



2006 Water Quality Report

SOUTH CENTRAL CONNECTICUT REGIONAL WATER AUTHORITY

Important Terminology, Definitions and Water Quality Measurement Units Listed in This Report

AL – Action Level	The concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.	MRDLG – Maximum Residual Disinfectant Level Goal	A nonenforceable health goal. It does not reflect the benefits of adding the chemical for the control of waterborne microbial contaminants.
TT – Treatment Techniques	A required process intended to reduce the level of contaminant in drinking water.	MRR – Minimum Removal Ratio	The calculated value derived for total organic carbon percent removal.
MCL – Maximum Contaminant Level	The highest level of a contaminant allowed in drinking water. Maximum Contaminant Levels are set as close to the Maximum Contaminant Level Goals as feasible using the best available treatment technology.	NTU – Nephelometric Turbidity Units	A measure of clarity of water. Turbidity more than five NTU is just noticeable to the average person.
MCLG – Maximum Contaminant Level Goal	The level of a contaminant in drinking water below which there is not known or expected risk to health. Maximum Contaminant Level Goals allow for a margin of safety.	ND	Not detected
MRDL – Maximum Residual Disinfectant Level	The level a disinfectant added for water treatment that may not be exceeded at consumer's tap without adverse health effects.	N/A	No MCL or MCLG established
		pCi/l – PicoCuries per liter	A measure of radioactivity in water.
		ppm – Parts per million	A measure of the concentration of a substance roughly equivalent to 1/2 of a dissolved tablet of aspirin in a full 50-gallon bathtub of water.
		ppb – Parts per billion	A measure of the concentration of a substance roughly equivalent to one inch in 15,750 miles or 1 minute in 2,000 years.

Potential Sources of Regulated Contaminants Listed in This Report

Substance	Potential Sources	Substance	Potential Sources
<i>Total Coliform Bacteria</i>	Naturally present in the environment	<i>Nitrate (as Nitrogen)</i>	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits
<i>Lead</i>	Corrosion of household plumbing systems; Erosion of natural deposits	<i>Nitrite (as Nitrogen)</i>	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
<i>Chlorine</i>	Water additive used to control microbes	<i>Sodium</i>	Naturally present in environment or part of the water treatment process
<i>Chloride</i>	Naturally present in the environment	<i>Strontium 90</i>	Erosion of natural deposits
<i>Chromium</i>	Discharge from steel and pulp mills; erosion of natural deposits	<i>Total Organic Carbon (TOC)</i>	Naturally present in the environment
<i>Copper</i>	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives	<i>Total Trihalomethanes (TTHM)</i>	By-product of drinking water chlorination
<i>Barium</i>	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	<i>Turbidity</i>	Soil runoff
<i>Fluoride</i>	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	<i>Total Haloacetic Acids (THAA)</i>	By-product of drinking water chlorination
		<i>Uranium</i>	Erosion of natural deposits

Potential Sources of Unregulated Contaminants Listed in This Report

Substance	Potential Sources	Substance	Potential Sources
<i>Bromoform</i>	By-product of drinking water chlorination	<i>Dibromochloromethane</i>	By-product of drinking water chlorination
<i>Sulfate</i>	Naturally present in environment or part of the water treatment process	<i>Monochloroacetic Acid</i>	By-product of drinking water chlorination
<i>Radon</i>	Naturally present in environment	<i>Monobromoacetic Acid</i>	By-product of drinking water chlorination
<i>Bromodichloromethane:</i>	By-product of drinking water chlorination	<i>Dichloroacetic Acid</i>	By-product of drinking water chlorination
<i>Chloroform</i>	By-product of drinking water chlorination	<i>Trichloroacetic Acid</i>	By-product of drinking water chlorination
		<i>Dibromoacetic Acid</i>	By-product of drinking water chlorination



June, 2007

Essential to a thriving community is an abundant, reliable, high quality supply of water. The South Central Connecticut Regional Water Authority provides drinking water to about 400,000 consumers. This water quality report, required by federal and state regulations, provides you with a summary of the region's public drinking water quality.

We encourage you to read this report to learn more about where your water comes from and know how it's protected, treated and tested before you drink it. You will read very detailed information. Our goal is to help you understand more about the water that is coming out of your faucet.

