

This 2016 Water Quality Report is made available to every resident in the Cortlandt Consolidated Water District as mandated by the New York State Department of Health.

Dear Cortlandt Resident:

The quality and protection of our water supplies are critical issues that we in our administration consider one of our major priorities. We are pleased to state that the quality of our town's drinking water is excellent.

The monitoring of our water and meeting the federal mandate to filter the water has been a project that our Department of Environmental Services-Water Division addresses with the Northern Westchester Joint Waterworks on a daily basis.

I am pleased to inform you that the Northern Westchester Joint Waterworks (Cortlandt, Yorktown, Montrose Improvement District and Somers) is continuing to upgrade our water treatment facilities. This filtration process and joint partnership also creates a backup water system for our residents. This regional plan is historic and proactive in the region and saves our taxpayers money as we continue to provide water services and meet the Federal Mandates for filtering drinking water.

Yours truly,
Linda D. Puglisi
Supervisor



Supervisor Linda D. Puglisi

Town Board
Members:

Richard H. Becker Francis X. Farrell
Seth M. Freach Debra A. Costello

TOWN OF CORTLANDT

Contact Us

For a copy of this report, or to report unusual water characteristic please call
(914) 734-1026

Important Numbers

Town of Cortlandt Consolidated Water (24 hour/7days)
(914) 734-1026

To report any polluting activities

1-(888)-H2O-SHED or
1-(888)-426-7433, 24-hours a day.



Annual Drinking Water Quality Report for 2016
Cortlandt Consolidated Water District

167 Roa Hook Road
Cortlandt Manor, NY 10567
(New York State I.D.#: 5903423)
(Westchester County I.D.#: 00017)

Contacts:

Jeffrey Coleman, P.E., Director of Environmental Services
Stephen Ferreira, P.E., Deputy Director

INTRODUCTION

To comply with State regulations, the Cortlandt Consolidated Water District, will be annually issuing a report describing the quality of our 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 or exceeded all State and Federal drinking water health standards. Although the tap water met all State and Federal drinking water standards, one minor notification violation was reported and is discussed later in this document.

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. The office for the Water Division is located at 167 Roa Hook Road across from Camp Smith.

If you want to learn more, please attend any of our regularly scheduled Town board meetings. The Town Board holds its monthly meetings on Tuesday in the Vincent F. Nyberg General Meeting room at the Town Hall at 7:30 pm. They also have three work sessions a month, meeting on Mondays. Special meetings are held as necessary. All meetings are open to the public. For more information, contact the Supervisors Office at 734-1002 or visit the Town of Cortlandt Website.

If you have any questions about this report or concerning your drinking water, please contact Stephen Ferreira, PE at (914) 734-1026.

WHERE DOES MY WATER COME FROM

In general, the sources of drinking water (both tap and bottled) 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 the following: 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 that 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 main source is the New York City DEP Catskill Aqueduct in the Town of Cortlandt. Water at The Catskill Water Treatment Plant is treated with the following processes prior to distribution: pH adjustment, coagulation, filtration, chlorine disinfection and corrosion control.

A connection with the City of Peekskill water system is maintained as a supplementary supply in the event that the Catskill water is not available. Also, treated water from the Amawalk Water Treatment Plant on Route 35 in Somers, can be used as an emergency water supply via a 24" transmission main from Yorktown.

The NYS DOH has evaluated the susceptibility of water supplies statewide to potential contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraphs below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this potable water supply (PWS). This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

This PWS obtains water from the New York City water supply system. Water either comes from the Catskill/Delaware watersheds east of the Hudson River and/or from the Croton watershed in Putnam and Westchester counties. The New York City Department of Environmental Protection (DEP) implements a series of programs to evaluate and protect source water quality within these watersheds. Their efforts focus on three important program areas: the enforcement of strengthened Watershed Rules and Regulations; the acquisition and protection of watershed lands; and implementation of partnership programs that target specific sources of pollution in the watersheds.

FACTS AND FIGURES

Our water system serves approx. 33,700 people through 8,100 services connections. The total water distributed in 2016 was 1.1 billion gallons. The daily average of treated water pumped into the distribution system is 2.8 million gallons per day. For the year of 2016 we had an unaccounted for water total of 30%. This water was used to flush mains, fight fires, and lost in water main and service connection leakage, etc. Water customers in 2016 were charged \$7.74 per 1,000 gallons of water for an average bill of approximately \$775.00 per year.

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 coli form, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total Trihalomethanes, and synthetic organic compounds. The tables presented below depict 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.

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 or 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 contaminants are available from the EPA's Safe Drinking Water Hotline (800) 426-4791.

It should be noted that all drinking water, including bottled drinking 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 EPA's Safe Drinking Water Hotline (800-426-4791) or the Westchester County Health Department at (914) 813-5000.

