



# WATER QUALITY

## INFORMATION



## DEAR CUSTOMER:



United Water is dedicated to providing you and your family with water that is safe and healthy, so we're proud to let you know that we made the grade! Our test results show that our water meets or surpasses all state and federal standards for safe drinking water. At United Water, we take great pride in our ability to provide you with drinking water that meets—and often surpasses—all the health and safety standards set by the United States Environmental Protection Agency (USEPA), the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH). Water is an essential element in our lives—it makes up 65 percent of our bodies, and health experts recommend that we drink eight glasses of water a day. That's why it's so important that we conduct the many tests that we do on your water. You can read more about these test results in this report.

As part of this commitment, we regularly test water samples to be sure that your water meets the safety standards. All the test results are on file with the NYSDOH, the agency that monitors and regulates drinking water quality in our state. Both the EPA and the NYSDOH require water suppliers to mail an Annual Water Quality Report to customers every year. This report provides important information about your drinking water. It shows how your drinking water measured up to government standards during 2010. Please read it carefully and feel free to call us at 845.623.1500, if you have any questions about your water or your service. You can contact the EPA Safe Drinking Water Hotline at 800.426.4791, the NYSDOH at 518.402.7713 or the RCDOH at 845.364.2608. If you have specific questions about water as it relates to your personal health, we suggest that you contact your health care provider.

Sincerely,

*Michael J. Pointing*

Michael J. Pointing  
Vice President & General Manager

## WHO WE ARE

United Water New York, based in West Nyack, New York, provides water and wastewater service to more than 285,000 people in Rockland and parts of Orange County.

Its parent company, United Water, is one of the nation's leading environmental companies, providing water and wastewater services to approximately 7 million people in the United States. In addition to owning and operating 20 water utilities, the company operates more than 220 municipal and industrial water and wastewater systems through innovative public-private partnerships and contract agreements. United Water's affiliate, Utility Service Company, is the nation's leading provider of long-term asset management contracts for water storage facilities with municipal and industrial clients. Founded in 1869, United Water is a subsidiary of SUEZ ENVIRONNEMENT.

In 2010,  
United Water New York  
provided an average  
of 27.7 million gallons  
of water per day to  
customers in Rockland  
and Orange counties.

UNITED WATER  
NEW YORK

**FACT**

WATER DELIVERED IN 2010:  
**10.88 BILLION GALLONS**



# VALUE OF WATER



LESS THAN 1 CENT

At less than one penny per gallon, tap water is safe, convenient and an exceptional value.

## ABOUT YOUR WATER SUPPLY

United Water's public water system identification number is NY4303673. We provide service to more than 285,000 people in Rockland and parts of Orange County. About 70 percent of our water supply is from various wells located throughout the county, and the remaining 30 percent is surface water supply from the Lake DeForest and Letchworth reservoirs. In 2010, United Water produced 10.88 billion gallons of water. We determined that 19.6 percent of the water we produced is non-revenue producing. This is water lost due to leaks, main breaks, under-registering meters, fire fighting, hydrant flushing and theft of service. On average about 43 inches of rain fall each year in the Hackensack River Watershed, which is the source of our surface water supply. Surface water is water from reservoirs, rivers, lakes and streams. This type of water, unlike groundwater, is stored on the earth's surface. Our supply includes both surface water from the Lake DeForest and Letchworth water treatment plants and groundwater from Rockland County wells. Groundwater filters naturally through the layers of the earth. It is then stored in deep, porous rocks called aquifers.

The New York Public Service Commission sets water rates to cover the costs of providing service. The average residential customer uses approximately 3,000 cubic feet of water (22,440 gallons) per quarter, or approximately \$589 annually (including taxes). A typical dollar pays for system improvements, operations and maintenance, taxes, interest and debt, dividends and reinvestment and depreciation costs.

EPA Safe Drinking Water Hotline: 800.426.4791



UNITED WATER  
NEW YORK

### FACT

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CUSTOMERS SERVED:  
**73,364**

# SOURCE WATER ASSESSMENT PROGRAM

The New York State Department of Health has completed a source water assessment for this 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 and to the surface water source. The susceptibility rating is an estimate of the potential for contamination of the source water.



UNITED WATER  
NEW YORK

**FACT**

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MILES OF MAINS:  
**1,026**

It does not mean that the water delivered to consumers is or will become contaminated. See the Water Quality Table 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.

