

VILLAGE OF SLEEPY HOLLOW
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Sleepy Hollow, NY 10591

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ANNUAL
DRINKING WATER
QUALITY REPORT
FOR
2012

**VILLAGE OF SLEEPY HOLLOW
DEPARTMENT OF PUBLIC WORKS
WATER & SEWER DEPARTMENT**

**28 Beekman Avenue
Sleepy Hollow, New York
10591**

**Public Water System
ID# 05903450**

INTRODUCTION

To comply with State and Federal regulations, the Village of Sleepy Hollow continues to issue its annual report which describes the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard.

This report provides an overview of the water quality of our water supply for the year 2012. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerns about your drinking water, please call John Arena at the Water Treatment Plant at 914-631-6848. We believe that an informed public is our best ally. If you want to learn more, please attend any of our regularly scheduled Village Board meetings. The meetings are held on the second and fourth Tuesday of the month at 7 PM at the Municipal Building, 28 Beekman Avenue, Sleepy Hollow, NY, 10591. Work sessions are held on the first and third Tuesdays. This report contains a supplement of analytical testing results for possible contaminants in your drinking water. This document is available for inspection by all interested parties at the Municipal Building located at the aforementioned location.

WHERE DOES OUR WATER COME FROM?

In general, 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 and in some cases radioactive material and can also pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water can include: Microbial contaminants, inorganic contaminants, pesticides and herbicides, organic chemical contaminants, and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA (Environmental Protection Agency) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same level of protection for public health.

The Village of Sleepy Hollow has one (1) year round primary source of water. This surface water source comes from the Catskill/Delaware Aqueduct downstream from the Kensico Reservoir in Valhalla, New York. In addition, the municipality has an emergency source of water from the New Croton Aqueduct which originates at the surface water Croton Reservoir in Yorktown, New York. The transmission main from the Catskill Aqueduct to our water treatment plant

located on 403 Neperan Road in the Village of Tarrytown has the capability of supplying a maximum capacity of 11.0 million gallons per day (MGD). This transmission main also serves as the primary source of potable water for our neighboring village of Tarrytown. The Catskill Pumping Station can supply a peak water demand of 4.0 MGD. The treatment process at the Pumping Station consists of the application of a blended orthophosphate liquid for corrosion control, followed by gaseous chlorine for disinfection and finally pH adjustment with sodium hydroxide (caustic soda). The water supply from the Kensico Reservoir is pre-treated with chlorine and fluoride by the City of New York prior to our connection into the Catskill Aqueduct. The Kensico Reservoir does meet Federal and State microbiological standards. However, the Catskill Aqueduct source does not meet the 1996 Surface Water Treatment Rule (SWTR) requirements for turbidity, which is caused by suspended material, such as fine clay which is normally not seen by the naked eye. A filtration avoidance provision was granted by the EPA to the City to allow the usage of this source without filtration processes provided that certain conditions exist. New Croton Aqueduct supply is only utilized in the event of an emergency, or an extended shut down on the Catskill Aqueduct and only with prior notification to the Westchester County Department of Health.

The NYS DOH has evaluated the susceptibility of water supplies statewide to potential contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraphs below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this PWS. This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

This PWS obtains water from the New York City water supply system. Water either come from the Catskill/Delaware watersheds east of the Hudson River and/or from the Croton watershed in Putnam Westchester counties. The New York City Dept. of Environmental Protection (DEP) implements a series of programs to evaluate and protect source water quality within these watersheds. Their efforts focus on three important program areas: the enforcement of strengthened Watershed Rules and Regulations; the acquisition and protection of watershed lands; and implementation partnership programs that target specific sources of pollution in the watersheds.

Due to these intensive efforts, the SWAP methodologies applied to the rest of the state were not applied for this PWS. Additional information on the water quality and protection efforts in these New York City watersheds can be found at DEP's web site www.nyc.gov/dep/watershed.

