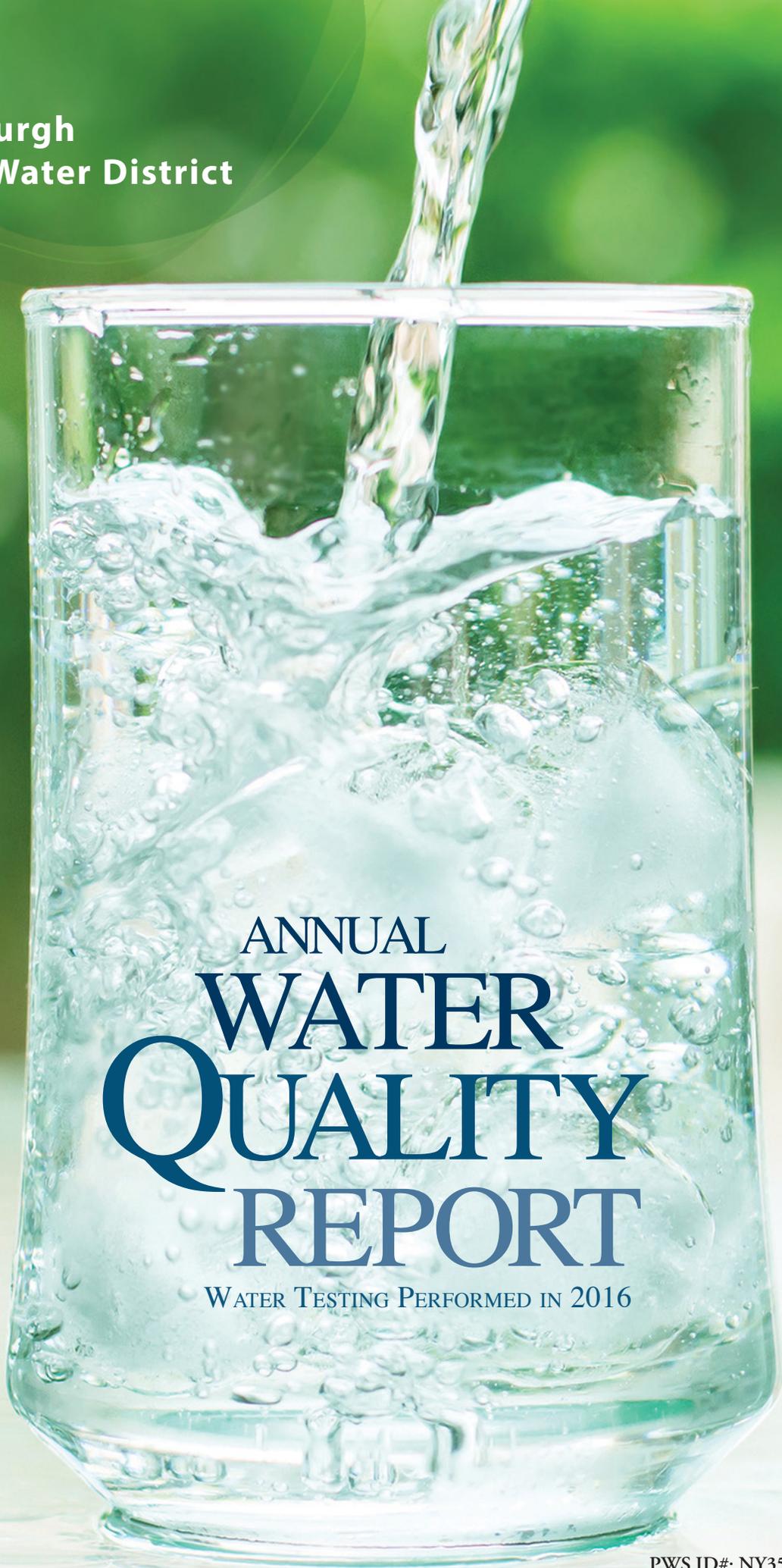
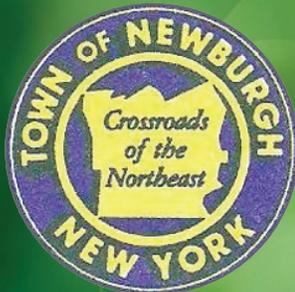


Presented By  
Town of Newburgh  
Consolidated Water District



ANNUAL  
WATER  
QUALITY  
REPORT

WATER TESTING PERFORMED IN 2016

## We've Come a Long Way

We are proud to present our annual water quality report covering the period between January 1 and December 31, 2016. In a matter of only a few decades, drinking water has become exponentially safer and more reliable than at any other point in human history. Our exceptional staff continues to work hard every day—at any hour—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

For more information about this report, contact John P. Egitto, Operations Engineer, at (845) 564-2180 or the Orange County Health Department at (845) 291-2331. You may also contact the New York State Department of Health at (800) 458-1158. The U.S. EPA drinking water Web site ([www.epa.gov/safewater](http://www.epa.gov/safewater)) also provides valuable information.

