

Annual Drinking Water Quality Report for 2008
Village of Alden Water Department
13336 Broadway, Alden, New York 14004
(Public Water Supply ID# 1400398)

INTRODUCTION

The Village of Alden is pleased to present to you our 2008 Annual Water Quality Report. To comply with State regulations, the Village of Alden 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, with the exception of exceeding the maximum contaminant level for iron and manganese from 2 of 4 well sites, 1 quarterly sample for iron, and failure to complete a cross connection control program. Further details are contained later in this report. 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.

Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. If you have any questions about this report or concerning your drinking water, please contact Keith A. Sitzman, Superintendent of Public Works at (716) 937-7392, or fax (716) 937-0316. We want you, our-valued water customers, to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings. They are held on the second and fourth Thursday of each month at 7:30 p.m. in the Village Municipal Building located at 13336 Broadway, Alden, New York.

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, 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 the entire Village of Alden, estimated at 2666 people, and 30 out-of-district customers through 990 water service connections. It has furnished in excess of 94 million gallons of water to the public in 2008 and has had no variances or exemptions from drinking water regulations. Four groundwater well sites ranging in depth from 16 to 40 feet, located within the Village of Alden are used to pump the water from underground aquifers, which lie under portions of the Village and Town of Alden. This water is chlorinated in all well facilities for disinfection purposes prior to distribution. In addition, aeration treatment (@ 2 well sites) and orthophosphate additives (@ all well sites) are used for taste, odor and corrosion control. Water is pumped into a common distribution system with a one million-gallon ground storage tank, which is used to maintain system pressure and emergency reserve capacity.

SOURCE WATER ASSESSMENT

The following is a summary of the Source Water Assessment -conducted by a contractor for the New York State Department of Health (NYSDOH). The final report was issued May 8, 2003. We have expressed our disagreement with the susceptibility ratings determined and the way the assessment was conducted. The contractor used a tabletop format for this assessment using numerous databases of information to make all evaluations and decisions. The contractor did this assessment from their office without stepping one foot within the source area of the Village of Alden Water System. A true assessment cannot be performed without seeing the system and well sites first hand. None the less the Village of Alden Water Department is required to publish the following summary in our annual water quality report. Staff of the Erie County Health Department prepared this summary.

SUMMARY

*Village of Alden Water System
NY 1400398
Source Water Assessment Report Summary*

*The New York State Department of Health (NYSDOH) has completed a source water assessment for the Village of Alden Water 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. **The susceptibility rating is an estimate of the potential for contamination of the water source. It does not mean that the water delivered to consumers is, or will become contaminated.** See SECTION "ARE THERE CONTAMINANTS IN OUR DRINKING WATER?" for a list of the contaminants that have been detected.*

Our water is derived from three drilled wells and one dug well field consisting of two wells. The source water assessment has rated these wells from medium to high susceptibility to contamination from bacteria, viruses, halogenated solvents, herbicides/pesticides, metals, nitrates, industrial organics, petroleum products and protozoa. These ratings are due primarily to the following factors:

- 1. The wells' close proximity to 3 permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government) and the associated industrial activity.*
- 2. The fact that one well has shown low levels of trichloroethene throughout many years*
- 3. The apparent existence of pasture areas within the vicinity of one well.*
- 4. The fact that one well draws more than 100 g.p.m. from an unconfined aquifer,*
- 5. The assumption that one well draws from an unconfined aquifer of unknown hydraulic conductivity, and*
- 6. The assumption that two of the wells are located in areas prone to flooding.*

While the source water assessment rates our well(s) as being susceptible to microbial contamination, please note that our water is disinfected to ensure that the finished water delivered into your home meets New York State's drinking water standards for microbial contamination.

A copy of the Source Water Assessment Report can be reviewed by contacting us, as noted in this annual water quality report.

PROTECTION EFFORTS

- The Village of Alden adopted section 204 of the Village Code entitled “WATER SUPPLY: PROTECTION FROM CONTAMINATION” on 12-27-2001 in an effort to prevent potential contamination of our water supply.
- In 2003 the Village of Alden completed a land transfer of property within the North Woods, acquiring 40+ acres of wood area which lies directly above the aquifer feeding one of our supply well fields. This will forever guarantee no future development over a large portion of the recharge area of the aquifer, thus significantly reducing the risk of potential contamination.