Table # 1
Montrose Improvement District Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Average & Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contaminant
Inorganic							
Alkalinity	no	1/1 – 12/31/16	18.41 12.6-59.0	mg/L as CaCO ₃	N/A	N/A	Naturally occurring
Hardness	no	1/1 – 12/31/16	16.83 9.80-60.90	mg/L as CaCO ₃	N/A	N/A	Naturally occurring
Barium	no	5/11/16	0.008	mg/L	2	MCL 2	Erosion of natural deposits.
Chloride	no	5/11/16	11	mg/L	N/A	MCL 250	Naturally occurring or road salt
Nitrate	no	5/11/16	0.05	mg/L	10	MCL 10	Fertilizer run-off, septic tank leaching, natural deposits.
pH	no	1/1 - 12/31/16	7.55 6.91-8.13	N/A	N/A	N/A	N/A
Phosphorus, Ortho	no	1/1 - 12/31/16	0.80 0.39-1.58	mg/L	N/A	N/A	Additive to prevent corrosion
Sodium	no	5/11/16	7.83	mg/L	N/A	(20) ³	Naturally occurring or road salt
Sulfate	no	5/11/16	4	mg/L	N/A	MCL 250	Naturally occurring
Microbiological							
Filtration Turbidity ⁴	no	7/1/16	0.14 100%	NTU	N/A	TT=95% of samples<0.3NTU	Soil run-off.

Table # 2
Yorktown Consolidated Water District Detected Contaminants

Contaminants	Violation Yes/No	Date of Sample	Average Level Detected (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source of Contaminants
<u>Inorganic</u>							
Alkalinity	no	Daily	39.65 (12.6-114.0)	mg/L as CaCO ₃	N/A	N/A	Naturally occurring
Hardness	no	Daily	19.0 (6.75-64.0)	mg/L as CaCO ₃	N/A	N/A	Naturally occurring
Aluminum	no	5/21/16	0.20	mg/L	N/A	N/A	In common water treatment chemical
Barium	no	5/11/16	0.0255 (0.008-0.043)	mg/L	2	MCL 2	Erosion of natural deposits.

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Chloride	no	5/11/16	(11-140)	mg/L	N/A	MCL 250	Naturally occurring or road salt
Fluoride	no	Daily	0.32 (0.00 - 0.86)*	mg/L	N/A	MCL 2.2	Additive to promote strong teeth
pH	no	Daily	7.59 (6.91-8.13)	N/A	N/A	N/A	N/A
Phosphorus, Ortho	no	Daily	0.85 (0.39-1.58)	mg/L	N/A	N/A	Additive to prevent corrosion
Sodium	no	5/11/16	7.74-66.7	mg/L	N/A	(20) ³	Naturally occurring or road salt
Sulfate	no	5/11/16	4-13	mg/L	N/A	MCL 250	Naturally occurring
Nitrate as N	no	5/11/16	0.05-0.30	mg/L	10	MCL 10	Fertilizer run-off, septic tank leaching, natural deposits.

*Fluoride- Catskill Aqueduct Filter Plant did not add fluoride due to repairs/modifications to fluoride delivery system. The Amawalk Filter Plant provided fluoride at or near recommended levels other than when plant was offline due to maintenance and repairs.

<u>Microbiological</u>							
Filtration Turbidity ⁴	no	Daily	0.5 (99.92%)	NTU	N/A	TT=99% of samples<0.3 NTU	Soil runoff.
<u>Radioactive</u>							
Combined Radium 226 and Radium 228 ⁶	no	9/9/15	0.3525	pCi/L	0	MCL 5 pCi/L	Decay of natural deposits.
Gross Alpha Activity ⁶	no	9/9/15	0.187	pCi/L	0	MCL 15	Decay of natural deposits.
Gross Beta activity ⁷	no	9/9/15	0.688	pCi/L	0	MCL 50 pCi/L	Decay of natural deposits and human-made emissions.
Total Uranium	no	7/19/12	0.023	µg/L	0	30 µg/L	Erosion of natural deposits

