

Annual
WATER
QUALITY
REPORT

Reporting Year 2013

Presented By
Southington Water Department

PWS ID#: 1310011

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.

Important Health Information

Sources of lead in drinking water includes corrosion of household plumbing systems and erosion of natural deposits. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

Sources of copper in drinking water includes corrosion of household plumbing systems, erosion of natural deposits, and leaching from wood preservatives. 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.

Some people may be more vulnerable to contaminants 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Community Participation

We encourage public interest and participation in our community decisions affecting water. Regular meetings of the Southington Board of Water Commissioners occur once each month. The public is welcome to attend these meetings. A complete listing of meeting locations, dates, and times can be obtained by calling the Town Clerk Office at (860) 276-6211, or our office at (860) 628-5593.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include: **Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; **Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; **Pesticides and Herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; **Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems; **Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home 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 or at www.epa.gov/safewater/lead.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far, the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

How chlorination works:

Potent Germicide Reduction in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.

Taste and Odor Reduction of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and odors from decaying vegetation.

Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.

Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.

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 themselves 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 and 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 such times. 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.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Frederick W. Rogers, Superintendent, at (860) 628-5593.

Where Does My Water Come From?

The Southington Water Works Department supplies its customers with a mixture of surface water and groundwater. These water sources include three reservoirs (Southington Reservoir #1, Southington Reservoir #2, and Southington Reservoir #3) on the Southington-Wolcott town line, and seven groundwater wells located throughout Southington. Each of these sources is treated specifically based on the needs of the water before becoming available to the public through a vast network of underground pipelines that lie below the town.

Source Water Assessment

The State of Connecticut Department of Public Health has performed an assessment of our drinking water sources. The assessment indicated that our source waters had a susceptibility rating from Low to High. This rating does not imply that the water is contaminated; rather, it represents the potential for contamination. The completed assessment report is available on the Drinking Water Division Web site at www.dph.state.ct.us/BRS/Water/source_protection/assessments/Community/community.htm

Missed Monitoring

During the summer of 2013, we did not submit sample results for the presence of organic chemicals in the public drinking water system. Upon being notified of this violation by the State Department of Public Health, we immediately analyzed our water supply for organic chemicals. Results of the analysis have been received and properly recorded as required by state and federal law. We do not believe that missing this monitoring requirement had any impact on public health and safety. We have already taken the steps to ensure that adequate monitoring and reporting will be performed in the future.

Source Water Protection

The Southington Water Department owns and controls over 90% of its watershed land and follows best management practices for source water protection. These practices include annual watershed inspection and an active forestry management program. The Southington Water Department has also implemented frequent patrols of watershed land and aquifer protection areas to reduce trespassing.

TipTopTap

The most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

Kitchen sink and drain

Hand washing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed up water in which bacteria (i.e., pink and black colored slime growth) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly. Also, flush regularly with hot water.

Faucets, screens, and aerators

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets and can collect particles like sediment and minerals resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet's screen as they could be pieces of plastic from the hot water heater's dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet's gasket with a higher-quality product. White scaling or hard deposits on faucets and shower heads may be caused by hard water or water with high levels of calcium carbonate. Clean these fixtures with vinegar or use water softening to reduce the calcium carbonate levels for the hot water system.

Water filtration/treatment devices

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time so regular filter replacement is important. (Remember to replace your refrigerator filters!)

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 tables below show only those contaminants that were detected in the water. The state requires us to monitor 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)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2012	15	0	2.85	0.63–2.85	No	Erosion of natural deposits
Barium (ppm)	2013	2	2	0.0098	0.0070–0.0098	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters¹ (pCi/L)	2012	50	0	3.18	0.65–3.18	No	Decay of natural and man-made deposits
Chlorine (ppm)	2013	[4]	[4]	1.10	0.25–1.10	No	Water additive used to control microbes
Combined Radium (pCi/L)	2012	5	0	1.07	-0.3–1.07	No	Erosion of natural deposits
Fluoride (ppm)	2013	4	4	1.23	0.43–1.23	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2013	60	NA	10.17	9.65–10.17	No	By-product of drinking water disinfection
Nitrate (ppm)	2013	10	10	7.4	ND–7.4	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 1 (ppb)	2013	80	NA	19.07	13.49–19.07	No	By-product of drinking water disinfection
Tetrachloroethylene (ppb)	2013	5	0	0.68	0.50–0.68	No	Discharge from factories and dry cleaners
Turbidity² (NTU)	2013	TT	NA	0.206	0.020–0.206	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2013	TT	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)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2011	1.3	1.3	0.26	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2011	15	0	2.3	1/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

OTHER REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Strontium 90 (pCi/L)	2011	8	0	1.32	1.32–1.32	No	Nuclear fission
Tritium (pCi/L)	2011	20,000	0	607.2	128.3–607.2	No	Nuclear fission

¹ The MCL for beta particles is 4 mrem/year. The U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.

² Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2013	11	ND–11	By-product of drinking water disinfection
Bromoform (ppb)	2013	1.8	ND–1.8	By-product of drinking water disinfection
Chloroform (ppb)	2013	88	ND–88	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2013	32	ND–32	By-product of drinking water disinfection
Metolachlor (ppb)	2012	0.56	ND–0.56	NA
Sodium (ppm)	2012	41	9.5–41	Naturally occurring; Road salt
Sulfate (ppm)	2012	40	6.9–40	Naturally occurring

Definitions

AL (Action Level): The concentration of a contaminant which, 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 MCLGs as feasible using the best available treatment technology.

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.

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.

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).

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