfection purposes. We carefully monitor the amount of chlorine, adding the quantity necessary to protect the safety of our water without compromising taste or other water-quality parameters.

## A Few Tips to Conserve Water

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. 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.

## Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The information below represents only those substances that were detected; our goal is to keep all detects below their respective maximum allowed levels. The State recommends monitoring for certain substances less often 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)	06/15/2016	2	2	0.0451	0.0314–0.0451	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloride (ppm)	06/15/2016	250	NA	93	88–93	No	Naturally occurring or indicative of road salt contamination
Chlorine (ppm)	2017	[4]	[4]	1.59	0.78–1.59	No	Water additive used to control microbes
Combined Radium [226 and 228] (pCi/L)	06/20/2013	5	0	0.3	ND–0.3	No	Erosion of natural deposits
Fluridone (ppb)	July to December 2017	50	NA	0.82	ND–0.82	No	An aquatic herbicide used to control invasive plants
Gross Alpha Activity [including radium 226 but excluding radon and uranium] (pCi/L)	06/20/2013	15	0	0.185	ND–0.185	No	Erosion of natural deposits
Manganese (ppb)	06/15/2016	300	NA	50	10–50	No	Naturally occurring; Indicative of landfill contamination
Nitrate (ppm)	7/11/17	10	10	1.07	ND–1.07	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium <sup>2</sup> (ppm)	March to December 2017	(see footnote 2)	NA	48.13	29.19–48.13	No	Naturally occurring; Road salt; Water softeners; Animal waste
Sulfate (ppm)	6/15/2016	250	NA	13.7	13.0–13.7	No	Naturally occurring
Tap water samples were collected for Total Trihalomethanes and Haloacetic Acids analyses from sample sites throughout the community.							
Haloacetic Acids <sup>1</sup> (ppb)	08/3/2017	60	NA	4.4	4.1–4.4	No	By-product of drinking water disinfection needed to kill harmful organisms
TTHMs [Total Trihalomethanes] <sup>3</sup> (ppb)	08/3/2017	80	NA	30.3	6.3–30.3	No	By-product of drinking water chlorination needed to kill harmful organisms; Formed when source water contains large amounts of organic matter

## 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 that, if exceeded, triggers treatment or other requirements that 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

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**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).

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	EXCEEDANCE	TYPICAL SOURCE
Copper (ppm)	June and December 2017	1.3	1.3	1.88	0.05–2.47	17/40 1.32 – 2.47	Yes	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	June and December 2017	15	0	13.7	ND–77	4/40 18.8 – 77	No	Corrosion of household plumbing systems; Erosion of natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Magnesium (ppm)	03/27/2012	10.5	10.0–10.5

<sup>1</sup>The haloacetic acids detected were dichloroacetic acid, dibromoacetic acid, and trichloroacetic acid.  
<sup>2</sup>Water containing more than 20 ppm of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 ppm of sodium should not be used for drinking by people on moderately restricted sodium diets.  
<sup>3</sup>The trihalomethanes detected were bromodichloromethane, bromoform, chloroform, and dibromochloromethane.