Our water is derived from 53 drilled wells and from Lake DeForest and the Letchworth reservoirs. The source water assessment has rated the drilled wells as having a high susceptibility to microbials, nitrates and industrial solvents and a high susceptibility to other industrial contaminants. These ratings are due primarily to the close proximity of permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) to the wells and the associated industrial activity in the assessment area. In addition, some of the wells draw from fractured bedrock and the overlying soils do not provide adequate protection from potential contamination.

This assessment also found Lake DeForest to have an elevated susceptibility to contamination. Due to the amount of residential lands in the assessment area, there is an elevated potential for contamination from pesticides, sediments, DBP precursors, phosphorus and microbials. There is also noteworthy susceptibility to contamination from other sources including Chemical Bulk Storage (CBS) facilities and Hazardous Substances Emergency Events Surveillance (HSEES) facilities. Hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

While the source water assessment rates our wells and Lake DeForest as being susceptible to microbials, nitrates and other contaminants, please note that our water is disinfected and treated to ensure that the finished water delivered into your home meets New York State’s drinking water standards.

## ABOUT YOUR WATER QUALITY

As state regulations require, we routinely test your drinking water for numerous contaminants, including total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, radioactive contaminants, total trihalomethanes and synthetic organic compounds. The Water Quality Table on page 10 shows which compounds were detected in your drinking water.

Detailed analytical testing information concerning each of United Water’s sources is included in a supplement to this statement. This information is available for review at the Finkelstein Memorial Library, 24 Chestnut Street, Spring Valley, New York. The phone number is 845.352.5700. Additionally, a copy of the supplement may be reviewed by contacting United Water’s Customer Service Department at 845.623.1500, option 1.



## SUSCEPTIBILITY RATINGS FOR UNITED WATER NEW YORK

Well Name	Well Number	Microbials	Nitrates	VOCs	Others
Spring Valley	1A	MH	H	H	H
Spring Valley	4	MH	H	H	H
Spring Valley	6	H	VH	H	H
Nanuet	13	MH	H	H	H
Tappan	16	MH	H	H	H
Spring Valley	17	MH	H	H	H
New Hempstead	18	MH	MH	MH	MH
Bardonia	19	H	H	H	H
Tappan	20	MH	MH	MH	MH
Germonds	21	MH	MH	MH	MH
Pearl River	22	MH	MH	NR	NR
New City	23	MH	H	H	MH
New Hempstead	24	H	H	H	H
Tallman	26	MH	H	H	H
River Road	27	MH	H	H	H
Viola	28	H	H	H	H
Lake Road	29A	MH	MH	H	H
Monsey	30	MH	MH	MH	MH
Monsey	31	MH	H	H	H
Wesel Road	32	MH	MH	MH	MH
Pomona	37	MH	MH	MH	MH
Pomona	38	MH	MH	MH	MH
Catamount	42A	NR	NR	NR	NR
Thiells	50	H	H	H	H
Thiells	51	H	H	H	H
Saddle River	53	NR	MH	MH	MH
Catamount	54A	NR	NR	NR	NR
Nottingham	55	MH	MH	MH	MH
Willow Tree	56	H	H	MH	MH
Norge	64	H	MH	MH	MH
Pascack Rd	65	H	VH	H	H
Elmwood	66	MH	H	H	H
Grandview	67	MH	MH	H	H
Cherry Lane	68	MH	MH	NR	NR
Pinebrook	69	MH	H	H	H
Birchwood	70	MH	MH	H	MH
Eckerson	71	H	H	MH	MH
Rustic Drive	72	MH	H	MH	MH
Lake Shore	73	MH	MH	MH	MH
Grandview	78	NR	NR	MH	MH
Westgate	79	H	H	H	H
Exkerson	82	MH	H	H	H
Grotke	83	H	H	MH	MH
Ramapo	85	VH	VH	VH	H
Ramapo	93	VH	VH	VH	H
Ramapo	94	VH	VH	VH	H
Ramapo	95	VH	VH	VH	H
Ramapo	96	VH	VH	VH	H
Ramapo	97	VH	VH	VH	H
Ramapo	98	VH	VH	VH	H
Ramapo	99	VH	VH	H	H
Ramapo	100	H	H	H	H
Viola	106	H	MH	MH	MH

**Key:** Medium, High, Very High Susceptibility

# DRINKING WATER QUALITY TABLE

The water quality table shows how the quality of your drinking water in 2010 compared to the standards set by the New York State Department of Health. As the table indicates, 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 current federal drinking water requirements.