SOURCE SPECIFIC ASSESSMENT:

Specifically, this PWS obtains its water from the Catskill/Delaware watersheds east of the Hudson. The reservoirs in this mountainous rural area are relatively deep with little development along their shorelines. The main water quality concerns associated with land cover agriculture, which can contribute microbial contaminants, pesticides, and algae producing nutrients. These are

also some potential contamination concerns associated with residential lands and associated wastewater discharges. However, advanced treatments which reduce contaminants are in place for most of these discharges. There are also a number of other discrete facilities, such as landfills, chemical bulk storages, etc. that have the potential to impact local water quality, but large significant water quality problems associated with these facilities are unlikely due to the size of the watershed and surveillance and management practiced.

FACTS AND FIGURES

Our water system serves a total population of 9,870 (2010 census) through 1535 service connections. The total amount of water produced in calendar year 2012 was 477,402,000 gallons. The daily average of water treated and pumped into the distribution system was 1,304,377 gallons per day. Our highest single day was 3,200,000 gallons which occurred on September 17, 2012. The amount of water delivered to customers was 459,671,327 gallons. This leaves an estimated total of 17,730,673 gallons which is based upon the difference between the amount of water pumped and the amount of water billed to the public. This water is un-metered and was utilized for flushing mains and hydrants, fighting fires, and allowable leakage throughout the water distribution system. In 2012, water customers were charged \$7.62 per 1000 gallons of water or the annual average water charge per user was \$184.11 The cost of water purchased from the City of New York is \$1213.84 per million (1,000,000) gallons. The Sleepy Hollow Water Department maintains a storage reservoir situated on Rockefeller State Park Preserve property. This reservoir's capacity is 800,000 gallons with an elevation of 408 feet above sea level. This storage capacity is sufficient for only a small portion of the normal daily potable water needs of the municipality. For this reason, the future expansion of the present storage facility is included in this report under "System Improvements". The existing reservoir is covered and protected from animal hibernation.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the state regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds.

The tables presented below depicts which compounds were detected in your drinking water. The state allows us to test for some contaminants less than once a year because the concentrations of these contaminants do not change frequently. As you can see by the table, our system had no violations. We have learned through our testing that some of the contaminants have been detected, however, these contaminants were detected below the level allowed by the State.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant
Inorganics							
Barium	No	02/21/12	21.6	ug/L	2000	2000	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Chloride	No	02/21/12	9.84	mg/L	N/A	250.0	Naturally occurring or indicative of road salt contamination
Iron	No	02/21/12	38	ug/L	N/A	300	Iron has no health effects at a 1000 ug/L a substantial # of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/L, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/L represents a reasonable compromise as adverse aesthetic effects. Are minimized at this level. Many multivitamins may contain 3000 or

							4000 ug/L of iron per capsule.
Fluoride (ADDED BY CATSKILL AQUEDUCT)	No	02/21/12	0.79	mg/L	N/A	2.2	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	No	02/21/12	0.195	mg/L	10.0	10.0	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits.
Manganese	No	02/21/12	13.8	ug/L	N/A	300	<p>The Food and Nutrition Board of the National Research Council determined an estimate safe and adequate daily dietary intake of manganese to be 2000-5000 ug/L for adults.</p> <p>However many peoples diets lead them to consume even higher amounts of manganese especially those who consume high amounts of vegetables or who are vegetarians.</p> <p>The infant population is of greatest concern. It would be better if the drinking water were not used to make infant formula since it already contains iron and manganese.</p> <p>Excess manganese produces a</p>

							<p>brownish color in laundered goods and impairs the taste of tea, coffee, and other beverages.</p> <p>Concentrations may cause a dark brown or black stain porcelain plumbing fixtures.</p> <p>As with iron manganese may form a coating on distribution pipes. These may slough off causing brown blotches on laundered clothing or black particles in the water.</p>
Zinc	No	02/21/12	4.8	ug/L	N/A	5000	Zinc has no health effects unless detected in very high concentrations. The presence of zinc may result in an undesirable taste in drinking water.
Phosphorous Ortho	No	02/21/12	0.649	mg/L	N/A	*	Added for corrosion control.
Sodium	No	02/21/12	7620	ug/L	N/A	*	Naturally occurring; Road salt; Water softeners; Animal waste.
Sulfate, potable	No	02/21/12	5.20	mg/l	N/A	250.0	Naturally occurring
PH	No	02/21/12	7.17	units	N/A	*	A process
Turbidity	No	02/21/12	0.89	NTU	N/A	5.00	Soil Runoff.

