

Annual Water Quality Report for 2008

Town of Red Hook Water District No. 1
7340 South Broadway
Red Hook, New York 12571
845-758-4608
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(Public Water Supply ID. No. 1302788)

INTRODUCTION

This is the 2008 Annual Water Quality Report for our water district, which is provided in May of each year.

The report is required by federal and state regulations. We all have a right to know about the quality of our drinking water. Our water district has been, and continues to be, in compliance with all requirements; accomplishing all required testing with **no** violations of quality requirements.

You are invited to attend any of the regularly scheduled monthly Water Board meetings (3rd Wednesday of January, March, May, July, September and November at 7:00 p.m.) or Town Board meetings. The Town Board meeting calendar is posted in the Town Hall and on the Town of Red Hook web page (www.RedHook.org).

If you have questions regarding this report or concerns about your water quality, you may contact any of the following representatives.

Water District Administration:

Hank Van Parys, Chairman – Carole Little, Secretary
Town of Red Hook Water District No. 1 (Federal ID No. 1302788)
Town Hall
7340 South Broadway
Red Hook, NY 12571
845-758-4608

System Operator:

Richard R. Cain. Inc.
4 Scenic Drive
Hyde Park, NY 12538
845-229-7410

Health Department:

Dutchess County Department of Health
387 Main Street
Poughkeepsie, NY 12501
845-486-3404

OUR WATER SYSTEM

HISTORY

Our town water district was formed in 1984, when the Town of Red Hook purchased the water system from the Annandale Development Corporation.

Residents of College Park and Linden Acres had been served by the Annandale water system and were often frustrated by quality and availability problems. The owning development corporation tired of operating the water supply and dealing with its problems so they agreed to turn it over to the town. The Town of Red Hook formed an "improvement district" in accordance with New York State Town Law to provide financing and operation of the water supply.

District capital expenses for a new water supply and a storage tank were financed by bonds and paid for by water district residents via an ad valorem property tax. The outstanding debt was paid off in 2002 thus eliminating the ad valorem tax.

OUR WATER

Our water system supply comprises two drilled wells adjacent to the Sawkill stream near the Recreational Park of Red Hook and a 920,000 gallon storage tank on a hill off Kelly Road. In 2008, the wells produced 40.4 million gallons of water averaging about 110.6 thousand gallons daily. The water is filtered through a cartridge filter system and then treated with sodium hypochlorite to eliminate pathogens. We try to maintain a chlorine residual of 0.2 to 0.5 parts per million at our 920,000 gallon storage tank off Kelly Road. Our water district currently serves nearly 500 homes.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

In general, the sources of drinking water (whether tap water or bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the earth it dissolves naturally-occurring minerals and it can also pick up substances resulting from animal or human activities.

Types of contaminants that **may** be present in water sources include:

- microbial contaminants; such as (*e.Coli*) from animal and human waste
- inorganic contaminants; e.g. copper, lead, flouride, mercury, nitrates, etc.
- organic chemical contaminants; often petroleum based, e.g. pesticides and herbicides
- radioactive contaminants; e.g. uranium

OUR TESTING

New York State Department of Health and EPA regulations specify Maximum Contaminant Levels (MCLs), below which drinking water is safe for consumption. Periodic sampling and testing is required of us and other public water supplies to ensure that contaminants which may be present in the water exist at levels which are safe for human consumption.

We test for some contaminants twice-monthly, e.g. bacterial contaminants, and for others at yearly or multi-year intervals.

During 2008, in addition to the twice monthly bacteria tests, we checked for nitrates, lead and copper, and disinfection by-products.

For some reason, probably operator error, we only did 5 lead and copper tests vs. the 10 test required. We will do 10 lead and copper tests early in 2009 to satisfy the requirement.

We also added tests in conformance with requirements of the Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR). The requirement affects surface water (ponds, streams, etc.) water supplies and water supplies which are "under the influence" of surface water. Our water supply is under the influence, i.e., derives some water from a nearby pond. The tests involve specific tests for e.Coli, with enumeration of the number of detections. Tests are required twice monthly:

- for each well
- prior to filtration or disinfection
- within a 5-day period

We have had no e.Coli detections thus far since September of 2008.

The following table indicates which contaminants were detected in your water when most recently tested. Most contaminants were not detected. As you can see in the table, the contaminants that were detected **did not** violate allowable contaminant levels. These detected contaminants exist at much smaller concentrations than the maximum allowable level (which would require corrective action).

2008 TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Y/N	Sample Date	Level Detected	Unit of Measure	MCL Goal	MCL	Likely Source
Copper (5 Samples)	No	Aug-08	Range 0.020 to .348	mg/L	1.3	Action Level =1.3 mg/L	Corrosion of galvanized pipe & erosion of natural deposits.
Lead (5 Samples)	No	Aug-08	none detected	mg/L	0.015 mg/L	Action Level =15 mg/L	Corrosion of household plumbing & erosion of natural deposits.
Nitrate	No	Jan-08	0.5	mg/L	10 mg/L	10 mg/L	Agriculture & lawn fertilization run off & septic leakage.
Barium	No	Dec-05	0.151	mg/L	N/A	2.0 mg/L	Erosion of natural deposits or from drilling or mining waste.
Mercury	No	Dec-05	0.0004	mg/L	0.002 mg/L	0.002 mg/L	Erosion of natural deposits. Discharge from croplands, run off from landfills. Discharges from refineries & factories.
Synthetic Organic Chemicals (SOCs)	No	Aug-08	Less than MCL	ug/L		MCL varies by specific contaminant	Typically runs off from herbicides & pesticides.
Total HAA5 (Haloacetic Acids)	No	Aug-08	0.0011	mg/L	NE	60 mg/L	Chlorination by-product
Total THMS Trihalomethanes	No	Aug-08	10.8	ug/L	NE	100 ug/L	Chlorination by-product

Maximum Contaminant Level(MCL):The highest level of a contaminant allowed in drinking water. MCLs are set as close to MCLGs as possible.