## WATER QUALITY CHARACTERISTICS

Inorganic Chemicals	MCLG	MCL	Average Result	Range of Results	Violation	Likely Source		
Arsenic ppb	0	10	1.3	ND - 5.8	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes		
Barium ppm	2	2	0.2	ND - 0.55	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits		
Chromium ppb	100	100	5	0.6 - 11.0	No	Discharge from steel and pulp mills; erosion of natural deposits		
Fluoride ppm	2.2	2.2	ND	ND - 0.13	No	Erosion of natural deposits; discharge from fertilizer and aluminum factories		
Nickel ppb	NA	NA	1.6	ND - 15.3	No	Erosion of natural deposits		
Nitrate as nitrogen ppm	10	10	1.24	ND - 3.67	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits		
Lead and Copper	MCLG	AL	90th Percentile	Range of Results	Violation	Likely Source		
Lead ppb <sup>1</sup>	0	15	3	0.5 - 17.2	No	Corrosion of household plumbing		
Copper ppm <sup>1</sup>	1.3	1.3	0.7	0.02 - 1.66	No	Corrosion of household plumbing		
Microbiologicals	MCLG	MCL	Average Result	Range of Results	Violation	Likely Source		
Total coliforms (% in monthly samples)	0	<5% monthly positive samples	0.3%	0.0% - 0.6%	No	Naturally present in the environment		
Turbidity NTU (value well)	NA	5	0.15	ND - 4.1	No	Sediment, iron oxide		
	MCLG	MCL	Level Found	Range of Results	Date of Sample	Violation	Likely Source	
Turbidity NTU <sup>2</sup>	NA	TT=1NTU TT=95% <0.3NTU	0.47 96.7%	0.01 - 0.47 97% - 100%	June, 2010	No	Soil run-off	
	MCLG	MCL	Average Result	Range of Results	Violation	Likely Source		
Distribution Turbidity NTU <sup>3</sup>	NA	5	0.37	0.04 - 12	No	Sediment, iron and manganese		
Disinfectant Residual	MCLG	MCL	Average Result RAA	Highest Result RAA	Range of Results (individual sites)	Violation	Likely Source	
Distribution Chlorine Residual ppm	NA	4.0	1.05	1.06	ND - 2.29	No	Treatment process	
	MCLG	MCL	Average Result	Range of Ratio	Lowest Ratio	Violation	Likely Source	
TOC Removal Ratio (RAA)	NA	>=1.00	1.12	1.04 - 1.22	1.04	No	Treatment process	
Radionuclides (2006, 2007, 2008, 2009, 2010 Data)	MCLG	MCL	Average Result	Range of Results	Violation	Likely Source		
Alpha emitters - pCi/L	0	15	3.3	ND - 9.9	No	Erosion of natural deposits		
Combined radium pCi/L	0	5	ND	ND - 5.1	No	Erosion of natural deposits		
Uranium ug/L	0	30	5.1	ND - 21.4	No	Erosion of natural deposits		
Organic Chemicals (volatile)	EPA MCLG	EPA MCL	New York MCL	Average Result	Range of Results	Violation	Likely Source	
cis-1,2-dichloroethylene ppb	70	70	5	ND	ND - 1.4	No	Discharge from industrial chemical factories	
ethyl benzene ppb	700	700	5	ND	ND - 0.7	No	Discharge from petroleum refineries; leaks from gasoline tanks	
tetrachloroethylene ppb	0	5	5	ND	ND - 2.2	No	Discharge from factories and dry cleaners; waste sites; spills	
trichloroethylene ppb	0	5	5	ND	ND - 2.0	No	Discharge from metals degreasing sites and other factories	
MTBE ppb	NA	NA	10	ND	ND - 2.4	No	Releases from gasoline storage tanks, atmospheric deposition	
Organic Chemicals (pesticides, herbicides, polyaromatic hydrocarbons)	EPA MCLG	EPA MCL	New York MCL	Average Result	Range of Results	Violation	Likely Source	
chlordan ppb	0	2	2	ND	ND - 0.24	No	Residue of banned termiticide	
di(2-ethylhexyl)adipate ppb	400	400	50	ND	ND - 0.73	No	Discharge from chemical factories	
di(2-ethylhexyl)phthalate ppb	0	6	6	ND	ND - 0.9	No	Discharge from rubber and chemical factories	
Disinfection By-Products	EPA MCLG	EPA MCL	NY MCL	Average Result	Highest Result	Range of Results (individual sites)	Violation	Likely Source
thms ppb running annual avg. <sup>4</sup> (thms: bromoform, bromodichloromethane, chlorodibromomethane, chloroform)	NA	80	80	23.9	25.2	ND - 92.2	No	By-product of drinking water disinfection
haa5 ppb running annual avg. <sup>4</sup> (haa5: dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, trichloroacetic acid)	NA	60	60	14.6	15.3	ND - 71.1	No	By-product of drinking water disinfection