## Substances That Could Be in Water

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.

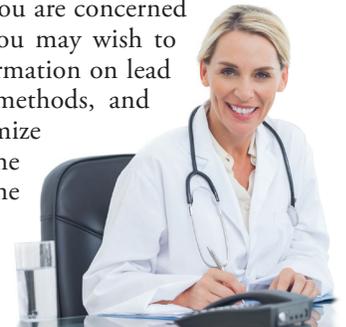
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, the State and the U.S. EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the U.S. FDA's regulations establish limits for contaminants in bottled water that must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.



## Important Health Information

Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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 at (800) 426-4791.

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. We are responsible for providing high-quality drinking water, but we 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 (800) 426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).



## Where Does My Water Come From?

The Town utilizes two sources of water: Chadwick Lake Reservoir and New York City DEP's Delaware Aqueduct. The Chadwick Lake Filter Plant has the capacity to treat 3.2 million gallons of water per day. The Delaware Aqueduct supply is taken from New York City's Delaware Watershed, which comprises four large reservoirs in the Catskill region. The Delaware Aqueduct Facility has the capacity to supply 6 million gallons of water per day. A new filtration plant for the Delaware source went on line in November of 2013.

## Facility Modification and System Improvements

During 2016, the Stewart Field storage tank was rehabilitated and put back into service. On the Tank I storage tank, an altitude valve was installed.

## Water Treatment Process

The Town utilizes two separate water sources, which are blended in our distribution system. At the Chadwick Lake Filtration Plant, water is drawn from the reservoir and a chemical is added for coagulation. This process causes small particles to adhere to one another forming what is called a floc. As this floc grows larger, it becomes heavier, and settles into a basin, from which sediment is removed. The water is then processed through sand filters, producing a crystal-clear effluent. Chemicals for pH adjustment and corrosion control are added at this point. Finished water can then pass through an additional filtration process for the removal of iron and manganese, as necessary. The water from our Delaware Aqueduct facility is purchased from New York City DEP. At our new state-of-the-art filtration plant for the Delaware source, water is filtered through a membrane barrier, and then chemically treated for pH and corrosion control. Sodium hypochlorite is added to both drinking water sources as a disinfectant. The water is fluoridated at both facilities for consumer dental health protection.



### Facts and Figures

Our water system serves 22,800 customers through 6,600 service connections. The total amount of water produced in 2016 was 972.5 million gallons. The daily average of water treated and pumped into the distribution system was 2.7 million gallons per day. The 2016 billing rate was \$16.00 for the first 7500 gallons used; \$4.40/1,000 gals. for the next 10,000 gals. used; \$5.20/1,000 gals. for the next 82,500 gals. used; and \$6.20/1,000 gals. thereafter. The minimum quarterly bill was \$16.00.

### Water Conservation Tips

You can play a role in conserving water and save yourself money in the process 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. Here are few tips:

- 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 an invisible toilet leak. 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.

### Community Participation

If you would like to learn more about your drinking water, please attend any of our regularly scheduled Town Board meetings. A schedule of meetings is available from the Town Clerk's Office, 1496 Route 300, Newburgh, NY, (845) 564-4554.

### Source Water Assessment

The NYS DOH has evaluated the Town of Newburgh Consolidated Water District's (TONCWD) susceptibility to 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 Water District. The TONCWD provides treatment and regular monitoring to ensure that the water delivered to consumers meets all applicable standards.

A copy of the assessment, including a map of the assessment area, can be obtained by contacting us, as noted in this report.

#### Chadwick Lake Reservoir Assessment Summary

This assessment found an elevated susceptibility to contamination for this source of drinking water. Land cover and its associated activities within the assessment area do not increase the potential for contamination. Non-sanitary wastewater discharges may also contribute to contamination. There are no noteworthy contamination threats associated with other discrete contaminant sources. Additional sources of potential contamination include a roadway.

#### Delaware Aqueduct Source Water Assessment Summary

The TONCWD also obtains water from the New York City water supply system. Water comes from the Delaware watershed west of the Hudson River. The SWAP methodologies applied to the rest of the state were not applied to the Delaware Aqueduct Source. Additional information on the water quality and protection efforts in these New York City watersheds can be found at DEP's web site at [WWW.nyc.gov/dep/watershed](http://WWW.nyc.gov/dep/watershed).

