

**ANNUAL DRINKING WATER QUALITY REPORT FOR 2006**  
**MEADOWBROOK WATER DISTRICT**  
119 Lozza Drive • Valhalla, New York 10595  
(PUBLIC WATER SUPPLY NO. 5903439)

**INTRODUCTION**

To comply with State regulations, the Meadowbrook 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 the awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. 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 Robert Guena, P.E, Superintendent, Town of Mount Pleasant Water and Sewer Department, at 831-1062. 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 Town Board of the Town of Mount Pleasant serves as the Board of Commissioners for the Meadowbrook Water District. The Board meets on the second and fourth Tuesday of each month in Town Hall at 8:30 pm. Please feel free to participate in these meetings.

## **WHERE DOES OUR WATER COME FROM?**

In general, the sources of drinking water (both tap 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 91 people through 26 service connections, Our water is purchased from the Village of Pleasantville. The Village purchases its water from the Town of New Castle. The Town of New Castle purchases its water from the New York City Water Board. New Castle's primary source is the Catskill Aqueduct System, and its secondary source is the New Croton Aqueduct.

Monitoring for inorganic contaminants is performed by the Town of New Castle prior to the water entering their distribution system. Monitoring for organic contaminants is performed by both New York City and Westchester County.

The Meadowbrook Water District provides no treatment to the water received from the Village of Pleasantville. The Town of New Castle performs treatment to maintain compliance with the Surface Water Treatment Rule (SWTR), under the authority of the New York State Health Department and the U.S. Environmental Protection Agency. New Castle performs the following treatment:

### Filtration

The Town of New Castle processes the raw water received from New York City through its Millwood Water Treatment Plant. The treatment process includes flocculation, dissolved air flotation, ozone disinfection and final filtration.

### Chlorination

Chlorine is added for final disinfection and to provide a detectable level of chlorine residual throughout the distribution system. The chlorine residual is required in order to maintain bacteria free water.

### Corrosion Control Treatment

In order to inhibit leaching of lead and copper from household plumbing, New Castle adds caustic soda for pH adjustment and polyphosphate to inhibit corrosion, after filtration.

### Fluoridation

Fluoride is added to the finished water for prevention of dental caries.

**ARE THERE CONTAMINANTS IN OUR DRINKING WATER?**

As the State regulations require, your drinking water is routinely tested for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. The Annual Water Quality Report prepared by the Town of New Castle is available from this office upon request. Shown below is a tabulation of contaminants detected from samples collected by New Castle 2006. All entry point samples collected by New Castle and NYC are in compliance with the NYS Sanitary Code.

It should be noted that all drinking water, including bottled 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 Department of Health at 813-5000.

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 a year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

<u>Contaminant</u>	<u>Violation Yes/No</u>	<u>Date of Sample</u>	<u>Level Detected (Avg/Max) (Range)</u>	<u>Unit Measurement</u>	<u>MCLG</u>	<u>Regulatory Limit (MCL, TT or AL)</u>	<u>Likely Source of Contamination</u>
<b><u>Microbiological Contaminants</u></b>							
Turbidity (Note 1)	No	11/06 & 12/06	0.7 NTU	NTU	n/a	TT=<5.0 NTU	Soil runoff.
<b><u>Inorganic Contaminants</u></b>							
Copper	No	08/05	.026 (Note 2) (.009 -.027)	mg/l	1.3	AL= 1.3	Corrosion of galvanized pipes; Erosion of deposits.
Lead	No	08/05	<LOQ (Note 3) (<LOQ)	ug/l	15	AL= 15	Corrosion of household plumbing systems; Erosion of deposits.
Alkalinity	No	10/06	17.1 mg/l as CaCo3	mg/l	n/a	MCL= N/A	Erosion of deposits.
Barium	No	10/06	.0091	mg/l	n/a	MCL=2.0	Erosion of deposits.
Calcium	No	10/06	5390	ug/l	n/a	MCL= N/A	Erosion of deposits.
Chloride	No	10/06	7.77	mg/l	n/a	MCL= 250	Erosion of deposits.
Corrosivity by Calculation	No	10/06	-2.32	mg/l	n/a	MCL= N/A	Erosion of deposits.
Fluoride	No	10/06	.843	mg/l	n/a	MCL=2.2	Erosion of deposits; water additive that promotes strong teeth.
Sodium	No	10/06	8.2	mg/l	n/a	MCL= 20	Erosion of deposits.
Nitrate	No	10/06	.238	mg/l	n/a	MCL= 10	Erosion of deposits; Runoff from fertilizer use; leaching

							from septic tanks, sewage.
Phosphorus	No	10/06	.314	mg/l	n/a	MCL= N/A	Erosion of deposits.
PH	No	10/06	7.15	units	n/a	MCL= N/A	Erosion of deposits.
Total Dissolved Solids	No	10/06	35.9	mg/l	n/a	MCL= N/A	Erosion of deposits.
Temperature	No	10/06	18.5	Degrees C	n/a	MCL= N/A	
Manganese	No	10/06	1.4	ug/l	n/a	MCL = 300	Naturally occurring.
Zinc	No	10/06	2.5	ug/l	n/a	MCL= 5000	Naturally occurring.
<b>Disinfection Byproducts</b>							
Total Trihalomethanes	No	2006	20.61	ug/l	N/a	MCL= 80	By-product of drinking water chlorination.
Haloacetic Acids	No	2006	4.2	ug/l	n/a	MCL= 60	By-product of drinking water chlorination.