### Notes:

- 1 - The level presented represents the 90th percentile of the 205 samples collected. The action level for lead was exceeded at one of the sites tested and the action level for copper was exceeded at one of the sites tested.
- 2 - 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 (0.47 NTU) for the year occurred in June. 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. Although June was the month when we had the fewest measurements meeting the treatment technique for turbidity, the levels recorded were within the acceptable range allowed and did not constitute a treatment technique violation.
- 3 - There was no violation for distribution turbidity. A violation occurs when the monthly average of the results of all distribution samples collected in any calendar month exceeds the MCL (5 NTU) rounded off to the nearest whole number.
- 4 - This level represents the annual quarterly average calculated from data collected.

Other Substances	New York MCL	Average Result	Range of Results**	Likely Source
Aluminum ppb	NA	22	ND - 184	Treatment process
Chloride ppm	250	78	4 - 190	Natural mineral, road salt
Color CU	15	4	3 - 15	Natural mineral and organic matter
Corrosivity	Non-corrosive	Non-corrosive	Non-corrosive	Natural mineral, road salt
Hardness (as CaCO <sub>3</sub> ) ppm	NA	160	6 - 388	Natural mineral
Iron ppb	300	17	ND - 1030***	Erosion of natural deposits
Manganese ppb*	300	15	ND - 1190****	Erosion of natural deposits
Odor TON	3	1C	1C - 2C	Naturally occurring, chlorine
pH	6.5-8.5	7.7	5.5 - 8.8	Natural mineral, treatment process
Sodium ppm	NA	31	8 - 81	Natural mineral, road salt
Sulfate ppm	250	16	ND - 36	Natural mineral
Total Dissolved Solids ppm	NA	268	24 - 546	Natural mineral
Zinc ppm	5	ND	ND - 0.16	Natural mineral

\*Sequestering agent used for treatment of iron and manganese.

**Health Effects**

Health Note for Sodium: Water containing more than 20 ppm of sodium should not be used for drinking water by people on diets that severely restrict sodium. Water containing more than 270 ppm of sodium should not be used for drinking by people on diets that moderately restrict sodium.

\*\* The "Range of Results" represent the lowest and highest detection during the monitoring year (2010).

\*\*\* Elevated iron level was detected at Catamount 54 Well at point of entry. Follow up sample indicated iron levels within guidelines.

\*\*\*\* Elevated manganese was detected at Garnerville Well 46 at point of entry. Follow up sample indicated appropriate levels for sequestering to be effective for control of manganese.

UNITED WATER  
NEW YORK  
**FACT**  
SIZE OF WATERSHED:  
**26**  
SQUARE MILES



**DEFINITIONS**

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

**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.

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

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

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

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

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

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

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

**Picograms per liter (pg/l):** Corresponds to one part per of liquid to one quadrillion parts of liquid (parts per quadrillion - ppq).

**ppb Parts per billion:** Corresponds to one part of liquid in one billion parts of liquid.

**ppm Parts per million:** Corresponds to one part of liquid in one million parts of liquid.

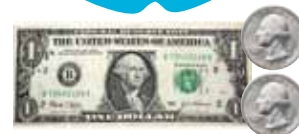
**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

# VALUE OF WATER

A gallon of tap water is a significantly better value than a gallon of bottled water.



VS.