Disinfection Byproducts							
Total Trihalomethanes (24.65 - 41.85)	No	2012 all 4 quarters.	30.66 average of 4 quarters.	ug/L	N/A	80.0	By-product of drinking water chlorination needed to kill harmful organisms. They are formed when source water contains large amounts of organic matter.
Total Halocetic Acids (35.2 - 43.5)	No	2012 all 4 quarters.	39.29 average of 4 quarters.	ug/L	N/A	60.0	By-product of drinking water chlorination needed to kill harmful organisms.

* Water containing more than 20 mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/L of sodium should not be used for drinking by people on moderately restricted sodium diets.

Treatment Stage	Lowest Lead	Lowest Copper	Highest Lead	Highest Copper	90% Lead	90% Copper
2012 Monitoring Period	<LOQ	8.8 ug/l	2.40ug/l	163ug/l	1.00ug/l	136 ug/l

Lead action level 15ug/l Copper action level 1300 ug/l.

The table above is data which was gathered from 20 first draw samples.

Some of our data of the representative are more than one year old.

DEFINITIONS

Action Level means the concentration of copper or lead that when exceeded triggers actions to be taken by a water system.

Copper action level = 1.300 milligrams per liter [mg/l] or 1300 micrograms per liter (µg/l)

Lead action level = 0.015 mg/l or 15 µg/l

Contaminant means any physical, chemical, microbiological, or radiological substance or matter in water.

Corrosion Inhibitor means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective coating on the interior surface of these materials.

Effective corrosion inhibitor residual means a concentration sufficient to form a protective coating on the interior walls of a pipe particularly household plumbing to reduce the levels of lead and copper in the water supply.

Emergency source means a source of water supply which is not the regular source or auxiliary source and which is developed or available during an emergency for temporary use.

First draw tap sample for lead and copper means a one liter sample of water collected from a cold water tap after the water has stood motionless in the plumbing system for at least six hours and is collected without flushing the tap.

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Maximum contaminant level (MCL) means the maximum permissible level of a contaminant in water which is delivered to any user of a public water system. For entry point turbidity and inorganic chemicals, the maximum permissible level is measured at the entry point to the distribution system. For organic chemicals the MCL is measured at the individual sources.

Maximum contaminant level goal (MCLG) is defined as the level of a contaminant in water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Maximum Residual Disinfectant Level (MRDL) is 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.

Maximum Residual Disinfectant Level Goal (MRDLG) is 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 contamination.

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Millirems per year (mrem/yr): A measure of radiation absorbed by the body.

Million Fibers per Liter (MFL): A measure of the presence of asbestos fibers that are longer than 10 micrometers.

Non-Detects (ND): Laboratory analysis indicates that the constituent is not present.

Nanograms per liter (ng/l): Corresponds to one part of liquid to one trillion parts of liquid (parts per trillion - ppt).

Nephelometric Turbidity Unit (NTU) is a measure of the clarity of the water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Optimal corrosion control treatment means the corrosion control treatment that reduces the lead and copper concentrations at the users' taps to the lowest reasonably achievable level while insuring that the treatment does not cause the water system to violate Part 5 of the State Sanitary Code or cause adverse health or operational effects.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Picograms per liter (pg/L): Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion – ppq).

Picocuries per liter (pCi/L): A measure of the radioactivity in water.