**Notes:**

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 for the year occurred in the months of November and December (0.7 NTU). State regulations require that turbidity must always be below 5.0 NTU. Although November and December were the months 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.

2 – The level presented represents the 90th percentile of the 5 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 copper values detected at your water system. In this case, five samples were collected at your water system and the 90th percentile value was the average of the two highest values (0.026 mg/l). The action level for copper is 1.3 mg/l. The action level for copper was not exceeded at any of the sites tested.

3 – The level presented represents the 90th percentile of the five samples collected. The action level for lead is 15 ug/l. The action level for lead was not exceeded at any of the five sites tested. In fact, all samples were below the detectable limit.

**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 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.

**n/a:** not applicable, **TTHM:** (total trihalomethane) means the sum of the concentration of trichloromethane (chloroform), dibromochloromethane, bromodichloromethane and tribromomethane (bromoform).

In addition to the detected contaminants listed above, the following seventeen (17) inorganic contaminants were sampled for but not detected: ammonia, antimony, arsenic, beryllium, cadmium, chromium, cobalt, cyanide, iron, lead, mercury, nickel, nitrite, selenium, silver, sulfate and thallium. Also, the following one hundred and two (102) organic contaminants were sampled for but not detected: 2,3,7,8-TCDD (Dioxin), 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, Butachlor, Metolachlor, Metribuzin, Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Heptachlor Epoxide, Lindane, Methoxychlor, PCB's, Propachlor, Toxaphene, 2,4,5-T, 2,4-D, Dalapon, Dicamba, Dinoseb, Pentachlorophenol, Picloram, Silvex, THM-Bromodichloromethane, THM-Bromoform, THM-Chloroform, THM-Dibromochloromethane, 1,1,1,2-tetrachloroethane, 1,1,1-trichloroethane, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,1-dichloroethane, 1,1-Dichloroethene, 1,1-dichloropropene, 1,2,3-trichlorobenzene, 1,2,3-trichloropropane, 1,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, 1,2 dichlorobenzene, 1,2-dichloroethane, 1,2-dichloropropane, 1,3,5-trimethylbenzene, 1,3-dichlorobenzene, 1,3-dichloropropane, 1,4-dichlorobenzene, 2,2-dichloropropane, 2-butanone(MEK), 2-chlorotoluene, 4-chlorotoluene, Benzene, Bromobenzene, Bromochloromethane, Bromomethane, Carbon tetrachloride, Chlorobenzene, Chlorethane, Chloromethane, cis-1,2-dichloroethene, cis-1,3-dichloropropene, Dibromomethane, Dichlorodifluoromethane, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, Methyl iso-butyl ketone (MIBK), Methyl tert-butyl ether (MTBE), Methylene Chloride, N-butylbenzene, N-propylbenzene, Naphthalene, O-xylene, P & M-xylene, P-isopropyltoluene, SEC-butylbenzene, Styrene, TERT-buthylbenzene, Tetrachloroethene, Toluene, trans-1,2-dichloroethene, trans-1,3-dichloropropene, Trichloroethene, Trichlorofluoromethane, Vinyl chloride, Alachlor, Atrazine, Benzo(a)pyrene, Bis(2-Ethylhexyl)adipate, Hexachlorobenzene, Hexachlorocyclopentadiene, Simazine, 3-Hydroxycarbofuran, Aldicarb, Aldicarb sulfone, Aldicarb sulfoxide, Carbaryl, Carbofuran, Methomyl, Oxamyl, Glyphosate, Endothall and Diquat. The following two (2) Radionuclides were also sampled for, but not detected: Tritium and Strontium 90.

As the Meadowbrook Water District resells water purchased from the Village of Pleasantville, it is defined as a consecutive supply of water. As a consecutive supply, the District is required to monitor for microbiological contaminants, lead & copper and turbidity.

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

As you can see by the table, the last samples taken show 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 2006, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

### **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 2006, as part of our routine sampling, 117 samples were collected at the Catskill and Croton supplies and analyzed for Cryptosporidium oocysts. Of these samples, 15 Cryptosporidium oocysts were detected. The test indicates the presence of these organisms in the raw untreated water. This water is then treated at the Millwood Water Treatment Plant. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. 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 2006, as part of our routine sampling, 117 samples were collected at the Catskill and Croton supplies and analyzed for Giardia cysts. Of these samples, 72 Giardia cysts were detected. The test indicates the presence of these organisms in the raw untreated water. This water is then treated at the Millwood Water Treatment Plant. 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.

For more information on Cryptosporidiosis and Giardiasis see the attached Cryptosporidiosis and Giardiasis background information and Cryptosporidiosis fact sheet.

## **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 about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

## **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

## **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 our customers help us protect our water sources, which are the heart of our community. All consumers are urged to report any suspicious activity observed in the vicinity of water system facilities to the Mount Pleasant Police at 769-1941. Please call our office if you have questions.

Contacts for more information:

Town of Mount Pleasant Water and Sewer Dept., 831-1062

Westchester County Dept. of Health, 813-5000

New York State Department of Health, (518) 402-7713

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