

Annual Drinking Water Quality Report for 2002
Village of Scarsdale Water Department
Village Hall, Scarsdale, New York
(Public Water Supply ID# 5903457)

INTRODUCTION:

To comply with State and Federal regulations, the Village of Scarsdale Water Department 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. 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 Jim Macri, Water Superintendent, at (914) 722-1138. We want you to be informed about your drinking water. If you want to learn more, please contact the Water Superintendent or information may be requested at any of the regularly scheduled village board meetings. Contact the Village Hall for meeting dates and times.

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 source water is received from the New York City Water Supply System and then delivered to the public through a water distribution system comprising 100 miles. The water is obtained through the Reeves Newsom Water Supply Station from the Kensico-Bronx 48" pipeline belonging to the Village of Scarsdale and the cities of Mount Vernon, White Plains and Yonkers, known as Westchester Water District No. 1. Water treatment includes the addition of fluoride, disinfection with chlorine, water pH adjustment with caustic soda, and the addition of orthophosphate prior to distribution. Under certain conditions water can be obtained from the Delaware Aqueduct, via the connection at Shaft 22, and delivered north to Scarsdale through the Kensico-Bronx 48" pipeline. Through the Ardsley Road Pumping Station, water is obtained from the United Water New Rochelle water system or directly from the New York City Catskill Aqueduct. During 2002, our system did experience water restrictions. From April 1st to October 31st, Phase 1 Drought Restrictions were in effect. New York City water storage reservoir levels were extremely low which triggered the declaration of restrictions. Along with the requirement for many water saving initiatives, various outdoor water uses were curtailed or prohibited.

FACTS AND FIGURES:

The Scarsdale Water System is owned and operated by the Village of Scarsdale. Water Service is provided to the Village of Scarsdale, Eastchester Water District No. 1 and some homes in Mamaroneck, New Rochelle and Greenburgh. Our water system serves an estimated population of 20,883 through 5,800 service connections. The total water delivered in 2002 was 1.23 billion gallons. The daily average of water treated and pumped into the distribution system was 3.36 million gallons per day. Our highest single day was 7.10 million gallons. The amount of water delivered to customers, (metered), was 1.098 billion gallons. This leaves an unaccounted for total of 132 million gallons, (11% of the total amount delivered). The loss of water is a result of many factors. Losses arise from ruptured water mains, hydrants struck by automobiles, service line leaks, fire protection and training, testing of water meters, use of unmetered water for construction purposes and the unmetered water used for flushing water mains. In 2002, water customers were charged \$1.33 per 100 cu ft (or \$1.78 per 1,000 gallons) through May 31st and thereafter \$1.54 per 100 cu ft (or \$2.06 per 1,000 gallons). The annual average water charge per user was \$370.

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, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, and synthetic organic compounds. 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, 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 Westchester County Health Department at (914) 813-5000.

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Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Average) (Range)	Unit Measure-ment	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination

Inorganic Chemical Contaminants (Distribution System):

Fluoride	No	01/30/02	0.79	mg/l	2.2	MCL	Water Additive which Promotes strong teeth
Nitrate	No	01/30/02	0.14	mg/l	10	MCL	Runoff from fertilizer use
Sulfate	No	01/30/02	5.6	mg/l	250	MCL	Erosion of natural deposits
Calcium as CA+2	No	01/30/02	16	mg/l	N/A	MCL	Erosion of natural deposits
Maganese	No	01/30/02	24	ug/l	300	MCL	Erosion of natural deposits
Copper	No	01/30/02	23	ug/l	1300	AL	Erosion of natural deposits
Chloride	No	01/30/02	0.4	mg/l	250	MCL	Erosion of natural deposits
Iron	No	01/30/02	30	ug/l	300	MCL	Erosion of natural deposits
Sodium	No	03/18/02	7.9	mg/l	20	AL	Erosion of natural deposits
Orthophosphates	No	01/30/02	1.10	mg/l	N/A	MCL	Water Additive which reduces water corrosivity
Turbidity (1)	No	01/30/02	0.85	NTU	5	NTU	Soil erosion & stream sediments

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Lead	No	10/24/02	1.3	ug/l	15	AL	Erosion of natural deposits
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Organic Chemical Contaminants (Distribution System):

Total Trihalomethanes – Quarterly Sampling (2)	No	Jan, April, July & Oct 2002	29.6	ug/l	80	MCL	By-product of chlorination
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Haloacetic Acids – Quarterly Sampling (2)	No	Jan, April, July & Oct 2002	28.5	ug/l	60	MCL	By-product of chlorination
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Inorganic Chemical Contaminants (Source Water System):

Copper	No	01/30/02	22.7	ug/l	1300	AL	Erosion of natural deposits
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Organic Chemical Contaminants (Source Water System):

Total Trihalomethanes	No	11/04/02	6.1	ug/l	80	MCL	By-product of chlorination
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Perchlorate	No	09/09/02	81	ug/l	--	Unregulated	Oxygen additive in Solid Fuel
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Notes:

1 – Turbidity is a measure of the cloudiness of the water. We test it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants. Our highest single turbidity measurement for the year occurred on 04/25/02 (1.03 NTU). State regulations require that turbidity must always be below 5 NTU.