Should you have questions concerning the information in this report, please call Customer Service at 562-4020. We welcome your interest in the region's public water system.

Claire C. Bennett
Chairperson,
Regional Water Authority

David Silverstone
President & Chief
Executive Officer

John E. Leary, Jr.
Chairperson,
Representative Policy Board

How safe is my water?

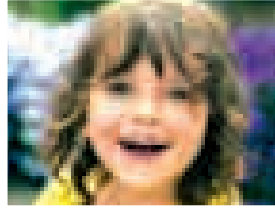
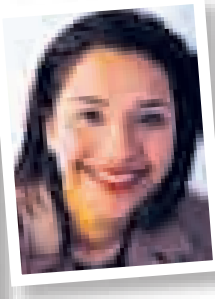
To ensure that your tap water is high quality, the U.S. Environmental Protection Agency (EPA) and the Connecticut Department of Public Health set regulations that limit the amount of certain contaminants in water provided by public-water systems. A review of 2006 water quality data shows that your drinking water is within the standards set by both regulatory agencies.

In 2006, we tested your water for 61 regulated contaminants. As listed in this report, 17 were detected. Those detected were present in amounts that are allowed by state and federal regulations established under the Federal Safe Drinking Water Act.

In addition, we do not test for some regulated contaminants every year. This is because the previous monitoring results demonstrated a lack of need according to both state and federal officials. For example, in 2002 we tested for asbestos, which was not detected. This data is still representative.

We are also required to analyze for unregulated contaminants to determine whether they are present. During the past year, we tested for 30 unregulated contaminants. As listed in the report, 11 contaminants were detected. Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Reading this water quality report, should be like reviewing the results of your physical exam with your doctor. The report gives a summary of the region's water quality with details that may require you to take some special precautions. Our goal is to help you understand what's coming out of your drinking water tap.



Do I need to take special precautions?

All drinking water, including bottled water, can 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 call the EPA's Safe Drinking Water Hotline at (800) 426-4791. People with severely weakened immune systems must be concerned about the water they drink because ingesting even slight amounts of waterborne parasites, bacteria, or viruses can cause serious health problems. Among those who should closely monitor water quality are persons with HIV/AIDS, chemotherapy patients, those who have undergone organ transplants, or anyone else with immune system problems. Consult your doctor if you have concerns. The EPA and Center for Disease Control guidelines on appropriate means to lessen the risk of infection by microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Copper and lead may pose a health risk. The risk comes from the corrosion of household plumbing systems and erosion of natural deposits.

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.

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 water containing lead in excess of the action level over many years could develop kidney problems or high blood pressure.

What does the RWA do to assure your drinking water complies with federal and state standards?

Before water ever reaches your tap, it goes through a multi-step process.

LAKES & AQUIFERS: Our source water protection program focuses on pollution prevention and watershed management. We protect over 25,000 acres of land in the region and manage it carefully. We vigilantly monitor the quality of the water and all activity on the surrounding land, constantly watching for potential contamination of the lakes and aquifers that are used as the sources of your tap water.

TREATMENT: Aquifer water is naturally filtered underground. Lake water is treated at our filtration plants. Both lake and aquifer water are disinfected with chlorine to kill microbes that can cause illness. We add fluoride to prevent dental cavities and phosphate to minimize corrosion of pipes.

DISTRIBUTE: The treated or finished water is delivered to you through a 1,600-mile-long network of pipes, pumping stations, and storage tanks. We carefully maintain our extensive distribution system to insure that high-quality water is available when you turn on your tap.

MONITOR: To make sure that your water is consistently of high quality, our chemists, microbiologists and water treatment plant staff conduct thousands of tests a month in our state-certified laboratory. We collect and test samples from numerous locations throughout the water distribution system, within our water filtration plants, and in the lakes and aquifers where the water is stored prior to treatment. Based on these tests – which are regularly reported to state officials – the water we deliver to you is within all state and federal quality standards.