Each well site is checked daily to not only ensure water quality, but to assure well security systems are functioning properly.

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 bacteria, inorganic compounds (IOC), nitrate, arsenic, lead and copper, iron and manganese, volatile organic compounds (VOC), total trihalomethanes & haloacetic acids (Disinfection Byproducts), chlorine residual, principal organic compounds (POC), Synthetic Organic Compounds (SOC), Primary Inorganic Contaminants, and Radiological contaminants. 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 Erie County Health Department at (716) 858-7677.

The following table shows the results of our monitoring for the period of January 1, 2008 to December 31, 2008 and earlier. (*detected contaminants only*) You may find unfamiliar terms and abbreviations in the tables. To be sure you understand these terms; we’ve provided the definitions on page 8.

Table of Detected Contaminants Village of Alden - Water Department 2008 pg 1 of 5

Contaminant	MCL Violation Y/N	Date of Sample	Level Detected				Unit Measurement	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
			Well Number		Distribution System					
			1	2						

POC - Principal Organic Contaminants

Tri-chloroethene	N	12/4/08		3.0				ug/l	0	5 MCL	Discharge from metal degreasing sites and other factories.
Methyl Tertiary Butyl Ether (MTBE)	N	12/4/08				0.85		ug/l	n/a	10 MCL	Releases from gasoline storage tanks. MTBE is an octane enhancer in unleaded gasoline. Atmospheric deposition.

Disinfection Byproducts

Total Trihalomethanes (TTHM's) Bromoform, Dibromochloromethane, Bromodichloromethane, Chloroform	N	8/12/08					21 Range (1.6-21) (4 samples taken results 1.6, 18, 19, 21)	ug/l	N/A	80 MCL	By-product of drinking water chlorination needed to kill harmful organisms. TTHM's are formed when source water contains large amounts of organic matter.
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Table of Detected Contaminants (cont.)

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Contaminant	MCL Violation Y/N	Date of Sample	Level Detected				Unit Measurement	MCLG	Regulatory Limit (MCL, TT or AL)	Likely Source of Contamination	
			Well Number								Distribution System
			1	2	3	4					

Disinfection Byproducts (cont.)

Total Haloacetic Acids (HAA5) mono-, di-, and trichloroacetic acid and mono- and di-bromoacetic acid	N	8/12/08					2.4 Range (<2-2.4) (4 samples taken Results <2, 2.2, 2.3, 2.4)	ug/l	N/A	60 MCL	By-product of drinking water disinfection needed to kill harmful organisms.
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Inorganic Compounds

Nitrate	N	3/11/08	0.2	1.1				mg/l	10	10 MCL	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Copper	N	5/1/08					1.0* (0.044-1.6) Range	mg/l	1.3	1.3 AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
	N	12/4/08					1.2* (0.11-2.2) Range				

Table of Detected Contaminants (cont.) Village of Alden - Water Department **2008** pg 3 of 5

Contaminant	MCL Violation Y/N	Date of Sample	Level Detected				Distribution System	Unit Measurement	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
			Well Number								
			1	2	3	4					

Inorganic Compounds (cont.)

Lead	N	5/1/08					1.8 ** (ND-3.4) Range	ug/l	0	15 AL	Corrosion of household plumbing systems, erosion of natural deposits
	N	12/4/08					2.4* (ND-8.2) Range				
Barium	N	8/16/04		0.074				mg/l	2	2 MCL	Discharge of drilling wastes; discharge from metal refineries, Erosion of natural deposits
Iron	Y	3/28/06			680	670		ug/l	N/A	300 MCL	Naturally occurring
	Y	8/29/06			630	590					
	N	3/11/08					119.5 ***				
	Y	4/22/08					328 ***				
	N	7/16/08					150 ***				
N	10/7/08					50 ***					
Manganese	N	3/28/06			170	98		ug/l	N/A	300 MCL	Naturally occurring; indicative of landfill contamination.
	N	8/29/06			180	88					
	N	3/11/08					19.5 ***				
	N	4/22/08					37.5 ***				
	N	7/16/08					27.5 ***				
	N	10/7/08					36 ***				

Table of Detected Contaminants (cont.) Village of Alden - Water Department 2008 pg 4 of 5

Contaminant	MCL Violation Y/N	Date of Sample	Level Detected				Unit Measurement	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
			Well Number			Distribution System				
			1	2	3					

Inorganic Compounds (cont.)

