



This report was prepared by:
Norwich Public Utilities
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此份有关你的食水报告，
内有重要资料和讯息，请找
他人替你翻译及解释清楚。

Cé rapport contient des information
importantes concernant votre eau potable.
Veuillez traduire, ou parlez avec quelqu' un
qui peut le comprendre.

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

Quality First

Once again NPU is proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with quality drinking water that met all Environmental Protection Agency and State drinking water health standards.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you.

For more information about this report, or for any questions relating to your drinking water, please call Norwich Public Utilities at 860-887-2555 or email us at communitymatters@npumail.com.

Community Participation

The Norwich Board of Public Utilities Commissioners generally meets the fourth Tuesday of every month at 6:00 p.m. These meetings are open to the public and, unless otherwise noted, take place at 16 South Golden Street, Norwich. For more information about these meetings, visit norwichpublicutilities.com.

Where Does My Water Come From?

Norwich Public Utilities customers are fortunate because we enjoy an abundant water supply from two sources. The Charles W. Solomon Water Treatment Plant draws water from the Deep River Reservoir located in Colchester. Our second water source is the Stony Brook Reservoir and Water Treatment Plant located in Montville. Additionally, we have two developable water supplies in Norwich: the Fairview and Bog Meadow reservoirs. We also have a well located in the Yantic area, which serves as a backup supply in the case of unexpected events like a water main break. Combined, our treatment facilities provide roughly 1.6 billion gallons of clean drinking water every year, or approximately 4.5 million gallons a day! Our storage tanks hold 9.3 million gallons of treated water, delivered to your home or business through a 190-mile network of water mains.

Our distribution system is carefully maintained and tested, using chlorine for disinfection, to ensure the water coming out of your faucet is of the same high quality that leaves the treatment plant. This includes routinely flushing the system twice a year to remove sediment and keep the water clear.

Lead and Drinking Water

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 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.

Lead is not detected in NPU's source water supplies.

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 can acquire 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.

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 system, 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 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.

Testing for *Cryptosporidium* and *Giardia*

Cryptosporidium and *giardia* are microbial parasites found in surface water throughout the U.S. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* and *giardia* must be ingested to cause disease, and they may be spread through means other than drinking water.

There are no reported cases of waterborne disease due to *cryptosporidium* or *giardia* in NPU's water supplies.

Source Water Protection

We continually monitor our reservoirs and surrounding lands to prevent potential contamination of our water supplies. Testing is handled by the following certified laboratories: NPU Stony Brook Laboratory (PH-0196); NPU Deep River Laboratory (PH-0449); NPU Falls Avenue Laboratory (PH-0453); Complete Environmental Testing (PH-0116); and the State of Connecticut laboratory.

Source water is untreated water from streams, rivers, lakes, or underground aquifers that is used to supply public drinking water. Preventing drinking water contamination at the source makes good public health sense, good economic sense, and good environmental sense. You can be aware of the challenges of keeping drinking water safe and take an active role in protecting drinking water. There are lots of ways you can get involved in drinking water protection activities to prevent the contamination of your water source. Properly dispose of household chemicals, help clean up the watershed that is the source of your community's water, and attend public meetings to ensure the community's need for safe drinking water is considered in making decisions about land use. Contact us for more information on source water protection, or contact the Environmental Protection Agency (EPA) at 800-426-4791. You may also find information on the EPA's Web site at <http://cfpub.epa.gov/safewater/sourcewater/index.cfm>.

Source Water Assessment

A water assessment of the Deep River and Stony Brook reservoirs was completed by the Department of Public Health, Drinking Water Section. The updated assessment report can be found on the Department of Public Health's Web site: www.dph.state.ct.us/BRS/Water/Source_Protection/Assessments/Assessments.htm.

The assessment found that this public drinking water source has a low susceptibility to potential sources of contamination.

System Improvements

Two NPU water storage tanks were thoroughly inspected for structural and coating integrity, repaired as necessary, and then repainted inside and out. Pump drives and controls were also upgraded at one tank. NPU was awarded ARRA grants and low-interest loans by the CT Department of Public Health for three major projects, including pumps and drives and construction of two water storage tanks, new transmission mains and micro turbines, and filtration backwash water recycling systems. These projects will go into design upon funding authorization by the State.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhme) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health.

Sampling Results

During the past year, we have taken hundreds of water samples to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state allows us to monitor for 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 in which the sample was taken.

REGULATED SUBSTANCES											
				Deep River Reservoir		Stony Brook Reservoir		Distribution System			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2010	[4]	[4]	NA	NA	NA	NA	0.83	0.053–1.0	No	Water additive used to control microbes
Fluoride (ppm)	2010	4	4	1.01	0.80–1.20	0.95	0.80–1.89	NA	NA	No	Water additive which promotes strong teeth
Haloacetic Acids [HAA] (ppb)	2010	60	NA	NA	NA	NA	NA	35.4	11.0–59.5	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2010	80	NA	NA	NA	NA	NA	38.4	6.60–105.1	No	By-product of drinking water disinfection
Total Organic Carbon (ppm)	2010	TT	NA	1.24	1.02–1.56	1.28	1.20–1.44	NA	NA	No	Naturally present in the environment
Turbidity ¹ (NTU)	2010	TT	NA	0.05	0.02–0.20	0.13	0.04–0.35	NA	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2010	TT = 95% of samples <0.3	NA	100	NA	99	NA	NA	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)	2010	1.3	1.3	0.027	0/35	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives				
Lead (ppb)	2010	15	0	2	0/35	No	Corrosion of household plumbing systems; Erosion of natural deposits				
SECONDARY SUBSTANCES											
				Deep River Reservoir		Stony Brook Reservoir					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE		
Chloride (ppm)	2010	250	NA	16.0	14.0–19.0	12.0	10.0–14.0	No	Runoff/leaching from natural deposits		
pH (Units)	2010	7.0–10.0	NA	8.4	7.5–9.4	8.6	7.8–9.1	No	Naturally occurring		
OTHER SUBSTANCES											
				Deep River Reservoir		Stony Brook Reservoir					
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	NOTIFICATION LIMIT ²		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE			
Sodium (ppm)	2010	28		15.0	10.0–18.0	11.0	9.0–13.0	Stormwater runoff containing road salt; Erosion of natural deposits			

¹Turbidity 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.

²there is no MCL or MCLG for Sodium, however 28 ppm is a “notification limit” established by the State DPH for persons with sodium-sensitive diets

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. Secondary MCLs (SMCL) are set for the control of taste and odor.

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.

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.