## Fluoridation of Our Water

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.6 to 0.8 ppm. To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that we monitor fluoride levels on a daily basis. During the reporting year, monitoring showed fluoride levels in your water were in the optimal range 97 percent of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 ppm MCL for fluoride.

### TOWN OF NEWBURGH BACTERIOLOGICAL SAMPLING RESULTS

CONTAMINANT (UNIT OF MEASURE)	VIOLATION YES/NO	DATE OF SAMPLE	RESULT	MCLG	REGULATORY LIMIT (MCL, TT)	TYPICAL SOURCE
Total Coliform Bacteria (sample result)	No	12/07/16	Positive	0	See below	Naturally present in the environment
		12/28/16	Positive			
E. coli (sample result)	No	12/07/16	Positive	0	Any confirmed positive sample—see below	Human and animal fecal waste
		12/28/16	Negative			

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

These two positive Total Coliform samples were both unconfirmed by repeat testing. Additionally, the E. coli detection on 12/7/16 was not confirmed by repeat testing and so was not a violation. However, under the Revised Total Coliform Rule multiple coliform detects in the distribution system during the same month require the water supplier to conduct a Level 1 Assessment. The two unconfirmed total coliform detections noted in the table above triggered a Level 1 Assessment which we conducted during January 2017.

The findings of the Level 1 Assessment were that the tap where the sample was taken was dirty. The corrective actions taken regarding the findings of this assessment were that the dirty tap was switched out to a non environmentally compromised tap, and that the Water Supply Manager reviewed sampling technique with collection personnel. These corrective actions were in place by 1-06-2017.

## Nondetected Contaminants

Following is a list of contaminants that we tested for but did not detect in our water supply.

Inorganics: Antimony, Arsenic, Asbestos, Beryllium, Bromate, Cadmium, Chlorite, Cyanide, Iron, Mercury, Selenium, Silver, Thallium, Uranium, Zinc

Volatile Organics: Alachlor; Aldicarb; Aldicarb sulfone; Aldicarb sulfoxide; Aldrin; Atrazine; Benzene; Benzo(a)pyrene; bis(2-Ethylhexyl)adipate; bis(2-Ethylhexyl)phthalate; Bromobenzene; Bromomethene; Butachlor; n-Butylbenzene; sec-Butylbenzene; tert-Butylbenzene; Bromochloromethane; Carbon Tetrachloride; Carbaryl; nCarbofuran; 3-Hydrocarbofuran; Chlordane; Chloroethane; Chloromethane; 1,2-Dibromo-3-chloropropane; 1,2-Dibromoethane; 2-Chlorotoluene; 4-Chlorotoluene; Dalapon; Dibromomethane; Dicamba; Dinoseb; 1,2-Dichlorobenzene; 1,3-Dichlorobenzene; 1,4-Dichlorobenzene; Dichlorodifluoromethane; 1,1-Dichloroethane; 1,2-Dichloroethane; 1,1-Dichloroethene; cis-1,2-Dichloroethene; trans-1,2-Dichloroethene; 1,2-Dichloropropane; 1,3-Dichloropropane; 2,2-Dichloropropane; 1,1-Dichloropropene; cis-1,3-Dichloropropene; trans-1,3-Dichloropropene; Dieldrin; Endrin; Ethylbenzene; gamma-BHC (Lindane); Heptachlor; Heptachlor epoxide; Hexachlorobenzene; Hexachlorocyclopentadiene; Hexachlorobutadiene; Isopropylbenzene; p-Isopropyltoluene; Methoxychlor; Methomyl; Metalochlor; Methylene Chloride; Metribuzin; Oxamyl; PCB, total; Pentachlorophenol; Picloram; Propachlor; n-Propylbenzene; Styrene; Simazine; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; 2,4,5-TP (Silvex); Tetrachloroethene; Toluene; Toxaphene; 1,2,4-Trichlorobenzene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethane; Trichlorofluoromethane; 1,2,3-Trichloropropane; 1,2,4-Trimethylbenzene; 1,3,5-Trimethylbenzene; o-Xylene; m-Xylene; p-Xylene; Xylene, Total; MTBE; Vinyl chloride

## Test Results

Our water is monitored for many different kinds of contaminants on a very strict sampling schedule. The information below represents only those substances that were detected; our goal is to keep all detects below their respective maximum allowed levels. The State recommends monitoring for certain substances less often 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