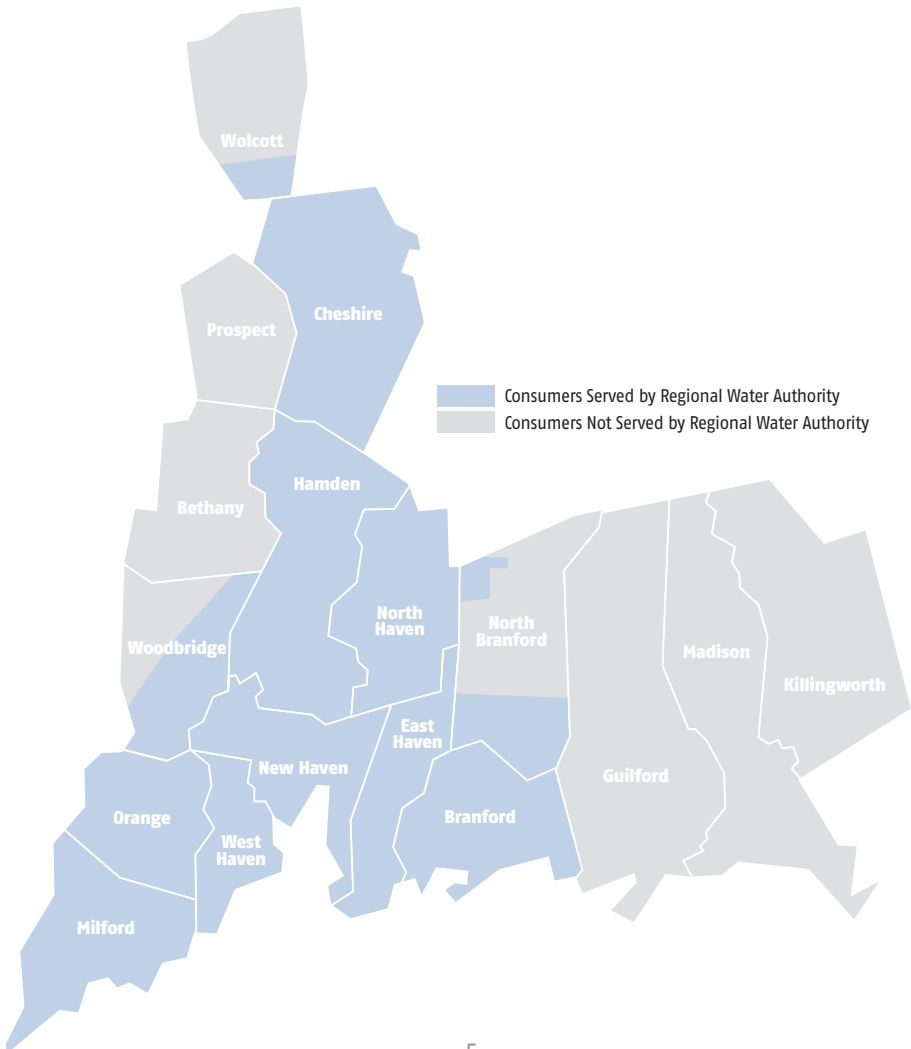
Where does my water come from?

There are 10 lakes and two aquifers that provide you with water. The lakes are filled by rivers. Aquifers are natural sand, gravel and bedrock areas below the surface of the ground that are saturated with water.

Over 80 percent of the tap water comes from the lakes located in Woodbridge, East Haven, Branford and North Branford while the balance of tap water comes from the Quinnipiac and Mill River aquifers in Cheshire and Hamden. The map below shows the area served.

The water is distributed to the region through a 1,600-mile-long network of pipes, pumping stations and storage tanks. Because of this interconnected distribution system, water from two or more sources may be delivered to some neighborhoods. The blending of water permits us to not only meet your water demands, especially during a heat wave but readily assures that water is available to fight a fire or other emergency.

The charts on pages 6 – 9 show the test results for the treated water that originates from the lakes and from the aquifers. Please note that the water coming from your tap could be from lakes, aquifers or a combination of both during the various times of the year.



2006 Water Quality Report for Lakes

(Please see page 2 for Terminology and Abbreviations Used in These Charts)

Region-wide Levels of Regulated Contaminants for Lakes

Parameter	MCL	MCLG	Highest Level Detected During 2006
<i>Total Coliform Bacteria</i>	Presence of coliform bacteria not to exceed 5.00% of monthly samples.	0%	1.02% (April 2006) Range 0.00% – 1.02%
<i>Total Trihalomethanes (TTHM)</i>	80 ppb Average	N/A	38 ppb Average Range 12* – 78*
<i>Total Haloacetic Acids (THAA)</i>	60 ppb Average	N/A	32 ppb Average Range 8* – 57*

* Individual sample and individual location.