Principal organic contaminant (POC) means any organic chemical compound belonging to the following classes:

- (1) Halogenated alkane
- (2) Halogenated ether
- (3) Halobenzenes and substituted halobenzenes
- (4) Benzene and alkyl- or nitrogen-substituted benzenes
- (5) Substituted, unsaturated hydrocarbons
- (6) Halogenated non-aromatic cyclic hydrocarbons

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Regular source means a source of water supply which is normally used and is approved by the Local Health Department Entity and other State agencies having jurisdiction.

Source of water supply means any ground water aquifer, surface water body, or water course from which water is taken either periodically or continuously for drinking, culinary, or food processing purposes, or which has been designated for present or future use as a source of water supply for domestic or municipal purposes.

Surface water means all water open to the atmosphere and subject to surface runoff.

Treatment technique refers to a required process intended to reduce the level of a contaminant in drinking water.

Turbidity is a measure of the cloudiness of the water. It is monitored because it is an indicator of water quality and the effectiveness of disinfection.

Unspecified organic contaminant (UOC) means any organic chemical compound not otherwise specified.

WHAT DOES INFORMATION MEAN?

As you can see by the table the system had no violations. We have learned through our testing that some contaminants have been detected, however the contaminants have been detected below New York State requirements.

* DEP is providing important information about an April 19, 2012 turbidity sampling event. This event resulted in a tier 3 monitoring violation for the DEP's system and those systems directly served by the Catskill Aqueduct between Kensico and Hillview Reservoirs.

ABOUT LEAD IN DRINKING WATER

If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. Sleepy Hollow is 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (1-800-426-4791), or by visiting the website at: WWW.EPA/GOV/SAFEWATER/LEAD.COM

WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS

During 2012 our system was in compliance with applicable state drinking water operation monitoring and reporting requirements.

The New York City Department of Environmental Protection conducted a test protocol to determine the concentration of cryptosporidium and giardia in their source water. The results are as follows:

Organism	Total # of Samples	Total # of Organisms in all samples	Average Number of Organisms in each sample
Giardia	49	37	0.75
Cryptosporidium	49	1	0.02

GIARDIA is a microbial pathogen presents in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection. The above table represents our 2010 Giardia routine sampling plan. Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risk of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where hand washing practices are poor.

CRYPTOSPORIDIUM is a microbial pathogen found in surface water and ground water under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. The above table represents our 2010 Cryptosporidium routine sampling plan. Ingestion of Cryptosporidium may cause Cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome disease within a few weeks. However, immune-compromised people are at greater risk of developing life-threatening illness. We encourage immune-compromised individuals to consult their health care provider 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.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about their drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of Cryptosporidium, Giardia, and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

INFORMATION FOR NON ENGLISH SPEAKING RESIDENCE

This report contains very important information about your drinking water. Translate it, or speak to someone who understands it. Este informe contiene informacion muy importante sobre su agua beber. Traduzalo o hable con alguien que lo entienda bien.

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ◆ 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 one of these otherwise invisible toilet leaks. 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.

SYSTEM IMPROVEMENTS

Even though the Village is reduced from sampling the lead and copper for 3 years we are always making improvements of our system. These improvements consist of a corrosion control program. This program consists of the application of caustic soda for pH adjustment and the addition of a blended orthophosphate solution for corrosion protection. The orthophosphate solution is a finely blended product that is added to the water in an effort to lower lead and copper levels at the consumers' taps and enhance water quality. This food grade substance is used in a variety of foods including baked goods, meat and poultry, seafood, dairy products, vegetables, etc., at much higher concentration levels than could ever be ingested from treated water. Through the cooperation of residents, follow up sampling is ongoing to determine the continued effectiveness of this treatment method and to monitor and insure the continued compliance with the Rule.

CONCLUSION

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all of our customers help us protect our water sources, which are the heart of our community and our way of life. For further information, you may call the office of the Sleepy Hollow Water Department between the hours of 8:30 AM and 4:30 PM at 366-5103 or 366-5100.