Table # 3
Cortlandt Consolidated Water District Detected Contaminants

Parameter	Violation	Date	Level Detected <u>Average</u> <u>Range</u>	Unit Measurement	MCLG	Regulatory Limit (MCL, TT, or AL)	Likely Source
Lead ²	No	2015	3.0 ND - 10.0	ug/L	0	AL=15	Corrosion of Household Plumbing. Erosion of natural deposit
Copper ¹	No	2015	90 ND - 360	ug/L	1300	AL=1300	Corrosion of Household Plumbing. Erosion of natural deposit
Organic							
Halo acetic Acids	No	23Jan2016 23April2016 24July2016 16Oct.2016	39.28 14.00-90.00	ug/L	N/A	MCL= 60	By-product of drinking water disinfection needed to kill harmful organisms
Trihalomethanes	No	23Jan2016 23April2016 24June2016 16Oct.2016	56.36 14.60-104.14	ug/L	N/A	MCL=80	By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Total Coliform	No	July 2016	1 Positive sample	N/A	0	TT=2 or more positive per month	Naturally Present in Environment
Turbidity ⁵ (distribution)	No	2016	0.24 0.05 -0.97	NTU	N/A	MCL = 5	Soil runoff
Chlorine Residual	No	Daily	0.77 0.05-2.20	Mg/l	N/A	MRDL=4	Water Additive used to Control Microbes.

1. This concentration presented represents the 90th percentile of the 30 sites tested for copper in 2015. 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. This value was 90 ug/L. The action level was not exceeded at any of the sites tested.
2. This concentration represents the 90th percentile of the 30 sites tested for lead in 2015. This value was 3.00 ug/L The action level was not exceeded at any of the sites tested.. Sample frequency for lead & copper is every three years.
3. People on severely restricted sodium diets should not consume water containing more than 20 mg/L of sodium. Water containing more than 270 mg/L of sodium should not be used by people on moderately restrictive sodium diets.
4. Turbidity is a good indicator of the effectiveness of our filtration system. This value is the highest single combined filter measurement. At least 95% of the samples collected must be below 0.30 NTU
5. Turbidity is a measure of the cloudiness of the water. All values measured must be below 5 NTU.
6. This is a quarterly composite sampling from the Amawalk Water Treatment Plant. This combined sample collected from the Amawalk treatment plant and Catskill filter plant must be collected every 6 years. The State considers 50 pCi/L to be a level of concern for Beta particles.

MONTROSE, YORKTOWN, CORTLANDT REPORT FOR 2016 **NON-DETECTED SUBSTANCES AND THE FREQUENCY OF TESTING**

According to State regulations, the following lists of substances (along with test frequencies) were tested for in your drinking water and **not detected**. Bromochloromethane, Bromoform, and dibromoacetic acid was tested quarterly from four sites. Arsenic, beryllium, cadmium, color, mercury, nitrite, selenium, silver, and thallium were tested for annually. Bromomethane, carbon tetrachloride, chloroethane, chloromethane, dibromomethane, dichlorodifluoromethane, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethene, cis-1, 2-dichloroethene, trans-1, 2-dichloroethene, 1,2-dichloropropane, 1,3-dichloropropane, 2,2-dichloropropane, 1,1-dichloropropene, cis-1, 3-dichloropropene, trans-1, 3-dichloropropene, methylene chloride, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, trichlorofluoromethane, 1,2,3-trichloropropane, vinyl chloride, benzene, bromobenzene, n-butylbenzene, sec-butylbenzene, tert-butylbenzene, chlorobenzene, 2-chlorotoluene, 4-chlorotoluene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, ethyl benzene, hexachlorobutadiene, isopropylbenzene, p-isopropyltoluene, naphthalene, n-propylbenzene, styrene, toluene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, 1,3,5-trichloromethylbenzen, p&m-xylene, o-xylene, methyl t-butyl ether, methyl isobutyl ketone, 1,2-dibromoethane, 1,2-dibromo-3-chloropropane, aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, lindane, methoxychlor, toxaphene, proachlor, PCB's, 2,4-D, 2,4,5-T, silvex, dalapon, dicamba, dinoseb, pentachlorophenol, pichloram, alachlor, atrazine, simazine, hexachlorobenzene, hexachlorocyclopentadiene, benzo(a)pyrene, di (2-ethylhexyl) adipate, di (2-ethylhexyl) phthalate, aldicarb sulfoxide, aldicarb sulfone, oxamyl, methomyl, 3-hydroxycarbofuran, aldicarb, carbofuran, carbaryl, glyphosate, and diquat were tested annually.

DEFINITIONS FOR TABLES

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

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 microbiological 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 microbiological contamination.

Micrograms per liter ($\mu\text{g/l}$): Corresponds to one part of liquid in one billion parts of liquid (parts per billion – ppb).

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

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

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

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

COMMITMENT OF CONTINUING SERVICE

Again we are pleased to present our annual water quality report. This report covers the results of completed testing done on our water system from January 2016 to December 2016. Your Water District is committed to delivering the best quality drinking water to its residence. We remain committed to meet the challenges of education and of water conservation and of serving the needs of all of our water consumers. For additional information on this report or any questions feel free to contact the Water Division Office at 914-734-1026.