Town of Newburgh Consolidated Water District														
Chadwick Lake														
Delaware Aqueduct														
SUBSTANCE (UNIT OF MEASURE)	MCL [MRDL]	MCLG [MRDLG]	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE	
Barium (ppm)	2	2	NA	NA	NA	5-17-16	0.0064	NA	5-17-16	0.0064	NA	No	Erosion of natural deposits	
Chloride (ppm)	250	NA	NA	NA	NA	5-18-16	72	NA	5-18-16	15	NA	No	Naturally occurring	
Fluoride (ppm)	2.2	NA	NA	NA	NA	5-17-16	0.60	0.40–0.80	5-17-16	0.56	0.50–0.60	No	Water additive that promotes strong teeth	
Haloacetic Acids <sup>1</sup> (ppb)	60	NA	Quarterly 2016	50.0	13.8–61 <sup>2</sup>	NA	NA	NA	NA	NA	NA	No	By-product of drinking water disinfection needed to kill harmful organisms	
Odor (TON)	3	NA	NA	NA	NA	5-18-16	1.0	1.0–1.0	5-18-16	1.0	1.0–1.0	No	Natural sources	
Sodium (ppm)	See footnote #3	NA	NA	NA	NA	5-18-16	38	NA	5-18-16	8.8	NA	No	Naturally occurring	
Sulfate (ppm)	250	NA	NA	NA	NA	5-18-16	10	NA	5-18-16	5.4	NA	No	Naturally occurring	
TTHMs [Total Trihalomethanes] <sup>1</sup> (ppb)	80	NA	Quarterly 2016	71.8	28–92 <sup>4</sup>	NA	NA	NA	NA	NA	NA	No	By-product of drinking water chlorination needed to kill harmful organisms; Formed when source water contains large amounts of organic matter	
Turbidity [Distribution System] <sup>5</sup> (NTU)	TT	NA	Sept-16	0.26	0.12–0.26	NA	NA	NA	NA	NA	NA	No	Soil runoff	
Turbidity <sup>5</sup> (NTU)	TT	NA	NA	NA	NA	12-02-16	0.21	0.01–0.21	11-02-16	0.07	0.02–0.07	No	Soil runoff	
Turbidity (Lowest monthly percent of samples meeting limit)	TT = 95% of samples meet the limit	NA	NA	NA	NA	12-02-16	100	NA	11-02-16	100	NA	No	Soil runoff	

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	AL	MCLG	DATE SAMPLED	AMOUNT DETECTED (90TH%TILE)	RANGE LOW-HIGH	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	1.3	1.3	July, August 2014	0.54	0.029–0.75	0/30	No	Corrosion of household plumbing systems
Lead (ppb)	15	0	July, August 2014	4.9	1.0–17	1/30	No	Corrosion of household plumbing systems

### UNREGULATED SUBSTANCES

Chadwick Lake							
Delaware Aqueduct							
SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	DATE SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Nickel (ppb)	5-17-16	1	1–1	5-17-16	1	1–1	Erosion of natural deposits

### UNREGULATED CONTAMINANT MONITORING RULE PART 3 (UCMR3) – NEWBURGH CONSOLIDATED

SUBSTANCE (UNIT OF MEASURE)	DATE SAMPLED	AMOUNT DETECTED
Chlorate (ppb)	6/23	440
Chromium-6 (ppb)	6/23	0.19
Chromium(total) (ppb)	3/24	0.38
Strontium (ppb)	3/24	113
Vanadium (ppb)	6/23	0.35

<sup>1</sup> TTHM and HAA5 values as indicated represent the highest Locational Running Annual Average for the year and show the range of all individual samples collected throughout the year.

<sup>2</sup> Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

<sup>3</sup> Water containing more than 20 ppm of Sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 ppm of sodium should not be used for drinking by people on moderately restricted sodium diets.

<sup>4</sup> Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their livers, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

<sup>5</sup> Turbidity is a measure of the cloudiness of the water. It is tested because it is a good indicator of the effectiveness of the filtration system. The highest measurement of the monthly average distribution results for the year occurred as indicated in the table above. 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. (Note that TT is dependent upon filtration method: conventional, 0.3 NTU; slow sand, 1.0 NTU; or diatomaceous earth filtration, 1.0 NTU.) As indicated in the table above, all our turbidity measurements met the treatment technique for turbidity, were within the acceptable range allowed, and did not constitute a treatment technique violation.

## Definitions

**90th percentile:** The levels reported for lead and copper represent the 90th percentile of the total number of 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 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system.

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

**Level 1 Assessment:** A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

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

**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

**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).

**TON (Threshold Odor Number):** A measure of odor in water.

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