

PWS ID. No. 3503534

Annual Drinking Water Quality Report for 2008

Department Of Public Works • 16 James St. Middletown, N.Y. 10940-1587

Honorable Joseph M. DeStefano, Mayor

Jacoub Tawil, P.E. Commissioner D.P.W.

INTRODUCTION

Your water system is owned and operated by the City of Middletown and has been since the 1800's. The operation and maintenance of this system falls under the direction of the Commissioner of Public Works, Mr. Jacob S. Tawil, P.E. The department consists of the raw water sources, including reservoirs, lakes and ground water well, miles of raw water mains, water treatment facilities, distribution system, water meter department and the reservoirs watchman. The City serves 7,212 connections, which serve a population of approximately 26,400 people. To comply with State regulations, the City of Middletown is required annually to issue 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. 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 Nick Klupacs, Chief Water Plant Operator at 845-346-4128 or Deputy Commissioner, Michael Moser at 845-346-4110. We want you to be informed about your drinking water; so don't hesitate to call the above.

INFORMATION FOR NON-ENGLISH SPEAKING RESIDENTS

Spanish

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

WHERE OUR WATER COMES FROM AND THE TREATMENT PROCESS.

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health. The City of Middletown derives its raw water from surface supplies consisting of three (3) reservoirs, plus two impoundments and a ground water well. The reservoirs watershed, mostly owned by the City encompasses approximately 1,500 acres. The raw water comes to you from these reservoirs and the well through the filtration plant via a system of pipes (of various sizes ranging from 4 inches to 24 inches in diameter) totaling approximately 75 miles to your faucet.

The raw water is treated through two plants:

1 The Monhagen Treatment Facility, built at the turn of the century and has been added to and upgraded since, consists of pre-Chlorination, aluminum sulfate for coagulation. Flocculation and sedimentation then take place. The settled water is then filtered by gravity through sand filters. Chlorine, for residual disinfection and sodium hydroxide, for pH adjustment, are added in the post treatment process. It is planned that this plant will be decommissioned this fall the new plant currently under construction is expected to be commissioned this Spring.

2 The package plant, which went on line in November of 2003, incorporates state of the art water treatment technologies, including dissolved air floatation (DAF), filtration and ultraviolet light (UV) disinfection, capable of routinely producing 1.5 Million Gallons per Day (MGD). The treatment includes feeding aluminum sulfate for coagulation, potassium permanganate to reduce iron and manganese (staining effect), dissolved air floatation to float flocculated matter and alum sludge, rapid sand filtration, and ultraviolet disinfection. Then, sodium hypochlorite is added to maintain chlorine (disinfectant) residual within the distribution system and Sodium Hydroxide for pH adjustment.

FACTS AND FIGURES

The City Of Middletown has 7,212 active metered water accounts that serve a population of approximately 26,400. Of these accounts, 331 are out of town accounts in the Town of Walkill and a water district in the Town of Waywayanda. Generally, water meters are read 3 times per year for billings, beginning on the 1st day of March, July and November; 233 large water consumers' meters are read monthly. Water rates as of this date are \$7.72 per 1,000 Gallons, (minimum billing \$6.65) and \$6.31 per 1,000 gallons for sewer users (minimum \$6.65). In 2009, the average daily water produced was 4.08 MGD and billed consumption was 2.1MGD indicating a 49% discrepancy. This apparent discrepancy is related in large part to the documented inaccuracy of the Monhagen plant's finished water master meter. This inaccuracy is expected to be minimized upon the start-up of the new water treatment plant scheduled to be commissioned in spring of 2010. Other factors that may contribute to the discrepancy include un-metered municipal use (street sweeping, sewer jet, hydrant flushing, and firefighting), consumer meter error and leaks in the distribution system. The City conducted a leak detection survey along with personnel & equipment from the New York Rural Water Association two years and located leaks which city crews repaired. New City Wide Leak Detection study is programmed for this year.

