



**Annual Water Quality Report and
Consumer Confidence Report For
Customers of Tooke's Spring
Public Water System ID# NY 3304310**

2021

The Onondaga County Water Authority (by contract) is responsible for maintaining the water system for customers receiving water originating from Tooke's Spring. OCWA assumed operation of this system from W2O on December 22, 2021. Tooke's Spring is located in Cardiff, N.Y. approximately 1000 feet east of the entrance of Tooke's cemetery off Route 11A. Tooke's Spring is a ground water source under the direct influence of surface water. A Source Water Assessment for Tooke's Spring has been completed by the New York State Department of Health and can be found on page 6 of this report.

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 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's health.

Water from Tooke's Spring fills the covered springhouse and flows by gravity into a chlorination building located behind the cemetery. It then continues on, feeding approximately 5,847 gallons per day to 30 customers. These customers are located in the area starting at the intersection of Route 20 & Rowland Road and ending at a point on Route 11A about 400 feet south of Webster Road. OCWA customers in this area are intermingled with houses having their own wells.

The only treatment this water received up until November of 2012, was disinfection by the addition of chlorine. At that time, an upgraded water treatment building was put into service. The new treatment provided included filtration and disinfection by both chlorination and UV light. The chlorination building and the chlorine level in the system are checked daily by OCWA personnel. Testing for bacteria is performed weekly and additional monitoring for chemical contaminants is done on a schedule which meets or exceeds requirements set by the New York State Sanitary Code. This report contains tables of detected contaminants found in your water in 2021. In cases where a contaminant is tested for less than once per year, the most recent results (prior to 2021) are included. No violations occurred in 2021. Please refer to page 4 of this report for a list of terms and abbreviations used. Entry point samples are taken at the effluent of the chlorination building. Distribution samples are taken at customers' taps.

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, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, radiological and synthetic organic compounds. The tables presented on pages two and three, depict which contaminants were detected in your drinking water. See page five for a list of contaminants that were analyzed for but not detected. 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 EPA's Safe Drinking Water Hotline (800-426-4791) or the Onondaga County Health Department at 315-435-6600.

**Table of Detected Contaminants
(Sampled at the entry point)**

Contaminant	Violation Yes / No	Date(s) of Sampling	Average Level found (Range)	Units Measured	MCLG	Regulatory Limits MCL,TT, AL	Likely Source of Contamination
Barium	No	Mar 2019	0.106	mg/l	2	2	Dishcharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloride	No	Aug 2021	159	mg/l	N/A	250	Naturally occurring; Road salts.
Chlorine (Free, Residual)	No	Daily 2021	1.21 (0.27 -3.24)	mg/l	N/A	4 (MRDL)	Added to water to kill harmful bacteria and to prevent the regrowth of bacteria.
Nitrate	No	April 2021	2.15	mg/l	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits.
Odor	No	Aug 2021	1.00	units	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits.
Radium 228	No	May 2017	0.686	pCi/l	0	5	Erosion of natural deposits.
Sodium*	No	Aug 2021	40.4	mg/l	N/A	* See Health Effects	Naturally occurring; Road salts; water softeners; animal wastes.
Sulfate	No	Aug 2021	34.6	mg/l	N/A	250	Naturally occurring.

* **Health Effect of Sodium;** There is no MCL for Sodium. However, 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 diets.

**Table of Detected Contaminants
(Sampled in the distribution system)**

Contaminant	Violation Yes / No	Date(s) of Sampling	Average Level found (Range)	Units Measured	MCLG	Regulatory Limits MCL,TT, AL	Likely Source of Contamination
Chlorine (Free, Residual)	No	Monthly 2021	1.42 (0.49 - 2.80)	mg/l	N/A	4 (MRDL)	Added to water to kill harmful bacteria and to prevent the regrowth of bacteria.
Copper**	No	Jul, Sept 2020	0.576 (0.0518-0.665)	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead**	No	Jul, Sept 2020	0.00277 (ND - 3.8)	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits.
Trihalomethanes (TTHMs)***	No	Aug 2020	49.4	ug/l	N/A	80	By-product of drinking water chlorination; TTHMs form when source water contains large amounts of organic matter.
Haloacetic Acids (HAAs)***	No	Aug 2020	< 2.0	ug/l	N/A	60	By-product of drinking water chlorination.

About Chlorine; Chlorine is added to your water in order to kill bacteria. In 2021 W20 and OCWA collected monthly bacteriological samples along with the monthly Chlorine sample. All 12 samples were negative for coliform bacteria, no violations occurred.

****About Lead & Copper;** OCWA must test 5 houses in this district every 3 years for lead & copper. The highest and second highest concentrations of Lead/Copper of these 5 homes are then averaged together. This result must be at or below the Action Levels or corrosion control treatment techniques must be started. In 2020 none of the houses tested were above the Action Level for lead or copper. OCWA will test for Lead and Copper again in 2023.

*****Disinfection by-products;** During disinfection, certain by-products form as a result of chlorine reacting with naturally occurring organic matter. The disinfection process is carefully monitored so that disinfection is effective, while levels of disinfection by-products are kept low. Trihalomethanes (THM's) and Haloacetic acids (HAA's) are classes of chemicals that OCWA is required to monitor for in its distribution system.

