

*Annual Drinking Water Quality Report for 2011  
Highland Water District  
12 Church Street, Highland N.Y. 12528  
(Public Water Supply ID#NY5503368)*

## **INTRODUCTION**

To comply with State regulations, the Highland Water District, will be annually issuing a report describing 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 and we are proud to report that our system did not violate a maximum contaminant level. This report provides an overview of last year's water quality. 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 concerning your drinking water, please contact Andrew Paccione, Chief Operator, at (845) 691-2400. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Town Board meetings. The meetings are held on the second Wednesday of every month, at the Town Hall, 12 Church Street, Highland, N.Y.

## **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 can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water 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 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 protection for public health.

Our water sources are the Hudson River and four upland reservoirs. One horizontal and three vertical wells, drilled into Illinois Mountain, are used as supplemental sources for the reservoirs. The reservoirs and wells are located behind the John Jankiewicz Water Plant at 2 Thomas Rizzo Boulevard, Highland, NY 12528. During 2009, our system did not experience any restriction of our water source. The water is chemically conditioned, clarified, filtered, and chlorinated prior to distribution.

## **FACTS AND FIGURES**

Our water system serves approximately 5,000 people through 1,630 service connections. The total water produced in 2011 was 186,490,600 gallons. The daily average of water treated and pumped into the distribution system was 510,933 gallons, with our highest single day at 1,544,000 gallons. The amount of water delivered to customers was 135,458,646 gallons. This leaves 51,031,954 gallons of water unaccounted for. Flushing water mains, fighting fires, water main breaks, leakage and unmetered usage, road cleaning, and state contractor usage account for the remaining 51,031,954 gallons (27% of the total amount produced).

In 2011, water customers were charged \$3.75 per 1,000 gallons of water used.

### 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, E.Coli, turbidity, lead and copper, total trihalomethanes, haloaceticacids, primary inorganic chemicals, nitrate, nitrite, principal organic contaminants, synthetic organic compounds and radiological. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, may be more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably 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 calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Ulster County Health Department at (845) 340-3010.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
<u>Microbiological Contaminants</u>							
Turbidity*	no	1/6/11	.23	ntu	N/A	TT=<1.0 ntu	soil runoff
Turbidity*	no	1/31/11	100%<.03	ntu	N/A	TT=95%of samples	soil runoff
Total Organic Carbon*	no	11/17/11	3.0	mg/l	N/A	TT range <1-3.0	Natural Present in the Environment
<u>Inorganic Contaminants</u>							
Barium	no	6/16/11	.004	mg/l	2	2	Erosion of natural deposits
Chloride	no	6/16/11	23	mg/l	N/A	250	Naturally occurring
Managanese	no	6/16/11	.004	mg/l	N/A	.3	Naturally occurring
Nitrate-Nitrogen	no	6/16/11	.24	mg/l	N/A	1	Naturally occurring
Lead*3	no	6/17/09	24	ug/l	N/A	AL=-15	Corrosion of household plumbing
	no	6/17/09	25	ug/l	N/A	AL=15	Corrosion of household plumbing
Copper*4	no	6/17/09	1.34	mg/l	N/A	AL=1.3	Corrosion of household plumbing
Sodium*5	no	4/20/12	66	mg/l	N/A	N/A	Naturally Occuring
Sulfate	no	6/16/11	8	mg/l	N/A	250	Naturally Occuring
<u>Disinfection By Products</u>							
Total Trihalomethanes*6no		8/11/11	*57.0 Range: 20.8-119.3	ug/l	N/A	80	Chlorine by Product
Total Haloacetic Acids*7no		2/3/11	*54.9 Range: 2-	ug/l	N/A	60	Chlorine By Product

Chlorine Residual\*8 no 9/15/11 2.3 mg/l N/A 4 micro organisms

\*1 – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement (0.23 NTU) for the year occurred on 1/7/11. State regulations require that turbidity must always be below 1 NTU. The regulations require that 95% of the turbidity samples collected have measurements below 0.3 NTU.

\*2 Total Organic Carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by products. These include trihalomethanes (THMs) and haloacetic acids (HAAs).

\*3- Twenty samples were collected in our water system and the range of detection was (ND-25). The 90<sup>th</sup> percentile value of the 20 sites tested was the third highest value (13 ug/l). A percentile is equal to or greater than 90% of the lead values detected at our water system. The action level for lead exceeded at two of the sites tested.

\*4- Twenty samples were collected in our water system and the range of detection was (.027-1.34). The 90<sup>th</sup> percentile of the 20 sites tested was the highest value (0.316 mg/l). The action level for copper was exceeded at one of the sites tested.

\*5- Water containing more than 20mg/l of sodium should not be used for drinking by people on severely restricted sodium diets.

\*6- This level represents the highest annual average calculated from the data collected.

\*7- This level represents the highest annual average calculated from the data collected.

\*8- Value presented represents the Maximum Residual Disinfectant Level (MRDL) which is a level of disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects. MRDLs are currently not regulated but in the future they will be enforceable in the same manner as MCLs.

Definitions:

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

**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.

**Maximum Residual Disinfectant Level (MRDL)**: 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)**: 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.

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

**Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water.

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

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

**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).

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

**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.

**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.

## **WHAT DOES THIS INFORMATION MEAN?**

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below New York State requirements. It should be noted that the action level (15ug/l) for lead was exceeded at two sites, or 10% of the homes tested. We are required to present the following information on 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. The Highland Water District 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>.

## **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During 2011, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirement.

## **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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800) 426-4791.

## **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**

In 2011, The Water District implemented a "jar testing" study, of the river source water, to help reduce disinfection byproducts. This improvement will meet new state regulations. The District also installed two new turbine river pumps, that produce more water while using less energy.

## **CLOSING**

Thank you for allowing us to continue to provide your family with quality drinking water this year. We ask that all our customers help us protect our water sources, which are the heart of our community. This report will also be available on the web at [www.townoflloyd.com/water](http://www.townoflloyd.com/water).

Please contact our office at (845)691-2400 if you have questions.