Region-wide Levels of Regulated Contaminants for Lakes (continued)

Parameter	MCL	MCLG	90th Percentile ^(a)
<i>Lead</i>	AL=15 ppb	0	2 ppb Number of sites above AL = 0 Analyzed 2005
<i>Copper</i>	AL=1.3 ppm	1.3	0.24 ppm Number of sites above AL = 0 Analyzed 2005

Source-specific Levels of Regulated Contaminants for Lakes

			Average Level and Range Detected During 2006			
Parameter	MCL	MCLG	North Branford	East Haven/ Branford	Hamden	Woodbridge
<i>Barium</i>	2 ppm	2	0.009	0.037	0.045	0.006
<i>Chloride</i>	250 ppm	N/A	8 Range 8 – 9	23 Range 21 – 23	22 Range 14 – 32	14 Range 13 – 15
<i>Fluoride</i>	4 ppm	4	0.99 Range ND – 1.22	1.00 Range 0.73 – 1.19	1.01 Range 0.72 – 1.20	1.02 Range 0.83 – 1.20
<i>Nitrate (as Nitrogen)</i>	10 ppm	10	0.010 Range ND – 0.026	0.041 Range 0.009 – 1.24	0.708 Range 0.543 – 0.892	0.144 Range 0.056 – 0.277
<i>Nitrite (as Nitrogen)</i>	1 ppm	1	0.005 Range ND – 0.021	0.007 Range ND – 0.029	0.008 Range ND – 0.030	0.007 Range ND – 0.028

Source-specific Levels of Regulated Contaminants for Lakes (continued)

			Highest Level Detected During 2006			
Param.	MCL	MCLG	North Branford	East Haven/ Branford	Hamden	Woodbridge
<i>Turbidity</i>	TT <= 0.3 NTU*	N/A	0.11	0.26	0.17	0.19
	TT = % of samples <= 0.3 NTU	N/A	100%	100%	100%	100%

* In 95% of samples in any month.

Source-specific Levels of Regulated Contaminants for Lakes (continued)

			Minimum Removal Ratio During 2006			
Parameter	MCL	MCLG	North Branford	East Haven/ Branford	Hamden	Woodbridge
<i>Total Organic Carbon (TOC)</i>	TT = 1 ratio ^(b) min.	N/A	Not Applicable	1.0	1.0	Not Applicable

2006 Water Quality Report for Lakes

(Please see page 2 for Terminology and Abbreviations Used in These Charts)

Source-specific Levels of Regulated Contaminants for Lakes (continued)

				Average Level and Range Detected During 2006			
Parameter	MRDL	MRDLG	Units	North Branford	East Haven/ Branford	Hamden	Woodbridge
<i>Chlorine</i>	4	4	ppm	2.0 Range 1.7 – 2.3	1.3 Range 1.0 – 1.6	1.4 Range 1.1 – 1.6	1.3 Range 1.0 – 1.8

Source-specific Levels of Regulated Contaminants for Lakes (continued)

				Average Level and Range Detected During 2006			
Parameter	Notification Level		Units	North Branford	East Haven/ Branford	Hamden	Woodbridge
<i>Sodium</i>	28 ppm		ppm	10 Range 8 – 11	19 Range 11 – 22	18 Range 16 – 20	13 Range 11 – 15

Source-specific Levels of Unregulated Contaminants for Lakes

				Average Level and Range Detected During 2006			
Parameter	MCL		Units	North Branford	East Haven/ Branford	Hamden	Woodbridge
<i>Sulfate</i>	N/A		ppm	13 Range 12 – 14	34 Range 30 – 37	19 Range 8 – 24	15 Range 14 – 16