Total Iron & Manganese ****	Y	3/28/06			860	768		ug/l	N/A	500 MCL ****	
	Y	8/29/06			800	680					
	N	3/11/08					139 ***				
	N	4/22/08					365.5 ***				
	N	7/16/08					127.5 ***				
N	10/7/08					86 ***					

Radioactive Contaminants

Radium – 228 ***	N	3/11/08	.592	.909	.236	.32		pCi/l		5 MCL	Erosion of natural deposits.
	N	5/7/08	0.8	0.2	0.9	2.0					
	N	7/16/08				2.76					
	N	10/8/08				0.454					
	N		Avg.= 0.7	Avg. = 0.6	Avg. = 0.6	Avg.= 1.4					

Table of Detected Contaminants – Notes

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* We collected 20 samples on 2 separate dates monitoring for Copper. 4 sites out of 40 were above the action level or 10% - Note: The level presented represents the 90th percentile of the 20 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 percentile is equal to or greater than 90% of the copper values detected in the water system. In this case, 2x (20) samples were collected in the water system and the 90th percentile values were 1.0 and 1.2 mg/l. The highest site tested was 2.2 mg/l. Further details of what is being done to address this issue are contained further in this report.

** We collected 20 samples on 2 separate dates monitoring for Lead. No sites out of 40 were above the action level. In this case, 2x (20) samples were collected in the water system and the 90th percentile values were 1.8 and 2.4 ug/l. The highest site tested was 8.2 ug/l.

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

**** If iron and manganese are present, the total concentration of both should not exceed 500 ug/l. Higher levels may be allowed by the state when justified by the supplier of water.

Definitions:

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

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 per 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

WHAT DOES THIS INFORMATION MEAN?

The Village of Alden routinely monitors for constituents in your drinking water according to Federal and State laws. Our water is routinely tested for principal organic compounds (POC), Inorganic Compounds (IOC), Synthetic organic compounds (SOC), volatile organic compounds (VOC), Disinfection Byproducts, Radioactive Contaminants, and nitrate. In addition, tests for coliform bacteria were performed a minimum of three times per month and chlorine residual was tested daily. The table depicts, which compounds were detected in your drinking water and the likely source. Several contaminants are found in Village of Alden water. With the exception of iron and manganese, all contaminants are well below regulatory limits.

Copper

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Important Update

In 2008, the Village of Alden Water Department conducted two (2) rounds of testing for copper and lead. Results of this testing, as shown in the Table of Detected Contaminants (pgs. 4-8) shows that copper and lead levels are below the Action Level (AL) of 1.3 mg/l and 15 ug/l respectively. 4 of 40 test sites exceeded the Action Level for copper, and no test sites exceeded the action level for lead. For the third year in a row our water system is not in violation of exceeding the Action Level for copper, however, we have forwarded our test results to our consulting engineer to assist them in developing a long term corrosion control plan which will help ensure we retain or reduce our levels of copper and lead detected in consumers water systems.

Iron & Manganese

In, 2006 we collected samples from our well sources and in 2008 from areas of our distribution system. Results showed we exceeded the Maximum Contaminant Level (MCL) for both Iron and Total Iron & Manganese as shown in the Table of Detected Contaminants (Pgs 4-8). Levels of iron and total iron & manganese exceeding the MCL were found in wells #3 and #4. We are currently in violations for both iron and total iron & manganese levels. To resolve the MCL violations, CRA Infrastructure and Engineering was retained to evaluate options to correct this issue. In November 2007 an evaluation study was complete and a recommendation was made to connect wells #3 and #4 and install an iron & manganese removal system at well #3 to treat both sources. The Village of Alden Water Department is committed to working diligently to resolve this problem in the most cost-effective manner. In January 2009, the Village of Alden Board of Trustees adopted a \$ 1.7 million bond resolution to make needed improvements to the Village water system. Included in the Improvements project is installing a process to remove iron and manganese from the source water at wells #3 and #4. In the summer of 2009 pilot testing of a treatment unit will be conducted to assist in design of the proper treatment system. We anticipate the design phase to be completed in the summer of 2009 and construction to be done in the fall/ winter of 2009. Additional items to be addressed in the water improvements project are outlined below under System Improvements.