**Table of Detected Contaminants
Year of 2009**

Contaminant	Violation Yes/No	Date of Sample	Level Detected (Avg/Max) (Range)	Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination
Sulfate	No	7/2009	24	mg/l	N/A	MCL=250mg/l	Naturally Occurring
Sodium See Footnote #1	No	7/2009	23.7	mg/l	N/A	See Footnote #1	Naturally Occurring,
Lead See Footnote #2	No	Aug. - Sept.2008	90 th = 6.2	ug/l	0	AL=15 ug/l	Corrosion of household plumbing systems.
Copper See Footnote #2	No	Aug - Sept.2008	90 th = 283	ug/l	1300 UG/L	AL=1300 ug/l	Corrosion of household plumbing.
Trihalomethanes See Footnotes #3 &6 (THM)	No	Quarterly 2009	65.79 Range 31.1 – 115.7	ug/l	N/A	MCL=80 ug/l	By-products of drinking water chlorination, needed to destroy harmful organisms.
Haloacetic Acids (HAA5's) See Footnotes #3 & 6	No	Quarterly 2009	47.19 Range 5.8 – 93.1	ug/l	N/A	MCL=60 ug/l	By-products of drinking water chlorination, needed to destroy harmful organisms.
NOTE: The running annual average for THM & HAA's test results was calculated to be 65.79ug/l and 47.19ug/l respectively.							
Nickel	No	7/2009	1.3	ug/l	N/A	100 ug/l	Naturally Occurring
Barium, Total	No	7/2009	0.69	mg/l	2	2	Erosion of natural deposits.
Turbidity See Footnote #4	No	12/31/2009	1.0	NTU's	N/A	TT= ≤ 1 NTU	Soil Runoff
Turbidity See Footnote #5	Yes	Dec 2009	66% of Samples ≤0.3NTU's	NTU's	N/A	TT=95%of Samples ≤ 0.3 NTU's	Soil Runoff

Notes:

- Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drink by people on moderately restricted sodium diets.
- The level presented represents the 90% percentile of 30 sites that were tested. A percentile is a value on a scale of 100 that indicates the percent of a Distribution sample that is equal to or below it. The 90% percentile is equal to or greater than 90% of the lead and copper values detected in our Water system. In this case, 30 samples were collected in our system and the 90% percentile value for lead was 6.2 ug/l and copper was 283 ug/l. The action level for lead was exceeded at one of the sites tested. The action level for copper was not exceeded at any of the sites tested.
- These results represent the annual quarterly average calculated from results of testing performed and from said data as required.
- Turbidity is a measure of the cloudiness of the water. We test it because it's a good indicator of the effectiveness of our filtration systems. Our highest single turbidity measure occurred for the year, on 12/31/09 at a measurement of 1.0 NTU's. State regulations require that turbidity must be 0.3 NTU or lower for our combined filter effluent at all times.
- Required is 95% of samples collected must be below 0.3 NTU's leaving the filtration facilities. The Monhagen treatment facility does not currently comply with the individual filter turbidity monitoring requirement, which is an ongoing monitoring violation.
- Orange County Health Dept. conducted a round of surveillance sampling in our water system close to a location representing maximum residency time. Test results were 85 ug/l for TTHM's and 4.2 ug/l for HAA 5's.

* The State considers 50 p/Ci/1 to be the level of concern for beta particles.

About Lead: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead in your home may be higher than at other homes in the community because of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, flush your tap for 30 seconds to 2 minutes before using water. If you wish to have your water tested, call (914) 668-7820 for details. More information is available from **Safe Drinking Water Hotline (800-426-4791)**.

About TTHM's (Total Trihalomethanes): The sum of the concentration of chloroform, bromodichloromethane, dibromochloromethane and bromoform. They are formed as a result of chlorine combining with the natural organics in water.
About HAA5 (Haloacetic Acids): The sum of the concentration of mono-, di-, and trichloroacetic acid and mono-, and dibromomonoacetic acid. They are also formed when chlorine reacts with the natural organics in water.

Maximum Residual Disinfectant Level (MDRL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the control of microbial contaminants. The MDRL for Chlorine is 4.0 ppm.