Maximum Contaminant Level Goal(MCLG):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.

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

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

Not Established: (NE)

Micrograms per liter (ug/L): Corresponds to one part of liquid in 1 billion parts of liquid (ppb).

2008 TABLE OF DETECTED CONTAMINANTS

Contaminant	Violation Y/N	Sample Date	Activity	Unit of Measure	MCL	Likely Source
Radioactive Contaminants	No	May-04		pCi/L		Decay of natural deposits
Radium-226	No	May-04	0.12	pCi/L	0.24	
Radium-228	No	May-04	1.07	pCi/L	1.73	
Gross Alpha-A	No	May-04	-0.34	pCi/L	2.21	
Gross Alpha-B	No	May-04	2.31	pCi/L	2.72	
Total Uranium	No	May-04	0.00	pCi/L	0.81	

Maximum Contaminant Level (MCL): The highest level of a contaminant allowed in drinking water.
Picocuries per liter (pCi/L): Picocuries per liter is a measure of the radioactivity in water.

For your peace of mind, following is status of our testing related to some common concerns:

- Bacteria (total Coliform) tests performed twice monthly. No detections.
- e.Coli. 2 well tests, twice monthly. No detections.
- MTBE. Part of test for Principal Organic Contaminants in 2007. Not detected.
- Arsenic. No detections. Test performed in 2005 as part of a set of Inorganic Contaminants (IOCs).
- Cryptosporidium and giardia. Microscopic Particulate Analysis performed in 2000, 2001 and 2002. No detections. Our filter system removes these pathogens.
- Turbidity. Turbidity is measured constantly at the output of the filters and recorded daily. The monthly average is 0.062 vs. a maximum level of 1.0 Nephelometric Turbidity Units (NTU). Our highest single measurement was 0.8 NTU.

You should realize that all drinking water, including bottled drinking water, may be reasonably expected to contain 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 calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Dutchess County Department of Health at 845-486-3404.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2008 our system was in compliance with all applicable New York State Drinking Water Requirements.

INFORMATION ON CRYPTOSPORIDIUM AND GIARDIA

You have probably seen and heard news stories about instances of problems (usually intestinal) caused by these pathogens which are especially dangerous for infants and the elderly.. Giardia and cryptosporidium are microbial pathogens-- protozoa, not bacteria -- found in most surface waters in this country. They are **NOT** controlled by chlorine. Filtering is required to remove these pathogens from drinking water.

In 2003 we installed a cartridge filter system, at a cost of \$95,000, to remove cryptosporidium and giardia cysts. We were vulnerable to these pathogens, though they had never been detected in our testing.

DO YOU NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water continues to meet or exceed 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

You should be aware that bottled water is not necessarily safer than our tap water.

WHY AND HOW TO SAVE WATER

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 associated costs;
- Reduces the need to construct costly new wells, pumping systems, and water storage facilities;
- 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; and,
- Saves **you** money in your quarterly water bills.

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. Some conservation tips are:

- 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 or shaving.
- 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.
- Check your water softener. It may be recycling more often than necessary.
- 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.

OTHER ITEMS OF INTEREST

1. System Maintenance - In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The impact of these improvements, and of scheduled maintenance such as flushing the mains, unfortunately, is some level of inconvenience. We will attempt to inform you prior to these activities and ask for your understanding and patience.
2. Security - We should all become more aware of the vulnerability of our water supply to contamination, and remain alert to prevent all types of contamination activities in our own and in other peoples' watersheds. Please notify Water District personnel (see front page) if you notice suspicious activity.
3. Hardness – We are occasionally asked how “hard” our water is. Our water is approximately **14 grains hard**. “Hardness” does not change much, so this is a guideline.

SOURCE WATER ASSESSMENT SUMMARY

The NYS DOH has completed a source water assessment for our system based on available information. Possible and actual threats to this drinking water source were evaluated. The state source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how easily contaminants can move through the subsurface to the wells. **The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated.** See section “Are there contaminants in our drinking water?” for a list of the contaminants that have been detected, if any. The source water assessments provide resource managers with additional information for protecting source waters into the future.

The source water assessment has rated our water source as having an elevated susceptibility to microbial and nitrate contamination. There ratings are due primarily to the close proximity of the wells to permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) and the agricultural and residential land use and their related activities in the assessment area. In addition, the wells are located in an area with a possibility of flooding.

The county and state health departments will use source water assessment to direct future source water protection activities. These may include water quality monitoring, resource management, planning and education programs. A copy of the assessment can be obtained by contacting us, as noted above.