Annual Drinking Water Quality Report for 2011, 2012 & 2013
LORELEI Water District
99 TOWER DR., BLDG.
MIDDLETOWN NY 10941
(Public Water Supply ID# NY3503585)

INTRODUCTION

This report has been prepared by the Orange County Health Department and has been distributed by the Town of Wallkill. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. This report provides an overview of water quality over the years cited. Included are details about where your water comes from, what it contains, and how it compares to State standards.

In late 2013 the Town of Wallkill began operating the water supply under an agreement with the owner. As part of the agreement, the Town made significant improvements at the water supply by completely replacing the 1960's era water treatment facility with a new building and attendant water storage, treatment, pumping and control equipment, and constructing a new well. Improvements were paid for with a bond which residents will pay off over 30 years along with the costs of operating the system. Transfer of ownership to the Town is expected to take place before the end of 2014.

If you have any questions about this report or concerning your drinking water, please contact Mr. Tim Grogan, Water Supt.(?), Town of Wallkill Water & Sewer Department at 845-342-1668 or Mr. Lee Bergus, Sr. Public Health Engineer, Orange County Health Department 845-291-2331. 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 **date, time and 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 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 system serves 184 people through 46 service connection. Our water source is two groundwater wells approximately 100 Ft deep which are located near the treatment building. The water is disinfected with sodium hypochlorite prior to distribution.

The NYS DOH has completed a source water assessment for this system, based on available information. A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as noted in this report. 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 "Table of Detected Contaminants" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

As mentioned before, our water is derived from two drilled wells. The source water assessment has rated these wells as having a medium-high susceptibility to microbials. These ratings are due primarily to the close proximity of a septic system that is located in the assessment area. In addition, the wells draw from fractured bedrock and a confined

aquifer with the estimated recharge area within the selected time of travel and the overlying soils are not known to provide adequate protection from potential contamination. While the source water assessment rates our well as being susceptible to microbials, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

State regulations require routine testing of 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 table presented below depicts which compounds were detected in your drinking water. The State allows testing for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, are 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 Orange County Health Department at 845-291-2331.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Date of Sample	Level Detected	Unit Measure-ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Barium	No	8/12/10	0.0373	mg/l	2	MCL = 2	Erosion of natural deposits.
Nitrate	No	9/27/12	1.01	mg/l	10	MCL = 10	Runoff from fertilizer use
Copper (See Note 1)	No	9/27/12	90^{th} = 0.12 Range = 0.05 to 0.16	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems
Lead (See Note 2)	No	9/27/12	90^{th} = 1.9 Range = ND to 1.9	ug/l	0	AL = 15	Corrosion of household plumbing systems
Sodium	No	9/27/12	27	mg/l	N/A	See Note 3	Naturally occurring
Nickel	No	8/12/10	4.1	ug/l	100	MCL = 100	Erosion of natural deposits
Sulfate	No	8/12/10	20	mg/l	N/A	MCL = 250	Naturally occurring
Total Trihalomethanes (TTHMs)	No	8/12/10	6.7	ug/l	N/A	MCL = 80	Byproduct of drinking water disinfection needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter.
Five Haloacetic Acids (HAA5)	No	8/12/10	6.6	ug/l	N/A	MCL = 60	

Notes:

1 – The level presented represents the 90^{th} percentile of the four sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90^{th} percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, four (4) samples were collected at your water system and the 90^{th} percentile value was the average of the two highest values, 0.12 mg/l. The action level for copper was not exceeded at any of the sites tested.

2 – The level presented represents the 90^{th} percentile of the four (4) samples collected. The action level for lead was not exceeded at any of the sites tested.

3 - 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.

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.

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

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).

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, our system had no water quality violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the levels allowed by the State.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

It is 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. Monitoring was not done for the contaminants indicated during the years stated below. Therefore we cannot be sure of the quality of your drinking water during that time.

- 2011: copper, lead, nitrate, sodium, synthetic organic chemicals.
- 2013: copper, disinfection byproducts, lead, nitrate, sodium, principal inorganic chemicals.

Additionally, monthly operations reports were not submitted for the following months: March 2011; April & September through December 2012; and January through May, July & September through December 2013. Furthermore, violations were received for failure to provide Annual Water Quality Reports for the years 2010, 2011 and 2012. **Since the Town of Wallkill has begun operating the system no violations have been accrued**. Shown in the table below is a more detailed look at the violations received by the water supply in the years 2011-2013:

NOV #	For the Period		Reason	NOV #	For the Period		Reason
2012-4260	1/1/2011	12/31/2011	SODIUM	2013-4263	9/1/2012	9/30/2012	Operations Report
2012-4261	1/1/2011	12/31/2011	NITRATE	2013-4264	10/1/2012	10/31/2012	Operations Report
2012-4822	1/1/2006	12/31/2011	SYNTHETIC OC	2013-4265	11/1/2012	11/30/2012	Operations Report
2014-4279	1/1/2013	12/31/2013	NITRATE	2013-4266	12/1/2012	12/31/2012	Operations Report
2014-4282	1/1/2013	12/31/2013	SODIUM	2013-4267	1/1/2013	1/31/2013	Operations Report
2014-5436	1/1/2011	12/31/2013	PRINCIPAL IOC	2013-4271	2/1/2013	2/28/2013	Operations Report
2014-5403	1/1/2011	12/31/2013	TTHM & HAA5	2013-4272	3/1/2013	3/31/2013	Operations Report
2013-4270	1/1/2011	12/31/2011	LEAD & COPPER	2013-4273	4/1/2013	4/30/2013	Operations Report
2014-4296	1/1/2013	12/31/2013	LEAD & COPPER	2013-4274	5/1/2013	5/31/2013	Operations Report
2012-4220	1/1/2010	12/31/2010	Water Quality Rpt	2013-4275	7/1/2013	7/31/2013	Operations Report
2013-4269	1/1/2011	12/31/2011	Water Quality Rpt	2014-4276	9/1/2013	9/30/2013	Operations Report
2014-4295	1/1/2012	12/31/2012	Water Quality Rpt	2014-4277	10/1/2013	10/31/2013	Operations Report
2011-4218	3/1/2011	3/31/2011	Operations Report	2014-4278	12/1/2013	12/31/2013	Operations Report
2012-4262	4/1/2012	4/30/2012	Operations Report				

The following testing is scheduled for 2014: Copper, Gross Alpha Activity, HAA5s, Lead, Nitrate, Principal Inorganic Chemicals, Sodium, TTHM, & Uranium.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

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 firefighting 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.

CLOSING

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.