Terms & Abbreviations:

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

Chlorine Residual - the amount of chlorine in water available for disinfection

Disinfection By-product (DBP) - chemical compounds that result from the addition of chlorine to water containing organic substances

HAA (Haloacetic acids) - the combined concentration of the following five contaminants: Dibromo-, Dichloro-, Monobromo-, Monochloro-, and Trichloro-, acetic acids

Inorganic Contaminant - chemical substances of mineral origin, such as iron or manganese

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 possible

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 disinfectant in drinking water 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 contaminations

mg/L (milligrams per liter) - corresponds to one part of liquid in one million parts of liquid; same as **ppm (parts per million)**

Microbial Contaminant - very small organisms, such as bacteria

N/A - not applicable

ND - not detected at testing limits

Organics - substances containing the element carbon; these can be naturally occurring or man-made, and can include pesticides, solvents, and by-products of disinfection

pCi/L - Pico curies per liter; units of concentration of radioactive substances

TTHM (Total Trihalomethanes) the combined concentration of the following four contaminants: Bromodichloromethane, Bromoform, Chloroform, and Dibromochloromethane

ug/L (micrograms per liter) - corresponds to one part of liquid in one billion parts of liquid; same as **ppb (parts per billion)**

Contaminants Tested For But Not Detected At The Entry Point

Synthetic Organic Contaminants		Principle Organic Contaminants	
Acifluorfen	Endrin aldehyde	Benzene	trans-1,2-Dichloroethene
Alachlor	Endosulfan sulfate	Bromobenzene	Tetrachloroethene
Aldicarb	Heptachlor	Bromochloromethane	Trichloroethene
Aldicarb sulfone	Heptachlor epoxide	Bromodichloromethane	Dichlorofluoromethane
Aldicarb sulfoxide	3-Hydroxy Carbofuran	Bromoform	Trichlorofluoromethane
Aldrin	Lindane	Bromomethane	1,2-Dichloropropane
Aroclor 1016	Methiocarb	n-Butylbenzene	1,3-Dichloropropane
Aroclor 1221	Methomyl	sec-Butylbenzene	2,2-Dichloropropane
Aroclor 1232	Methoxychlor	tert-Butylbenzene	1,2,3-Trichloropropane
Aroclor 1242	Metolachlor	Carbon Tetrachloride	1,1-Dichloropropene
Aroclor 1248	Metribuzan	Chlorobenzene	cis-1,3,-Dichloropropene
Aroclor 1254	Mirex	Chloroethane	trans-1,3-Dichloropropene
Aroclor 1260	Oxamyl vdate	Chloroform	Ethylbenzene
Atrazine	Pentachlorophenol	Chloromethane	HCH, alpha
Benzo(a)pyrene	Pichloram	2-Chlorotoluene	HCH, beta
Butachlor	Propoxur	4-Chlorotoluene	HCH, delta
Carbaryl	Simazine	p-Cymene	Hexachlorbenzene
Carbofuran	Toxaphene	Dibromochloromethane	Hexachlorobutadiene
Chlorodane	2,4 - D	Dibromomethane	Hexachlorocyclopentadiene
Dalapon	2,4-DB	1,2-Dibromoethane	Isopropylbenzene
Dicamba	2,4,5-T	Dibromo-3-chloropropane	1,2,4-Trimethylbenzene
Dieldrin	2,4,5-TP (Silvex)	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene
Dinoseb	1,4-dioxane	1,3-Dichlorobenzene	Methyl Ethyl Ketone
Endosulfan I	4,4'-DDD	1,4-Dichlorobenzene	Methyl Isobutyl Ketone
Endosulfan II	4,4'-DDE	1,2,3-Trichlorobenzene	Methyl -t-Butyl-Ether
Endrin	4,4'-DDT	1,2,4-Trichlorobenzene	Methylene Chloride
Inorganic Contaminants		1,1-Dichloroethane	Napthalene
Antimony	Lead	1,2-Dichloroethane	n-Propylbenzene
Arsenic	Manganese	1,1,1-Trichloroethane	Styrene
Barium	Mercury	1,1,2-Trichloroethane	Toluene
Beryllium	Nickel	1,1,1,2-Tetrachloroethane	Vinyl Chloride
Cadmium	Nitrite	1,1,2,2-Tetrachloroethane	m-Xylene
Chromium	Selenium	1,1-Dichloroethene	o-Xylene
Color	Silver	cis-1,2-Dichloroethene	p-Xylene
Cyanide	Thallium	Per & Poly-fluoralkyl Contaminants	
Fluoride	Zinc	Perfluorooctanoic Acid	
Iron		Perfluorooctane sulfonate	

SWAP Summary for Tooke's Spring:

The NYS DOH has evaluated the Cardiff Tooke's Spring's susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph 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 Cardiff Tooke's. The Cardiff Tooke's water supply is provided treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

Based on the analysis of available information, this spring source is rated as having a medium susceptibility to protozoa contamination. This rating is due primarily to the high percentage of pasture land cover in the assessment area and the associated potential for contamination. No permitted discharges or other regulated facilities have been identified in the assessment area using GIS.

WHAT DOES THIS INFORMATION MEAN ?

As you can see by the tables, Tooke's Spring water 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 2021, our system was in compliance with applicable state drinking water operating, monitoring and reporting requirements.

DO I NEED TO TAKE SPECIAL PRECAUTIONS ?

Although the Tooke's Spring drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immunocompromised 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 for 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).

Other useful Information:

Your water's pH is about 7.4

Your water's hardness is about 27 grains per gallon (about 460 ppm CaCO₃)

To find information about **Conservation, Frequently asked questions, Terms and Abbreviations**, and to learn more about OCWA and Water Quality Issues please refer to the main part of OCWA's most recent Annual Water Quality Report and Consumer Confidence Report available at: www.ocwa.org

Phone Numbers:

Your contact at OCWA: Anson Bettinger (315-455-7061 ext. 3130)

Questions about water quality: Lisa Yesensky (315-455-7061 ext. 3157)

Onondaga Co. Health Dept / Questions about Source Water Assessment Program: (315-435-6600)

EPA's Safe Drinking Water Hotline: (1-800-426-4791)