## ABOUT THE TREATMENT PROCESS

We treat both groundwater and surface water to remove impurities. Our laboratory regularly tests the quality of the water before, during and after the treatment process. We monitor it for dozens of substances and detected those listed on the Water Quality Table. We also monitor for turbidity which is a measure of the cloudiness of water because it is a good indicator of the effectiveness of our filtration system. Our job is to provide you and your family with water that meets all government standards for health and safety. The treatment process differs depending upon whether the water is from our wells, Lake DeForest Water Treatment Plant or Letchworth Water Treatment Plant.

### Lake DeForest Water Treatment Plant

Physical treatment includes traveling screens, aeration (Dissolved Air Flotation - DAF) and filtration (dual media). Chemical treatment includes potassium permanganate (prior to traveling screens), anionic polymer (prior to aeration), alum (prior to flocculation), sodium hypochlorite (prior to flocculation, prior to filtration and post-filtration) and polyphosphates (post-filtration). Sodium hypochlorite is added to protect against microbiological contamination and sodium hydroxide and polyphosphates are added to reduce corrosion of metal piping and plumbing.

### Letchworth Water Treatment Plant

Water comes from any one of three reservoirs that are within the Palisades Interstate Park property. The treatment process employs conventional methods including chemical addition, mixing, flocculation, sedimentation, filtration, disinfection and corrosion control. The process is similar to the process used at Lake DeForest with the exception of the DAF process.

### Supply from Wells

All wells are treated with sodium hypochlorite for disinfection and polyphosphates for corrosion control. Certain wells receive additional treatment through granular activated carbon filtration, aeration and/or ultraviolet disinfection.

## ARSENIC INFORMATION

As you can see by the table on page 6, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below current federal drinking water requirements. Although arsenic was detected below the MCL, it was detected at 5.8 which is greater than one-half of the MCL. Therefore, we are required to present the following information on arsenic in drinking water:

New York State and EPA have promulgated a drinking water arsenic standard of 10 parts per billion. While your drinking

water meets the standard for arsenic, it does contain low levels of arsenic. The standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effect of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.



## LEAD INFORMATION

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Your water is lead free when it leaves our treatment plant. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. United Water New York 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 and 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 EPA's Safe Drinking Water hotline at 800.426.4791 or by visiting the EPA website at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## HEALTH NOTE

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at 800.426.4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-

compromised 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 individuals, and infants can be particularly at risk from infections. Those listed should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infections by cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline at 800.426.4791.

UNITED WATER  
NEW YORK

**FACT**

SERVICE POPULATION:

**286,038**



## CONSERVATION TIPS

United Water encourages its customers to use water wisely and exercise individual responsibility. The average customer uses about 250 gallons of water every day. Be aware of how much water you use! Now more than ever, it's important to reduce your water consumption.

- Check every faucet in your home for leaks. A leaky faucet is usually caused by a worn washer or "O" rings (for washerless faucets). Just a slow drip can waste 15 to 20 gallons a day, or almost 6,000 gallons per year.
- Check your toilet for leaks by putting a few drops of food coloring in the tank and watching for a few minutes to see if the color shows up in the bowl. If you see color in the toilet bowl after 15 minutes, you have a leak. Fixing a toilet leak can 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 and then check the meter reading over a 15 minute period. If the meter moves, you have a leak.
- Using less water in the home will reduce water and heating bills. More importantly, the cumulative effect of many people practicing personal water conservation will help to ensure adequate water supplies.



UNITED WATER  
NEW YORK

**FACT**

HYDRANTS:  
**6222**

## IS OUR WATER SYSTEM MEETING OTHER RULES?

During a routine inspection by the Rockland County Department of Health, it was determined that a cross connection device to prevent water from re-entering our system was necessary at one of our facilities. At the time that United Water was notified of the requirement, the facility had already been taken out of service. United Water took immediate actions to correct the issue prior to placing the facility back in service.



# WHERE DOES YOUR WATER COME FROM?

Most of United Water New York's water supply comes from groundwater. Groundwater or well water is stored below the surface of the earth in deep, porous rocks called aquifers. Groundwater is purified naturally as it filters through layers of soil, clay, rock and sand.

About 30% of our water supply comes from lakes, rivers and reservoirs and is known as surface water. We treat surface water at our Lake DeForest Water Treatment Plant and Letchworth Water Treatment Plant.

