



Annual WATER
QUALITY
REPORT

Reporting Year 2011



Presented By _____
The Torrington
Water Company

PWS ID#: CT1430011 and CT1430021

Meeting the Challenge

The Torrington Water Company is proud to present our annual water quality report. 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.

This report is an opportunity for us to report to our consumers and provide information to you about your water company, its water supply, treatment practices, and water quality. We hope you will find this information both interesting and helpful. Please share with us your thoughts or concerns about the information in this report. After all, well-informed customers are our best allies.

We pledge to do all we can to continue to bring you the best-quality drinking water possible along with outstanding customer service.

Thank you,

Susan M. Suhanovsky, President

Source Water Protection

The Torrington Water Company's commitment to providing the highest quality water is evidenced by the efforts we take to protect our reservoirs from contamination. We own over 70% of our watershed and maintain it in a forested state. We are vigilant in monitoring activities on those lands.

There are no industrial or commercial activities on the watershed which could lead to chemical contamination of our supply.

Things that you can do to help make sure that your water supply is protected are:

- Make sure septic systems are working properly
- Use chemicals such as pesticides and cleaning products wisely
- Dispose of waste chemicals and used motor oil properly
- Report illegal dumping, chemical spills, or other polluting activities to the CT DEEP's 24-hour hotline (860) 424-3338, Torrington Water (860) 489-4149, or your local police.

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, which 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.

Source Water Assessment

A source water assessment of The Torrington Water Company was completed by the Department of Public Health, Drinking Water Section, in 2002. The updated assessment report can be found on the Department of Public Health's Web site: www.dir.ct.gov/dph/Water/SWAP/Community/CT1430011.pdf.

The assessment found that our public drinking water sources have a low susceptibility to potential sources of contamination.

Important Health Information

Sources of lead in drinking water include 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 include 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.

Where Does My Water Come From?

Our customers are fortunate because we enjoy an abundant water supply from two sources. The Torrington Water Filtration Plant draws water from the Reuben Hart Reservoir, located in Torrington, which is supplemented by water from North Pond located in Norfolk. This source supplies the bulk of water to our system and has been the primary source of water for Torrington since 1930. Water from Allen Dam, located in Torrington, which is supplemented by Whist Pond, located in Goshen, is also used, primarily during drought conditions or in an emergency.

We vigilantly monitor the water and activities on the surrounding land to safeguard our water supplies. We believe protecting the source is the single most important measure we can employ to protect your health. To this end, we maintain our watershed area in a forested condition.

The Torrington Water Company Filtration plant was constructed in 1996 and can treat up to 5.3 million gallons of water a day. In 2011, we provided 939 million gallons of clean drinking water to our customers.

Lead

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.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Steven Cerruto, Vice President of Operations, at (860) 489-4149.

Stay tuned for our new website coming soon at www.torringtonwater.com.

Disinfection By-Products (DBPs)

Since untreated reservoir water contains organisms that might make consumers ill, the Torrington Water Company uses Chlorine for a disinfectant. Chlorine is used as the primary disinfectant and to maintain a level of disinfection in the water mains that transport the water to homes and businesses in the community.

When naturally occurring organic matter in untreated water reacts with the disinfectant, by-products are produced. In excessive quantities, these by-products may have harmful health effects. Currently two disinfection by-products are regulated by the EPA: Total Trihalomethanes (TTHMs) and Total Haloacetic Acids (HAA5s). The EPA has established a limit of 60 ppb for HAA5s and 80 ppb for TTHMs, based on an annual average of measurements. Some people who drink water containing DBPs that exceed these limits over many years may experience problems with their livers, kidneys, or central nervous systems, and may have an increased risk of getting cancer. We monitor through the collection and analysis of five (5) samples taken each quarter at representative sites in our system. Our water has never exceeded the MCL for either by-product.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water flows to the Torrington Water Filtration Plant by gravity, thereby saving the substantial cost of providing and operating large pumps. The water entering the plant has small amounts of alum and caustic added to coagulate the fine particles in the water into larger masses which will settle out. The water and chemicals are mixed vigorously and then stirred gently to promote the growth of settleable masses called floc. The water goes through two more processes: sedimentation, where the majority of the floc settles out, and filtration, where the water is polished to remove the last of the floc. Then additional chemicals including fluoride (used to prevent tooth decay), chlorine (used as a disinfectant to protect against contamination that could occur after water leaves the treatment facility), phosphate (added as a corrosion inhibitor to protect distribution system pipes), and caustic soda (used to adjust the final pH and alkalinity) are added to the water before it leaves the plant to go to the customers.

