



**Consumer Confidence Report For
Customers of Cardiff Tookes Spring
Public Water System ID# NY 3304310**

The Onondaga County Water Authority (by contract) is responsible for maintaining the water system for customers receiving water originating from Took's Spring. Took's Spring is located in Cardiff, NY approximately 1000 feet east of the entrance of Took's cemetery off route 11A. A Source Water Assessment for Took's Spring has been completed by the New York State Department of Health and can be found on page 4 of this report. Took's Spring is a ground water source under the direct influence of surface water. The Onondaga County Department of Health has provided an explanation of what this means and what is being done to address this issue. This can be found on pages 5 and 6.

Water from Took's Spring fills the covered springhouse and flows by gravity into a chlorination building located behind the cemetery. It then continues on, feeding approximately 7,909 gallons a day to 30 customers. These customers are located in the area starting at the intersection of Route 20 & Rowland Rd. and ending at a point on Rt. 11A about 400 ft. south of Webster Rd. OCWA customers in this area are intermingled with houses having their own wells.

The only treatment this water received was disinfection by the addition of chlorine until November of 2012. In November an upgraded water treatment building was put into service. The new treatment provided includes 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. Below is a list of contaminants found in your water in 2012. In cases where a contaminant is tested for less than once per year, the most recent results (prior to 2012) are included. No violations occurred in 2012. Please refer to the last page of this report for abbreviations used. Entry point samples are taken at the effluent of the chlorination building. Distribution system samples are taken at customers taps.

**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	Feb-11	0.099	mg/l	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Calcium	No	Jun-10	100	mg/l	N/A	N/A	Naturally occurring.
Chloride	No	Feb-11	110	mg/l	N/A	250	Naturally occurring; Road salts.

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(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
Chlorine (Free, Residual)	No	Daily in 2012	1.14 (0.74 -1.57)	mg/l	N/A	4 (MRDL)	Added to water to kill harmful bacteria and to prevent the regrowth of bacteria.
Chromium	No	Feb-11	10	ug/l	100	100	Erosion of natural deposits.
Color	No	Feb-11	5	Units	N/A	15	Presence of metals such as copper, iron, or manganese, organic chemicals, Natural color may be caused by decaying leaves, plants, and soil.
Magnesium	No	Jun-10	30	mg/l	N/A	N/A	Naturally occurring.
Nickel	No	Feb-11	2.4	ug/l	N/A	N/A	Erosion of natural deposits.
Nitrate	No	Jun-12	0.8	mg/l	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; Erosion of natural deposits.
Radium 226	No	Mar-08	0.767	pCi/l	0	5	Erosion of natural deposits.
Sodium*	No	Jun-12	28	mg/l	N/A	* See Health Effects	Naturally occurring; Road salts; water softeners; animal wastes.
Sulfate	No	Feb-11	33	mg/l	N/A	250	Naturally occurring.
Zinc	No	Feb-11	0.022	mg/l	N/A	5	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	Level found (Range)	Units Measured	MCLG	Regulatory Limits MCL,TT, AL	Likely Source of Contamination
Chlorine (Free, Residual)	No	Weekly in 2012	1.13 (.65 - 1.60)	mg/l	N/A	4 (MRDL)	Added to water to kill harmful bacteria and to prevent the regrowth of bacteria.
Copper**	No	Aug-11	0.35** (.096 -.42)	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.
Lead**	No	Aug-11	2.1** (nd - 3.1)	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits;
Trihalo methanes (TTHM's)***	No	Aug-11	29	ug/l	N/A	80	By-product of drinking water chlorination. TTHM's form when source water contains large amounts of organic matter.
Haloacetic Acids (HHA5's)***	No	Aug-11	5.8	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 2012 OCWA took weekly bacteriological samples along with the weekly Chlorine sample. All 52 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 2011 none of the houses tested were above the Action Level for lead or copper. OCWA will test for Lead and Copper again in 2014.

*****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.

About Radon:

Radon is a naturally-occurring radioactive gas found in soil and outdoor air that may also be found in drinking water and indoor air. Some people exposed to elevated radon levels over many years in drinking water may have an increased risk of getting cancer. The main risk is lung cancer from radon entering indoor air from soil under homes. For additional information call your state radon program (1-800-458-1158) or call EPA's Radon Hotline (1-800-SOS-RADON).

In anticipation of the EPA adopting regulations for radon in ground water systems OCWA tested for it in April 2011. The effluent of the Chlorination Building was used as the sampling point . The amount of Radon detected was **311 pCi/l**.

SWAP Summary for Took's Spring:

The NYS DOH has evaluated the Cardiff Took'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 Took's. The Cardiff Took's water supply provides 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.

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 2012 Consumer Confidence Report available at; www.ocwa.org

Phone Numbers:

Your contact at OCWA; Dick Crouse (673-4304 ext.14)

Questions about water quality; Bob Rusyn (673-4304 ext.11)

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

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

Ground Water Under the Direct Influence of surface water (GWUDI)

On June 3, 2011 the Onondaga County Health Department (OCHD) determined that the Cardiff Tookes Spring is Ground Water Under the Direct Influence of surface water (GWUDI) after an extensive reevaluation of the water supply. Microscopic Particulate Analysis (MPA) sampling confirmed the presence of various microscopic plant matter indicative of surface water i.e. diatoms and algae. Total Coliform bacteria were not present, and we will continue to chlorinate the water to eliminate bacteria in the drinking water. Honeywell International Inc. has until December 3, 2012 to correct the situation and thereby achieve compliance with the Surface Water Treatment Rule. We intend to make modifications to the system as necessary to comply with the NY State Sanitary Code and will continue to work with the OCHD in that regard. *

* These changes were made and went into effect in November of 2012.

The Onondaga County Health Department requires that we include the following pathogen information in this notice to you. Note that there is a telephone hotline included if you desire more information.

GROUND WATER UNDER THE DIRECT INFLUENCE (GWUDI) - PATHOGEN INFORMATION: Microorganisms Potentially Found in Cardiff Tookes Spring Water

The water source for Cardiff Tookes Spring has been determined to be Ground Water Under the Direct Influence of Surface Water (GWUDI). Surface water is of concern due to the possible presence of bacteria, microbial pathogens, and viruses. The existing chlorine disinfection system at Cardiff Tookes Spring does not provide adequate treatment. Inadequately treated water may contain disease-causing organisms. These organisms can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Honeywell International is investigating and will be actively pursuing either additional treatment measures or water source alternatives to address this issue.

INFORMATION ON BACTERIA

Some bacteria, such as Escherichia coli (E. coli) and other coliforms (in the same family as E. coli), are used as indicators of more serious contamination from human and animal waste. The most common way to kill bacteria in water is to use chlorine.

INFORMATION ON CRYPTOSPORIDIUM

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Chlorination has not been shown to be effective on Cryptosporidium. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

INFORMATION ON GIARDIA

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection with adequate chlorine contact time. Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where handwashing practices are poor.

INFORMATION ON VIRUSES

This category includes infectious agents such as Hepatitis A, rotavirus and a general group of viruses called 'enteroviruses'. Most viruses are susceptible to chlorination and proper water treatment can remove or kill them. Generally, viral diseases usually run their course and are not life threatening. However, infants and people with weakened immune systems who develop symptoms must have their symptoms treated and consult with their health care provider to avoid serious complications. Usually, dehydration due to diarrhea is the major concern with illnesses caused by waterborne viruses.

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 (800-426-4791).

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 contaminants.

mg/l – (milligrams per liter) corresponds to one part of liquid in one million parts of liquid (parts per million or **ppm**).

Microbiological 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 (parts per billion or **ppb**).