## BUILDING FOR THE FUTURE

The population of Rockland County has grown from 287,000 people in 2000 to over 310,000 in 2010. The County Planning Department estimates Rockland's population will continue to increase to approximately 344,000 by 2035.

### By Order of the Commission

As part of the December 14, 2006 New York State Public Service Commission (PSC) Order adopting a three-year rate plan for United Water, the company is required to, among other things, develop an additional, long-term water supply to meet the growing needs for water in Rockland County over the next 20 years. The PSC, the County of Rockland, the Town of Ramapo, the Rockland County Fire Chiefs Association and other local officials found that it is in the best interest of United Water's customers and the public for United Water to develop new sources of water supply.

### A Two-Phased Approach

To meet projected future needs for water, United Water has established a two-phased approach.

Phase I, the Short-Term Water Supply program, is currently increasing capacity by continuing to encourage conservation, making improvements to existing infrastructure and developing new, small supplies. This program will help to meet projected demands for water through the end of 2015.

United Water has worked hard to keep pace with the fast growing demand for water in Rockland County. We have gained some additional supply by improving our existing wells and expanding treatment plants.

We have also long employed comprehensive water-conservation programs, resulting in a consumption level of 67 gallons per person per day- well below the national average of 90-100 gallons. Conservation is a worthy endeavor and we can all do more to preserve a precious natural resource, but it will not be enough to ensure a safe, reliable supply of water, particularly during future droughts.

Phase II is designed to enable United Water to continue to provide a high-quality water supply at quantities and pressure needed to meet projected future demands for County residents, businesses, and firefighting. It will provide up to an additional 7.5 millions of gallons of water a day.

### Studying Alternatives

After extensive evaluation of other options, such as wastewater reuse and the building of a new reservoir, United Water has determined that the Hudson River is the best solution to provide a reliable, sustainable, cost-effective and healthy source of drinking water for the people of Rockland County. A plant that would purify water drawn from the river would help us meet rising demand on the system as Rockland's population continues to grow.

United Water proposes building the Haverstraw Water Supply Project that would provide a long-term water supply solution for Rockland County for decades to come.

### The Hudson River: A Safe, Sustainable and Abundant Water Source

Since 2007, United Water has conducted water quality tests on the Hudson River in the vicinity of its proposed intake, and has found that the water quality is as good as or better than the quality of water of other major water bodies that are used as a drinking water source. Over a dozen communities have long used the Hudson River as a source of drinking water.

The Hudson is also a robust and resilient water body that would provide a more sustainable solution to water supply issues than alternatives that rely on rainfall and are susceptible to drought.

### A Pilot Study to Optimize the Process

A small, pilot study that began operations in 2010 will help us to determine the most effective ways to treat Hudson River water and optimize energy and chemical use.

### The Water Treatment Project: Safe, Pure, Efficient.

The proposed permanent project would include a water intake pumping station that would draw water from the Hudson River. Water would be piped inland to a water treatment plant to be built in the Town of Haverstraw.

The treatment process will begin with standard treatment and filtering technologies found in water plants all over the world - including ones already serving Rockland County. A second type of treatment called reverse osmosis will be used to remove salt and other constituents. Reverse osmosis is a process where water is pumped through a membrane with microscopic holes that filter out salt, chloride and other constituents while letting purified water pass through it.

Reverse osmosis has been used in water treatment plants for decades. It is used at desalination plants around the world, including places as nearby as New Jersey and Massachusetts. Recent advances in membrane technology have slashed the amount of energy that will be required, making reverse osmosis and desalination an increasingly cost-effective way to provide drinking water.

Finally, wastewater and brine would be disposed of according to all applicable environmental and health regulations.

The result will be purified, great-tasting water that will meet or surpass all safe drinking water standards. The Haverstraw Water Supply Project represents the best solution for providing a long-range supply of drinking water to Rockland County.

For more information, please visit our project website at [www.unitedwater.com/hwsp](http://www.unitedwater.com/hwsp).



**United Water New York**  
360 West Nyack Road, West Nyack, NY 10994  
[www.unitedwater.com](http://www.unitedwater.com)



**THIS REPORT  
CONTAINS IMPORTANT  
INFORMATION ABOUT  
YOUR DRINKING WATER.**

**ESTE INFORME CONTIENE  
INFORMACIÓN MUY  
IMPORTANTE SOBRE  
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# WATER QUALITY INFORMATION

