

ANNUAL WATER QUALITY REPORT

Water testing performed in 2006

FIRST TAXING DISTRICT WATER DEPARTMENT

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PWS ID#: 1030011

Continuing Our Commitment

The First Taxing District Water Department (FDWD) proudly presents its annual water quality report. This edition covers all testing completed from January 1, 2006 through December 31, 2006. We are pleased to report that the water department is in complete compliance with all state and federal drinking water laws. As in the past, we are committed to delivering the best-quality drinking water to your home or business. We continue to focus our efforts on source water protection, water quality improvements, and water conservation while serving the needs of all of our water customers.

During the past year the water department continued its program of planned improvements, including chemical storage tank additions installed at the filtration plant and water main replacements throughout the distribution system.

The Connecticut Department of Public Health (DPH) certifies public drinking water utility personnel for the operation of treatment plants and distribution systems. The goal of this program is to ensure that qualified personnel are operating public water supply systems. Certification applicants must meet a combination of education, experience, and examination requirements in order to become certified. Provisions for license renewal require that certified operators complete a minimum number of training hours during their three-year renewal period. Right, the FDWD operators participate in a continuing education course involving the safe handling of chemicals.



Where Does My Water Come From?

Your water comes primarily from surface water reservoirs located in Lewisboro, New York and New Canaan, Connecticut. The water treatment plant in New Canaan can draw water from four reservoirs which hold one billion gallons of water when full. An additional water source is the Kellogg-Deering Well Field in Norwalk. This groundwater source supplements the surface water when needed. The well field is used mostly in the warmer, high water-usage months.

Source Water Protection

The primary goal of the First Taxing District Water Department (FDWD) is to ensure an adequate, long-term supply of potable water for its customers. To achieve this goal the water department first protects the water at its source which means protecting the watershed area. A watershed area is the land from which water drains under or across after rain falls and snow melts. This water is channeled into soils, groundwater, creeks, and streams, making its way to larger rivers and lakes (our drinking water reservoirs). Water, the universal solvent, is affected by all that it comes into contact with, which is why the activities of people on watershed land affect the water quality for all communities living downstream.

The FDWD watershed area covers over 6,500 acres throughout parts of New Canaan, Ridgefield, and Wilton, Connecticut; and Lewisboro, New York. Each year during the spring and summer, the FDWD water treatment operators conduct a survey of the watershed area. The operators visit each property and try to speak with the owners. An informational pamphlet is distributed which describes the unique responsibility of living in a watershed area. The pamphlet emphasizes the importance of septic system maintenance; fertilizer use; the handling of pool and water softening discharge; and the handling and proper disposal of chemicals, oil, animal waste, and pesticide/herbicide products.

Measures to protect the Kellogg-Deering Well Field have come in the way of new state regulations that protect groundwater sources from pollution by managing land use. The new law, which establishes the Aquifer Protection Area (APA) regulations, gives the Norwalk Zoning Commission the authority to prohibit new businesses and regulate existing businesses involved in certain regulated activities within the APA.



Important Health Information

Sources of lead in drinking water include the corrosion of household plumbing systems and the erosion of natural deposits. Infants and children who drink water that contains 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 the 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 that contains copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water that contains copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their doctor.

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.

Source Water Assessment

A source water assessment was performed by the State of Connecticut Department of Public Health, Drinking Water Section. The assessment found that the FDWD surface water source has a moderate susceptibility and the groundwater source a high susceptibility to potential sources of contamination. This does not imply poor water quality but does indicate the need for source water protection.

The completed assessment report can be found on the Department of Public Health's Web site at www.dph.state.ct.us/BRS/Water/Source_Protection/Assessments/Assessments.htm. Additional source water assessment information can be found at the U.S. Environmental Protection Agency's Web site at www.epa.gov/safewater/protect/swap.html.

What You Can Do To Help

Source Water Protection

- Use chemicals such as fertilizers, pesticides, and herbicides sparingly and according to directions.
- Dispose of chemicals properly.
- Take advantage of hazardous waste recycling days—free to Norwalk residents.
- Report chemical spills or other polluting activities to the authorities.

Water Conservation

Water conservation is another important way to protect our water supply.

Inside your home:

- Check for leaks and fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures with new water-saving devices in faucets, toilets, and appliances.
- Run the dishwasher and washing machine only when full.
- Shut off the water while shaving and brushing your teeth.
- Take shorter showers.

You can conserve outdoors as well:

- Water the lawn and garden in the early morning or evening.
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.

Information on other ways that you can help conserve water can be found at www.epa.gov/safewater/publicoutreach/index.html.



