Annual Drinking Water Quality Report for 2015

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 2015 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 not completing the full implementation of our 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 2605 people through 994 water service connections and 14 out of district customers. It has furnished 83.5 million gallons of water to the public in 2015 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 and iron & manganese removal (at 2 well sites) and orthophosphate additives at 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 wooded 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. In 2015, we tested for over 114. These contaminants include: total coliform bacteria, inorganic compounds (IOC), nitrate, arsenic, asbestos, 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) 961-6800.

The following table shows the results of our monitoring for the period of January 1, 2015 to December 31, 2015 and earlier *(detected contaminants only)*. You may find unfamiliar terms and abbreviations in the tables. To be sure you understand these terms we have provided the definitions on page 9.

Table of Detected Contaminants — Village of Alden - Water Department — 2015

Contaminant	MCL Violation Y/N	Date of Sample	Level Detected: Well Number 1	Well Number 2	Well Number 3+	Well Number 4+	Distribution System	Unit Measure-ment	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
POC - Principal Organic Contaminants											
Trichloro-ethene (TCE)	N N N N	3/12/2015 5/152015 9/10/2015 11/12/15		2.01 1.9 2.08 2.68				ug/l	0	5 MCL	Discharge from metal degreasing sites and other factories.
Methyl Tertiary Butyl Ether (MTBE)	N N N	3/12/15 9/10/15 11/12/15			0.62 <0.50 0.58	+ + +		ug/l	n/a	10MCL	Releases from gasoline storage tanks. MTBE is an octane enhancer in unleaded gasoline. Atmospheric deposition.
Disinfection Byproducts											
Total Haloacetic Acids (HAA5) mono-,di-, and trichlor-oacetic acid and mono- and di-bromoacetic acid	N	8/13/2015					6.81*** Range(6.46-7.15)	ug/l	N/A	60 MCL	By-product of drinking water disinfection needed to kill harmful organisms.

Contaminant	MCL Violation Y/N	Date of Sample	Level Detected					Unit Measure-ment	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
			Well Number				Distribution System				
			1	2	3+	4+					
Disinfection Byproducts (cont.)											
Total Trihalometh-anes (TTHM's) Bromoform, Dibromochloro-methane, Bromodichloromethane, Chloroform	N N N	8/13/15 3/12/15 5/15/15		0.32	11.70 10.24	+ +	29.7*** Range (25.2-34.1)	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.
Inorganic Compounds											
Nitrate	N	1/8/15	0.139	0.612	ND	+		mg/l	10	10 MCL	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Table of Detected Contaminants (cont.) Village of Alden - Water Department 2015

Contaminant	MCL Violation Y/N	Date of Sample	Level Detected					Unit Measure-ment	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
			Well Number				Distribution System				
			1	2	3+	4+					
Inorganic Compounds (cont.)											
Copper	N N	6/15/15 12/7/15					1.14* (0.17-1.38) Range 1.26* (0.14-1.54) Range	mg/l	1.3	1.3 AL	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	N N	6/15/15 12/7/15					2.3 ** (ND-4.1) Range 1.6** (ND-5.7) Range	ug/l	0	15 AL	Corrosion of household plumbing systems, erosion of natural deposits
Barium	N	10/28/14	0.055	.098	0.167	+		mg/l	2	2 MCL	Discharge of drilling wastes; discharge from metal refineries, Erosion of natural deposits
Iron	N N N N N N N N	3/12/15 4/2/15 8/13/15 10/8/2015 3/12/2014 5/22/2014 8/14/2014 11/6/2014			<0.030 0.194 0.098 0.130	+ + + +	<0.03 *** 0.0581 *** <0.0443 *** <0.04085***	mg/l	N/A	0.30 MCL	Naturally occurring