Water Conservation

We are fortunate to have an abundant water supply for our customers, but we still encourage you to conserve this precious natural resource whenever possible. It is not hard to conserve water. Here are a few tips:

- Install water saving devices – call our office at 860 489-4149 to find out how to get one for your property.
- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- 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.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a 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.

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced many of us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp.

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) | 2009 | 15 | 0 | 0.698 | NA | No | Erosion of natural deposits |
| Barium (ppm) | 2011 | 2 | 2 | 0.01 | NA | No | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| Combined Radium (pCi/L) | 2009 | 5 | 0 | 0.667 | NA | No | Erosion of natural deposits |
| Fluoride (ppm) | 2011 | 4 | 4 | 0.97 ¹ | 0.81–1.47 | No | Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories |
| Haloacetic Acids [HAA] (ppb) | 2011 | 60 | NA | 43 ² | 35–60 ² | No | By-product of drinking water disinfection |
| TTHMs [Total Trihalomethanes] (ppb) | 2011 | 80 | NA | 47 ² | 36–55 ² | No | By-product of drinking water disinfection |
| Total Coliform Bacteria (% positive samples) | 2011 | 5% of monthly samples are positive | 0 | 4% | NA | No | Naturally present in the environment |
| Turbidity ³ (NTU) | 2011 | TT = 1 | NA | 0.13 | 0.021–0.13 | No | Soil runoff |
| Turbidity (Lowest monthly percent of samples meeting limit) | 2011 | TT = 95% of samples < 0.3 NTU | NA | 100 | NA | No | Soil runoff |
| Uranium (ppb) | 2009 | 30 | 0 | 0.066 | NA | No | Erosion of natural deposits |

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 | 0.13 | 0/36 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead (ppb) | 2011 | 15 | 0 | 1.6 | 2/36 | No | Corrosion of household plumbing systems; Erosion of natural deposits |

SECONDARY SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | SMCL | MCLG | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
|--------------------------------|-----------------|----------|------|--------------------|-------------------|-----------|---|
| Aluminum (ppb) | 2011 | 200 | NA | 32 | NA | No | Erosion of natural deposits; Residual from some surface water treatment processes |
| Chloride (ppm) | 2011 | 250 | NA | 6 | NA | No | Runoff/leaching from natural deposits |
| Color (Units) | 2011 | 15 | NA | < 1 average | ND–10 | No | Naturally occurring organic materials |
| Copper (ppm) | 2011 | 1.0 | NA | 0.007 | NA | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Manganese (ppb) | 2011 | 50 | NA | 2.6 | NA | No | Leaching from natural deposits |
| pH (Units) | 2011 | 6.4–10.0 | NA | 7.3 ⁴ | 7.1–7.5 | No | Naturally occurring |
| Sulfate (ppm) | 2011 | 250 | NA | 12 | NA | No | Runoff/leaching from natural deposits; Industrial wastes |
| Turbidity (NTU) | 2011 | 5 | NA | 0.15 ⁴ | 0.10–0.59 | No | Naturally occurring |

UNREGULATED SUBSTANCES

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | AMOUNT DETECTED | RANGE LOW-HIGH | TYPICAL SOURCE |
|-----------------------------------|-----------------|--------------------|-------------------|---|
| Bromodichloromethane (ppb) | 2011 | 1.4 | NA | By-product of drinking water disinfection |
| Chloroform (ppb) | 2011 | 22 | NA | By-product of drinking water disinfection |
| Sodium (ppm) | 2011 | 6.6 | NA | Naturally occurring |

¹ Annual average.

² Reported value is the highest annual average of quarterly measurements for disinfection by-products in the distribution system. Values in the range are the quarterly average measurements.

³ 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. TT = 95% of samples < 0.3 NTU.

⁴ Measured at representative locations within the distribution system. Annual average. State-required testing.

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.