Community Participation

All First Taxing District customers are invited to comment or learn more about the water department at one of our regular meetings. The Board of Commissioners (Robert A. Corbo, Kenneth J. Slapin, Ernestine K. Santaniello) meets each month in our main office, 12 New Canaan Avenue, Norwalk. Please call the office at (203) 847-7387 for the time and date of the next meeting. You may also contact the General Manager or the Board of Commissioners at the address above.

For more information about this report, or for any questions regarding the quality of your drinking water, please call Tracey Pierson, Water Quality Coordinator, or Robert S. Mercurio, Production Supervisor, at (203) 966-1473.

How Is My Water Treated and Purified?

The surface water treatment process consists of a series of steps. First, raw water is drawn from our reservoir and sent to a mixing tank where polyaluminum chloride (a coagulant) is added. The addition of this substance causes small particles to adhere to one another and makes them

heavy enough to settle onto large plates in a basin where the sediment is removed. The water is then filtered through layers of anthracite media and sand. Clear water emerges as the smaller, suspended particles are removed by the filters. Chlorine is added to disinfect any bacteria that may still be present. We carefully monitor the amount of chlorine, adding the smallest quantity necessary to ensure the safety of your water without compromising the taste. Finally, sodium hydroxide (used to adjust the final pH), fluoride (used to prevent tooth decay), and orthophosphate (used to provide a protective coating inside the water mains), are added. The water is then pumped to water mains and storage tanks and into your home or business. At the well field, the sand and gravel of the aquifer filters the groundwater. The remaining treatment is similar to that of the surface water and includes aeration of the water supply.



Substances That Might Be in Drinking 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.

Table Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which 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

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.

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.

Sampling Results

Your water is monitored daily as it leaves the water treatment plant and weekly throughout the distribution system. 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 table below shows only those regulated substances that were detected in the water. All of the substances listed here are under the Maximum Contaminant Level (MCL). State and federal regulations allow us to monitor certain substances less 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 that the sample was taken.

REGULATED SUBSTANCES				Well Water		Surface Water		VIOLATION	TYPICAL SOURCE
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	HIGHEST AMOUNT DETECTED	RANGE LOW-HIGH	HIGHEST AMOUNT DETECTED	RANGE LOW-HIGH		
Chlorine (ppm)	2006	[4]	[4]	1.10	0.20–1.10	1.51	0.77–1.51	No	Water additive used to control microbes
Fluoride ¹ (ppm)	2006	4	4	0.95	0.82–0.95	0.93	0.82–0.93	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm)	2005	10	10	1.86	NA	0.30 ²	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Total Organic Carbon ³ (% removal)	2006	TT	NA	NA	NA	100	50–73	No	Naturally present in the environment
Turbidity ⁴ (NTU)	2006	TT	NA	NA	NA	0.20	0.05–0.20	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2006	TT	NA	NA	NA	100	NA	No	Soil runoff

Distribution System

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	HIGHEST FOUR QUARTER RUNNING ANNUAL AVERAGE	RANGE OF INDIVIDUAL SITES LOW-HIGH	VIOLATION	TYPICAL SOURCE
HAAs [Haloacetic Acids] (ppb)	2006	60	NA	20.6	11.0–30.0	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2006	80	NA	31.9	10.3–61.6	No	By-product of drinking water disinfection

Tap water samples were collected from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	ACTION LEVEL	MCLG	AMOUNT DETECTED (90TH% TILE)	SITES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
Copper ⁵ (ppm)	2005	1.3	1.3	0.26	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

UNREGULATED SUBSTANCES (Well Water Sampling Results)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Sodium ⁶ (ppm)	2006	34.1	27.7–34.1	Erosion of natural deposits; Road salt; Residual of the drinking water treatment process



¹ Highest amount detected and range are monthly averages.

² Sampled in 2006

³ Footnote for Surface Water: The amount detected represents the percentage of monthly removal rates meeting the required removal rate (35%).

⁴ Footnote for Surface Water: Turbidity is a measure of the clarity of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

⁵ Tap water samples were collected for lead and copper analyses from 33 homes throughout the service area. Lead was not detected at the 90th percentile. There was one home with lead

results over the Action Level but upon further testing it was found that the likely cause was a new faucet in the customer's home.

⁶ Footnote for Well Water: There is no MCL for sodium but Connecticut has a notification level of 28 ppm (mg/L) so that customers on sodium-restricted diets will be informed of the level. The well water is always blended with lower sodium surface water so actual sodium consumption will be lower. Foods and drinks that the FDA allows to carry a "very low sodium" label have 30mg/L of sodium or less.