INFORMATION AVAILABLE FROM:

Cortlandt Consolidated Water District 914-734-1026

Westchester County Health Department 914-813-5000

INFORMATION ON LEAD

The information summarized in Table 3 shows that our distribution system had no violations. Lead was below the Action Level of 15 ug/L in 30 of the 30 first draw water samples collected. We present the following required statement on lead in drinking water for your information:

“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. The Cortlandt Water District 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 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.”

WHAT DOES THIS INFORMATION MEAN?

As you can see by the tables in the previous section, our system had no violations with respect to contaminants. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the New York State Department of Health.

Our system was issued one monitoring violation with respect to pick up of collected samples from our Northern Westchester Joint Water Works.

On July 27, 2016 the Westchester County Department of Health (W.C.H.D.) issued Violation ID: 2016-6184 and determined that the Cortlandt Consolidated Water District (C.C.W.D.) Public Water Supply (PWS) # NY5903423 was in violation of Part 5, Subpart 5-1, sections 5-1.51 (c) of the New York State Sanitary Code (NYSSC) for failure “...to perform the quarterly Disinfection Byproducts (DBP’s) sampling within the specified schedule as per the approved Comprehensive Monitoring Plan for the monitoring period beginning April 1, 2016 and ending June 30, 2016.....”.

Although samples were collected by Town of Cortlandt staff within the specified time frame, the samples were not picked up for analysis by the testing laboratory at the Northern Westchester Joint Water Works facility within the allowable 14 day time period. As a result the samples were unacceptable for testing. After the error was identified by C.C.W.D. staff the W.C.H.D. was contacted and follow up samples were requested and results were reported to the W.C.H.D. Follow up samples were collected on May 11, 2016 and analyzed on May 13, 2016 and reported on June 15, 2016. All follow up samples were within acceptable regulated levels for DBP’s.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards.



WATER CONSERVATION

Please be aware that although the Town of Cortlandt has not implemented any restrictions on water usage at this time, it is expected that we all conserve this natural resource.

Here are some ways that you can help save water and money:

- Repair all leaks promptly. Leaks waste water 24 hours a day, 7 days a week. Check all faucets and toilets for leaks.
- Install aerators on all sinks and use a high-pressure, low-flow showerhead. Replacing old fixtures with water conserving models can produce substantial savings without reducing effectiveness and comfort.
- Water your gardens and lawns in the early morning or evening instead of the heat of the day to reduce evaporation.
- Do not over-water! Measure the rainfall and install the proper moisture sensors on your lawn sprinkler systems. Your lawn only needs one inch of water per week. Your gardens may need more, you can usually tell by the droop of the leaves. Using too much water is not only expensive but can cause damage. If you do water, water deeply, not in short bursts.
- Raise the blade on your mower and keep the grass longer, leave the clippings on the lawn as compost. This will lead to a more robust and healthier lawn.

COMPLETED PROJECTS FOR 2016

We performed our annual fire hydrant flushing program which serves two functions: the first is clearing the water mains of sediment and debris, the second is it gives us the opportunity to operate each hydrant and find any that may be in need of repair and/or service.

We currently perform two annual leak detection surveys for our entire system. This allows us to find and address all the leaks throughout our distribution system.

A new 4 million gallon water storage tank was built at the Northern Westchester Joint Water Works Facility.

We are continuing to update our GIS system, which is used to locate hydrants, water mains, and curb box. The system is also used to create work orders used for the daily operations of the system.

PROPOSED PROJECTS FOR 2017

FIRE HYDRANT REPLACEMENT:

The Cortlandt Consolidated Water District staff will continue with its ongoing fire hydrant replacement and upgrade program town wide.

REPLACEMENT AND UPGRADE OF EXISTING WATER STORAGE TANK:

The Town of Cortlandt is currently overseeing the construction of a 1.6 million gallon glass lined water tank at our Croton Park Colony water tank site. This tank will be in operation by late summer of this year.

NEW WATER MAIN TO CONNECT TO 24" TRANSMISSION MAIN:

Currently working on specifications for a new feed to our Croton Park Colony water storage tanks. This will allow the filling of our storage tanks directly from the 24" Northern Westchester Joint Water Works transmission main.

WATER TANK LEVEL TELEMETRY AND CONTROL UPGRADES:

Currently working to upgrade communication telemetry and valve control at all of our existing water storage tanks.

SUMMARY

Thank you for allowing us to continue to provide you and your family with quality drinking water this year. We ask that all our customers help us protect all of our water sources, which are the heart of our community. Please do not hesitate to call our office at (914) 737-0100 if you have questions or concerns.



TOWN OF CORTLANDT

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2016 DRINKING WATER SUPPLY & QUALITY STATEMENT

Cortlandt Consolidated Water District
167 Roa Hook Road
Cortlandt Manor, NY 10567