Region-wide Levels of Unregulated Contaminants for Lakes

Parameter	MCL	Units	Average Level and Range Detected During 2006
<i>Bromodichloromethane</i>	N/A	ppb	7 Range 3 – 16
<i>Chloroform</i>	N/A	ppb	30 Range 7 – 60
<i>Dibromochloromethane</i>	N/A	ppb	1 Range ND – 3
<i>Bromoform</i>	N/A	ppb	ND Range ND – 1
<i>Monochloroacetic Acid</i>	N/A	ppb	1 Range ND – 3
<i>Dichloroacetic Acid</i>	N/A	ppb	11 Range 2 – 20
<i>Trichloroacetic Acid</i>	N/A	ppb	19 Range 3 – 36
<i>Monobromoacetic Acid</i>	N/A	ppb	ND Range ND – 1
<i>Dibromoacetic Acid</i>	N/A	ppb	ND Range ND – 3

(a) Calculated value derived from the analysis performed on high priority customers

(b) Calculated value derived from TOC percent removal

2006 Water Quality Report for Aquifers

(Please see page 2 for Terminology and Abbreviations Used in These Charts)

Region-wide Levels of Regulated Contaminants for Aquifers

Parameter	MCL	MCLG	Highest Level Detected During 2006
<i>Total Coliform Bacteria</i>	Presence of coliform bacteria not to exceed 5.00% of monthly samples.	0%	1.02% (April 2006) Range 0.00% – 1.02%
<i>Turbidity</i>	TT = 5 NTU	N/A	ND Average Range ND* – 0.17*
<i>Total Trihalomethanes (TTHM)</i>	80 ppb Average	N/A	7 ppb Average Range ND* – 28*
<i>Total Haloacetic Acids (THAA)</i>	60 ppb Average	N/A	2 ppb Average Range ND* – 10*

* Individual sample and individual location

Region-wide Levels of Regulated Contaminants for Aquifers (continued)

Parameter	MCL	MCLG	90th Percentile ^(a)
<i>Lead</i>	AL=15 ppb	0	2 ppb Number of sites above AL = 0 Analyzed 2005
<i>Copper</i>	AL=1.3 ppm	1.3	0.24 ppm Number of sites above AL = 0 Analyzed 2005

Source-specific Levels of Regulated Contaminants for Aquifers

Parameter	MCL	MCLG	Average Level and Range Detected During 2006	
			Quinnipiac River Aquifer	Mill River Aquifer
<i>Barium</i>	2 ppm	2	0.164 Range 0.131 – 0.202	0.096 Range 0.032 – 0.230
<i>Chromium</i>	0.1 ppm	0.1	0.001	Range ND – 0.001
<i>Chloride</i>	250 ppm	N/A	21 Range 18 – 25	27 Range 16 – 44
<i>Fluoride</i>	4 ppm	4	1.02 Range 0.04 – 1.40	1.03 Range ND – 1.28
<i>Nitrate (as Nitrogen)</i>	10 ppm	10	3.584 Range 3.160 – 4.048	1.871 Range 0.673 – 3.450
<i>Nitrite (as Nitrogen)</i>	1 ppm	1	0.003 Range ND – 0.012	ND
<i>Uranium</i>	30 ug/L	0	ND Range ND – 3.54	ND
<i>Strontium 90</i>	N/A	N/A	N/A	ND Range ND – 3.0

Source-specific Levels of Regulated Contaminants for Aquifers (continued)

Parameter	MRDL	MRDLG	Units	Average Level and Range Detected During 2006	
				Quinnipiac River Aquifer	Mill River Aquifer
<i>Chlorine</i>	4	4	ppm	1.6 Range 1.2 – 1.8	1.5 Range 0.9 – 2.1

Source-specific Levels of Regulated Contaminants for Aquifers (continued)

Parameter	Notification Level	Units	Average Level and Range Detected During 2006	
			Quinnipiac River Aquifer	Mill River Aquifer
<i>Sodium</i>	28 ppm	ppm	11 Range 10 – 13	13 Range 10 – 20

2006 Water Quality Report for Aquifers

(Please see page 2 for Terminology and Abbreviations Used in These Charts)

Source-specific Levels of Unregulated Contaminants for Aquifers

Parameter	MCL	Units	Average Level and Range Detected During 2006	
			Quinnipiac River Aquifer	Mill River Aquifer
Radon	N/A	pCi/l	19 Range ND - 46	192 Range ND - 346
Sulfate	N/A	ppm	14 Range 13 -16	11 Range 8-14

Region-wide Levels of Unregulated Contaminants for Aquifers (continued)