Table of Detected Contaminants (cont.) Village of Alden - Water Department 2015

Contaminant	MCL Violation Y/N	Date of Sample	Level Detected					Unit Measure-ment	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
			Well Number				Distribution System				
			1	2	3+	4+					
Inorganic Compounds (cont.)											
Manganese	N	3/12/15			<0.004	+		mg/l	N/A	0.3 MCL	Naturally occurring; indicative of landfill contamination.
	N	4/2/15			0.0313	+					
	N	8/13/15			0.018	+					
	N	10/8/15			0.021	+					
	N	3/12/14					0.0055 ***				
	N	5/22/14					0.0094 ***				
	N	8/14/14					<0.00995 ***				
	N	11/6/14					<0.00445 ***				
Total Iron & Manganese ****	N	3/12/15			<0.034	+		mg/l	N/A	0.5 MCL ****	
	N	4/2/15			0.2253	+					
	N	8/13/15			0.116	+					
	N	10/8/15			0.151	+					
	N	3/12/14					<0.0355 ***				
	N	5/22/14					0.0675 ***				
	N	8/14/14					<0.05425 ***				
	N	11/6/14					<0.0453 ***				

Table of Detected Contaminants (cont.) Village of Alden - Water Department 2015

Contaminant	MCL Violation Y/N	Date of Sample	Level Detected					Unit Measure-ment	MCLG	Regulatory Limit (MCL,TT or AL)	Likely Source of Contamination
			Well Number				Distribution System				
			1	2	3+	4+					
Radiological Contaminants											
Radium-228 ***	N	5/14/13				4.E-1 +/- 3.E-1		pCi/l		5 MCL	Erosion of natural deposits.
Disinfectants											
Chlorine Residual	N	Daily avg. Range	0.61 0.49-0.69	0.58 0.52-0.65	0.66 0.53-0.81		0.37 Range (0.22-0.69)	mg/l	N/A	4	Water additive used to control microbes.

Table of Detected Contaminants – Notes

* We collected 20 samples on 2 separate dates monitoring for Copper. Three (3) of the 40 test sites were above the action level - 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 90th 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 1.14 and 1.26 mg/l. The highest site tested was 1.54 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 2.3 and 1.6 ug/l. The highest site tested was 5.7 ug/l. Of the 40 sites tested 16 detected lead and all were well below the action level.

Lead is not present in the drinking water that is treated and delivered to your home. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. The Village of Alden Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at http://www.epa.gov/safewater/lead.

*** This level represents the average level detected.

**** If iron and manganese are present, the total concentration of both should not exceed 0.50 mg/l. Higher levels may be allowed by the state when justified by the supplier of water.

+ Wells #3 and #4 combined as of 4/13/13, to supply one common system entry point.

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, Microbiological Contaminants, asbestos, and nitrate. In addition, tests for coliform bacteria were performed a minimum of three times per month and chorine 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, all contaminants are well below regulatory limits.

Copper & Lead

In 2015 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. 4-9) shows that the copper 90th percentile level was below the action level (AL) of 1.3 mg/l in both rounds of sampling. The lead levels are well below the Action Level (AL) of 15 ug/l for both rounds of testing. Three (3) of the 40 sites tested exceeded the action level for copper, and no sites exceeded the action level for lead. We believe that the removal of iron and manganese from our drinking water better allows the corrosion inhibiting chemical we feed into the water to better control the copper levels.

The following is information you should know about copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

Iron & Manganese

In, 2015 our iron and manganese removal system had completed its second year of operation. Well Sites #3 and #4 both contain iron and manganese in the raw water. The new removal filter takes out between 90-100% of the iron and manganese, allowing us to provide water to our customers with iron & manganese levels well below the allowable limits.

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

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 your drinking water meets health standards. During 2015 all samples had levels consistently below regulatory limits.

In addition our 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 2015, and into 2016 we will be further evaluating water users for compliance with the ordinance and working with them to become compliant. It is anticipated that the Village will be in full compliance by the end of 2016.
With the exception of the preceding 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 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

Planned system improvements are;

1- Complete 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 and maintain approved 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- Replace several old system isolation valves to assist in system maintenance and flushing.

4- Replacement of older non functional fire hydrants to improve reliability in case of fires.

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.