Maximum Residual Disinfectant Level Goal (MDRLG): The level of a drinking water disinfectant below which there is a known or expected risk to health. MDRLG's do not reflect the benefits of disinfectant use to control microbial contamination. For Chlorine the MDRLG is 4 ppm.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER

The NYSDOH has evaluated this public water system's susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph 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 Public Water System (PWS). This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable standards.

This assessment found an elevated susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for protozoa and pesticides contamination. There is also a high density of sanitary wastewater discharges, which results in elevated susceptibility for all contaminate categories. In addition, it appears that the total amount of wastewater discharge to surface water in this assessment area is high enough to considerably raise the potential for contamination (particularly for protozoa). There are no noteworthy contamination threats associated with other discrete contaminate sources. Finally, it should be noted that hydrologic characteristics (e.g. basin shape and flushing rates) generally make reservoirs highly sensitive to existing and new sources of phosphorus and microbial contamination.

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

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, and synthetic organic compounds. The table presented 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, might be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Orange County Health Department at (845) 291-2331.

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).

Picocuries per liter (pCi/l): a measure of the radioactivity in water

WHAT DOES THIS INFORMATION MEAN?

As you can see by the table, we have learned through testing that some contaminants have been detected; however, the contaminants detected were below New York State MCL / AL regulations.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

1.) Our water system recently violated drinking water standards. Although this was not an emergency, as our customers, you have a right to know what happened, what you should do, and what we did to correct this situation

We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. Water samples for December showed that 34.4% of turbidity measurements were over 0.3 turbidity units. The standard is that no more than 5% of samples may exceed 0.3 turbidity units per month. The turbidity levels are relatively low. However, their persistence is a concern. Normal turbidity readings at our plant are less than 0.2 turbidity units.

What should I do?

1 You do not need to boil your water or take other actions. We do not know of any contamination, and none of our testing has shown disease-causing organisms in the drinking water.

2 People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791.

What does this mean?

This is not an emergency. If it had been, you would have been notified immediately. However, turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What is being done?

The existing Monhagen water treatment plant is approaching the end of its useful life, and is not able to meet the extreme variations of water demands as well as extreme surges related to distribution system water main breaks or normally scheduled maintenance. In mid December, unusual increase in flows occurred through our Monhagen treatment facility which is currently our only treatment facility in operation due to maintenance/repairs being done at our D.A.F. Packaged plant. On December 27, a major water main break surfaced on Lake Ave, caused the surge in demand mentioned above. After the Lake Ave. break was repaired and implementing some adjustments to the plant maintenance routine, such as more frequent cleaning of the plant old sedimentation basins, turbidity readings have since met the required standard. The New Water Treatment Plant, currently under construction is scheduled to replace this Old Treatment Plant this Spring.

2.) We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the month of June we did not complete all testing for total organic carbons and therefore cannot be sure of the quality of our drinking water during that time.

What should I do?

There is nothing you need to do at this time.

What has been done?

The table below lists the contaminant we did not properly test for during the last year, we are supposed to sample for total organic carbon (TOC) for raw and finished water on any day during each month per treatment plant as part of compliance with the disinfection by-product rule. In June, the samples for the finished waters were not taken. We took samples for raw and finished waters on July 6 & 23, 2009 (the July 6 test was not required for the month, but was taken close to the June month were the sample was missing) and the results were compliant with regulations for both dates although it is still a violation for not being taken during the month of June.

Contaminant	Required sampling frequency	Number of samples taken	When samples should have been taken	When samples were taken
TOC's	Monthly	0	During June 2009	July 2009

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

For more information, please contact Mr. Mike Moser, Deputy Commissioner of Public Works or Nick Klupacs Chief Operator WTP at 845-343-3169 or by mail to City of Middletown DPW, 16 James St, Middletown, NY 10940.

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).

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. UV disinfection has been found to be very effective against this pathogen. 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. 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.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

As part of a USEPA Administrative Order and a negotiated timetable with the EPA, the below listed phases of construction are being implemented accordingly for the upgrade of the City of Middletown Water Treatment Facilities:

Phase I: 1.5 MGD (Million Gallons per Day), new package plant was constructed and put in line during November 2003. This plant incorporated dissolved air floatation process, filtration and ultra violet light disinfection. This plant replaced the Highland Water Treatment Plant, which was abandoned.