Parameter	MCL	Units	Average Level and Range Detected During 2006
Bromodichloromethane	N/A	ppb	2 Range ND - 11
Bromoform	N/A	ppb	ND Range ND - 2
Chloroform	N/A	ppb	3 Range ND - 12
Dibromochloromethane	N/A	ppb	2 Range ND - 7
Dichloroacetic Acid	N/A	ppb	1 Range ND - 5
Trichloroacetic Acid	N/A	ppb	1 Range ND - 4
Dibromoacetic Acid	N/A	ppb	ND Range ND - 1
Monochloroacetic Acid	N/A	ppb	1 Range ND - 2

(a) Calculated value derived from the analysis performed on high priority customers

Results of Cryptosporidium Monitoring

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicated the detection of the organism was in the raw untreated source water. There were no organisms detected in the finished treated water ready for consumption. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the 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 doctor 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.





How can contaminants get into my drinking water?

As natural water travels over the surface of land or through the ground, it can pick up substances such as natural occurring minerals and other materials that may come from animals and human activity. Both untreated and treated water may include the following kinds of contamination:

INORGANIC COMPOUNDS such as salt and metals, can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

PESTICIDES AND HERBICIDES may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

MICROBIAL CONTAMINANTS such as viruses and cryptosporidium may come from the sewage-treatment plants, septic systems, agricultural livestock operations, wildlife or natural sources.

ORGANIC CHEMICAL COMPOUNDS, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, can come from gas stations, urban stormwater runoff, or septic systems. Trihalomethanes and haloacetic acids are disinfection byproducts that result from the use of chlorine as a disinfectant in water treatment, which reacts with natural occurring compounds in water.

RADIOACTIVE CONTAMINANTS can be naturally occurring or may be the result of oil and gas production.

RADON is a radioactive gas that you cannot see, taste or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. It can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water during showers, washing dishes, and other household activities. In most cases, however, radon entering the home through tap water is a small source of all the radon in indoor air.

Radon is a carcinogen. Breathing air-containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air. Testing is inexpensive and easy. If the level of radon in your air is four picoCuries per liter of air (pCi/l) or higher, you need to take steps to reduce it. For additional information, call your state radon program or call EPA's Radon Hotline (800.505.RADON).

Source Water Assessment Information

The source water assessment of the South Central Connecticut Regional Water Authority was completed by the Department of Public Health, Drinking Water Division. The updated assessment report can be found on the Department of Public Health's website: www.dph.state.ct.us/BRS/Water/source_protection/assessments/assessments.htm.

Water Conservation

Water is a precious resource. It is important to use it wisely. While the normal amount of rainfall we receive is sufficient to meet our needs, we encourage consumers to use water wisely. Here's how:

- ▶ Three-quarters of the water we use each day flows through the bathroom. Check for leaks.
- ▶ Consider replacing your 5-gallon per flush toilet with an efficient 1.6-gallon per flush unit. This cuts water consumption by 25%.
- ▶ Turn the faucet off while brushing teeth or shaving.
- ▶ Run your dishwasher or washing machines only when full.
- ▶ Water your lawn early in the morning to avoid excess evaporation. Don't water on a very hot, or windy day.
- ▶ Be sure your hose has a shut-off nozzle. Hoses without a nozzle can spout 10 gallons or more per minute.
- ▶ Be sure sprinklers water only your lawn, not the pavement.
- ▶ Apply mulch around flowers, shrubs, vegetables and trees to reduce evaporation, promote plant growth and control weeds.
- ▶ Raise the cutting height on your lawn mower; keep the grass higher to avoid "burning" your lawn.

About the Authority

The five-member Authority and a 17-member Representative Policy Board oversee our operations. The Authority normally meets on the third Wednesday of each month at 8 a.m. and the Representative Policy Board meets on the third Thursday in the evening at our headquarters on 90 Sargent Drive. Please call to confirm meeting time.

South Central Connecticut Regional Water Authority
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On the Internet: www.rwater.com /
General E-mail: ask.info@rwater.com



The pages of this report contain a map (page 5) and important terms (page 2), definitions and abbreviations referred to in this report. Please refer to them as you review the information and charts (pages 6 -9) in this water quality report.

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.



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