The following is information you should no about iron and manganese. Iron has no health effects. At 1000 ug/l a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/l, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/l represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multivitamins may contain 3000 or 4000 micrograms (ug) of iron per capsule. In addition, the Food and Nutrition Board of the National Research Council determined an estimated safe and adequate daily dietary intake of manganese to be 2000-5000 micrograms for adults. However, many peoples diets lead them to consume even higher amounts of manganese, especially those who consume high amounts of vegetables or are vegetarian. The infant population is of greatest concern. It would be better if the drinking water were not used to make infant formula since it already contains iron and manganese. Excess manganese produces a brownish color in laundered goods and impairs the taste of tea, coffee, and other beverages. Concentrations may cause a dark brown or black stain on porcelain plumbing fixtures.

As with iron, manganese may form a coating on distribution pipes. These may slough off, causing brown blotches on laundered clothing or black particles in the water.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

The Village of Alden water system is currently in violation for not completing a Cross Connection Control program. Cross Connection Control is a program which designates water consumers which by the nature of their water use have a potential to contaminate the public water system. These users are then required to install approved backflow prevention devices at their connection to the public system. A large majority of these users already have backflow prevention installed, although the Village lacked a formal plan and ordinance to govern this program. To comply with this regulation the Village of Alden adopted Chapter 84 "Cross Connection Control" on October 18, 2007. In 2009, we will be further evaluating water users for compliance with the ordinance and working with them to become in compliance.

With the exception of the proceeding the Village of Alden Water System is in full compliance with all federal and state water quality regulations.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

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.

SYSTEM IMPROVEMENTS

In November 2007, CRA Infrastructure and Engineering completed a study of various issues with our water system. They looked at water quality issues like iron & manganese removal, copper & lead control through a corrosion control plan, source water consolidation, hydrogen sulfide removal, water softening alternatives, upgrading system controls, assisting with a cross connection control program development, water source expansion, and the alternative of purchasing water from or contracting with the Erie County Water Authority. The Village of Alden, Board of Trustee's evaluated the alternatives proposed in the CRA study and decided to pursue improvements to the Village of Alden water system. In January 2009, the Board of Trustees adopted a \$1.7 million Water Improvements project to make needed changes and upgrades to our water system.

The Water Improvements project will address the following items:

- 1- Iron, Manganese, and Hydrogen Sulfide removal at well sites #3 and #4 to improve water quality. Also includes interconnection of these wells to allow one treatment system.
- 2- Evaluate options for hardness reduction and install treatment equipment if feasible.
- 3- Upgrade control system to better control and monitor well sites and storage tank.
- 4- Install baffle or mixing system in the water storage tank to improve water quality.
- 5- Upgrade water meters to radio read technology including leak detection. This will reduce read time and provide a means to detect potential leaks within the system to reduce unnecessary costs to the Village and consumers.
- 6- Rehabilitation to well site #2 to include refurbishing the well pump, cleaning the well, and repairs/upgrades to the pump house.

Additional system improvements planned;

- 1- Continue the implementation phase of our cross connection control program whereby customers which pose a contamination threat to the water system will be required to install approve backflow prevention devices in their piping system.
- 2- Increase distribution system flushing to remove accumulated sediment from the distribution system, to help reduce rusty water issues.
- 3- Address emergency power supplies for wells.
- 4- Replace several old system isolation valves to assist in system maintenance and flushing.

We have developed a source water protection program, system vulnerability assessment, and emergency response plans, in compliance with State and EPA regulations, which were approved by the County and State Health Departments.

CLOSING

Thank you for allowing us to continue providing your family with quality drinking water this year. In order to help maintain a safe and dependable water supply, we ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. Please call our office at 937-7392 if you have any questions or comments.