2 – This level represents the annual quarterly average calculated from data collected.

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.

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).

According to State regulations, we are required to routinely monitor drinking water for various contaminants. Drinking water is tested for inorganic and organic contaminants, trihalomethanes, and coliform bacteria. Contaminants detected are included in the Table of Detected Contaminants. Contaminants we analyzed for but did not detect were:

E.coli bacteria, Arsenic, Barium, Cadmium, Chromium, Magnesium, Mercury, Selenium, Zinc, Beryllium, Cyanide, Nickel, Antimony, Thallium, Nitrite, Vanadium, Thallium, Silver, Cobalt, Boron, Molybdenum, Bromoform, Dibromochloromethane, Vinyl Chloride, Benzene, Bromobenzene, Bromochloromethane, Bromomethane, N-butylbenzene, Sec-butylbenzene, Tert-butylbenzene, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloromethane, 2-chlorotoluene, 4-chlorotoluene, Dibromomethane, 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, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, P-isopropyltoluene, Methylene chloride, N-propylbenzene, Styrene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, Tetrachloroethene, Toluene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,3-trichloropropane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, P & M-xylene, O-xylene, 2-butanone (MEK), Naphthalene, Methyl T-Butyl Ether, Methyl Isobutyl Ketone, 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane, Alachlor, Atrazine, Simazine, Hexachlorobenzene, Hexachlorocyclopentadiene, Benzo(A)pyrene, bis(2-Ethylhexyl)adipate, bis(2-Ethylhexyl)phthalate, Aldicarb Sulfoxide, Aldicarb Sulfone, Oxamyl, Methomyl, 3-Hydroxycarbofuran, Aldicarb, Carbofuran, Carbaryl, Glyphosate, Diquat, 2,4-D, 2,4,5-T, Silvex, Dalapon, Dicamba, Dinoseb, Pentachlorophenol, Pichloram, Dioxin, Endothall, Butachlor, Metolachlor, Metribuzin, 2,3,7,8-TCDD (Dioxin), DCPA diacid, Bromodichloromethane, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Acetochlor, EPTC, bis(2-Ethylhexyl)phthalate, Molinate, Terbacil, MTBE, Nitrobenzene, Aluminum, Copper, Lead, Manganese

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 the level allowed by the State.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2002, our system was in compliance with all applicable State drinking water requirements.

Variances and Exemptions:

In accordance with the Federal Safe Drinking Water Act of 1986 and New York State requirements regarding the quality of potable water, we submitted a request for filtration avoidance of our raw water sources for both the Reeves Newsom Water Supply Station and the Ardsley Road Pumping Station. We received a variance from the New York State Department of Health in December 1991. This variance is still in effect.

The Village of Scarsdale was granted a Biofilm Variance from the New York State Department of Health on August 29, 1994. The variance recognizes that the maximum contaminant level cannot be used to determine the public health significance of coliform bacteria being detected in the distribution system when biofilms, and not contaminated water, is in the system.

INFORMATION ON CRYPTOSPORIDIUM:

Cryptosporidium is a microbial pathogen found in surface water and groundwater under the influence of surface water. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. During 2002, as part of routine sampling, NYC collected 144 samples from their source water at Kensico Reservoir and analyzed them for Cryptosporidium oocysts. Of these samples 38 were confirmed positive. Therefore, the testing indicates the presence of Cryptosporidium in our source water. Ingestion of Cryptosporidium may cause cryptosporidiosis, a gastrointestinal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-

compromised individuals to consult their health care provider regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

INFORMATION ON GIARDIA:

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. *Giardia* is removed/inactivated through a combination of filtration and disinfection or by disinfection. During 2002, as part of routine sampling, NYC collected 144 samples from the their source water at Kensico Reservoir and analyzed them for *Giardia* cysts. Of these samples 95 were confirmed positive. Therefore, the testing indicates the presence of *Giardia* in our source water. The source water is disinfected prior to reaching our distribution system so to remove/inactivate the *Giardia* cyst. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Giardia* may cause giardiasis, an intestinal illness. People exposed to *Giardia* may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The *Giardia* parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where handwashing practices are poor.

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 up 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 2001 design began on the water supply improvements and upgrade of the Ardsley Road Pumping Station. We had expected construction to begin in 2002 but approval by the Westchester County Dept of Health and NYC Department of Environmental Protection were not received. The revised construction schedule has work beginning in year 2003. In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make this improvement and additional improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. In the near future we plan to upgrade all the Village Treatment and Pumping Stations.

ADDITIONAL INFORMATION:

All of Scarsdale's source water came from the New York City water system. The City conducted numerous tests on the water prior to it reaching Scarsdale. The NYC Annual Water Quality Report can be viewed on www.nyc.gov/html/dep/html/waterqual.html or by contacting the Water Superintendent for the Village of Scarsdale.

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 and our way of life. Please call our office if you have questions.



Boniface Water Tower