Phase II: New 5 MGD (Million Gallons per Day) Water Treatment Facilities. Design plans and specifications have been finalized, submitted and approved by the New York State Department of Health and Environmental Protection Agency. Construction of said plant commenced in the fall of 2007. This new facility will replace the existing Monhagen Water Treatment Facility, which will be decommissioned upon the successful commissioning of the new facility scheduled for spring 2010.

SYSTEM IMPROVEMENTS / 2009 HIGHLIGHTS

- ◆ Repaired 12 water main breaks.
- ◆ Installed 17 commercial / residential taps.
- ◆ Winterized and flushed all hydrants and installed hydrant markers.
- ◆ Updated / Replaced 369 Water meters. 3,549 meters (49%) are converted to radio & are remote readable.
- ◆ 15 Water main valves, varying in sizes from 4" to 24" were repaired / replaced.
- ◆ Installed 340' of new water main to increase pressure and flow.
- ◆ Repaired / replaced / installed 24 fire hydrants.
- ◆ Construction of new Water Treatment Plant continued.
- ◆ Regular Treatment of City Reservoirs with Copper Sulfate, required for controlling Algae growth.

2010 PLANNED SYSTEM IMPROVEMENTS AND PROJECTIONS

- ◆ Raise valve boxes
- ◆ Replace broken valves in distribution system
- ◆ Replacement / placement of new fire hydrants
- ◆ Treatment of reservoirs with algaecide
- ◆ Construction of New Water Treatment Plan to be completed and it will be commissioned this spring.
- ◆ Extending 18" Water Main on Co. Rt. 78 to intersection of Co. Rt. 78 & High Barney Rd. Work to start this Spring
- ◆ Converting Mill Pond Supplemental Water Taking Permit to a permanent water skimming/taking operation, including reconstruction of Mill Pond Dam and adding a permanent raw water pump station. Dam Reconstruction Project is scheduled to start this Spring.
- ◆ Conduct new system-wide leak detection program.

PLUMBING INSPECTOR & LICENSED PLUMBERS

The City is required by New York State Municipal Law to have a plumbing inspector. This law was made for your protection and the protection of all our customers. Both the County and State Health Departments require us to prevent and control cross connections within our water distribution system. This can only be done by the plumbing inspector knowing when and where work is being done and that person doing the work is licensed by the City and clearly knowledgeable in the field of plumbing.

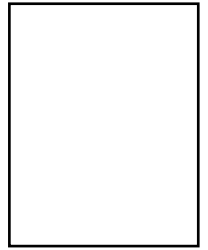
IF YOU SEE

Anyone tampering with a hydrant and its operation, or climbing on a water tank is a violation of the law. Report it to the Police immediately. If you see water running out of the street or the ground where have never seen it before, report it to this department. Should your water be discolored after running it for a few minutes, report it also to this department.

The Department of Public Works is open 8:30 – 4:30, Mon- Fri, (343-3169). After hours emergency only, call police department at 343-3151.

YOUR RESPONSIBILITY

Your responsibility for the maintenance of the water system is from and including the tap on the city's water main in the street all the way into your building including all plumbing in your building. You should keep your curb box clean and accessible for emergency shut off of water to your building. All valves should be operable and in good working order. Do not allow hoses to lay in a pool, bucket, tank or anything of the like that could cause contamination to the water system.



Fold Line

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- Saving water saves energy and some of the costs associated with both of these necessities of life;
- Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential firefighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it 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

The City has always been willing to keep the public informed and gives guided tours of the reservoirs and filtration plant to any individuals or groups on request. 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. Please call our office if you have questions. *Please be vigilant about protecting our Water System by reporting any suspicious activities to the following phone numbers: During normal business working hours, DPW (845) 343-3169. All other times, including normal work hours, Police Department (845) 343-3151.*