

Annual Drinking Water Quality Report for 2009
Town of Lysander Water Department
8220 Loop Road, Baldwinsville, NY 13027
(Public Water Supply ID# NY3304320)

INTRODUCTION

To comply with State regulations, the Town of Lysander 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. This report provides an overview of last year's water quality. We purchase our water from the Village of Baldwinsville and therefore most of the information contained in this report comes from the testing they have conducted. The Town of Lysander tests your water for bacteria, lead, copper and chlorine residual. Included in this report 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 Barry Bullis, Supervisor, Town of Lysander at (315) 638-4264.

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, 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 sources are:

- ◆ **Doan Well:** Located in the Town of Lysander, outside of the Village. The well field consists of three (3) separate wells, all approximately ninety (90') feet deep. This well field is capable of producing 2 million gallons per day. In 2009, 251,910,000 gallons were produced from this well field. Treatment for the Doan Well supply consists of chlorination and fluoridation.
- ◆ **Canton Street Well:** Located within the Village. This well is twenty feet (20') deep and twenty feet (20') in diameter. This well field is capable of producing 1.5 million gallons per day. In 2009, 124,896,000 gallons were produced from this well field. Treatment for the Canton Street Well consists of chlorination and fluoridation.

During 2009, our system did not experience any restriction of our water sources. The water is treated by chlorination and fluoridation prior to distribution.

The NYS DOH has completed a source water assessment for this 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 source water, 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. The source water assessments provide resource managers with additional information for protecting source waters into the future. Water suppliers and county and state health departments will use this

information to direct future source water protection activities. These may include water quality monitoring, resource management, planning, and education programs.

As mentioned before, our water is derived from one dug well and 3 drilled wells. The source water assessment has rated these wells as having a medium-high to high susceptibility to microbials, a medium-high susceptibility to nitrates, metals, herbicides/pesticides, and industrial solvents, and a high susceptibility to petroleum products and other industrial contaminants. These ratings are due primarily to the close proximity of oil and gas wells, pasture, and low intensity residential activity in the assessment area. In addition, the wells yield or pump greater than 100 gpm from unconfined aquifers. While the source water assessment rates our wells as being susceptible to microbials, 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.

| Susceptibility Ratings | | | | | |
|---|--------------------|-------------------|-----------------|-------------|---------------|
| System Name: Baldwinsville Village NY3304307 | | | | | |
| Well Name | Well Number | Microbials | Nitrates | VOCs | Others |
| Canton St. Well | 2558437 | H | MH | H | MH |
| Doan Well field – Well No. 2 | 2558436 | MH | MH | H | MH |
| Doan Well field – Well No. 3 | 2592903 | MH | MH | H | MH |
| Doan Well field – Well No. 4a | 2592904 | MH | MH | H | MH |

FACTS AND FIGURES

Our water system serves approximately 1,210 people within the Town through 450 service connections. The total water purchased by the Town was 45,699,060 gallons. The amount of water delivered to customers was 44,860,717 gallons. 838,343 gallons or 1.8345% of purchased water was unaccounted for (lost or leakage). This includes water for fire protection and practice, road cleaning, municipal use, etc. In 2009, water customers were charged \$1.40 per 1,000 gallons of water with the annual average water charge per user at \$139.13.

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, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. The tables presented below depict 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 Onondaga County Health Department at 315-435-6600.

Definitions:

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

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

EPA: Environmental Protection Agency

DBP – Disinfection By-product: Chemical compounds that result from the addition of chlorine to water containing organic substances.

CDC: Center for Disease Control

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).

Picocuries per liter (pCi/L): A measure of the radioactivity in water.

90th Percentile Value: The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system.

Maximum Residual Disinfectant Level (MRDL): The highest level 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 Goal (MRDLG): The level of 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.

Total Trihalomethanes: The combined concentration of the following four contaminants; Bromodichloromethane, Bromoform, Chloroform, and Dibromochloromethane.

Haloacetic acids: The combined concentration of the following five contaminants; Dibromo-, Dichloro-, Monobromo-, Monochloro-, and Trichloro -, acetic acids.

2009 Sampling

| Table of Detected Contaminants | | | | | | | |
|--|------------------|----------------|-----------------------------|------------------|-----------|----------------------|---|
| Contaminant | Violation Yes/No | Date of Sample | Level Detected Avg. (Range) | Unit Measurement | MCLG | Regulatory Limit MCL | Likely Source of Contamination |
| Disinfection By-Products (DBP) (Town of Lysander Distribution System) | | | | | | | |
| Total Trihalomethanes (TTHM) | No | 8/14/07 | 15.4 | ug/L | N/A | MCL 80 | By-product of drinking water chlorination |
| Chlorine Residual | No | Daily | 0.6 (0.4-0.8) | mg/L | (MRDLG) 0 | (MRDL) 4 | By-product of drinking water chlorination |
| Total Haloacetic Acids (HAA5) | No | 8/14/07 | 2.9 | ug/L | N/A | MCL 60 | By-product of drinking water chlorination |
| Inorganic Contaminants (Village of Baldwinsville) | | | | | | | |
| Nitrate - Canton St. Well* | No | 12/10/09 | 1.26 | mg/L | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits |

| | | | | | | | |
|---|-----|----------|----------------------|-------|-----|---------|---|
| Nitrate - Doan Wellfield* | No | 12/10/09 | 6.82 (6.34 -7.14) | mg/L | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits |
| Sodium - Canton St. Well** | No | 6/19/09 | 94.0 | mg/L | N/A | N/A | Naturally occurring; road salt; water softeners; animal waste |
| Sodium - Doan Wellfield** | No | 6/19/09 | 13.33 (12 -15) | mg/L | N/A | N/A | Naturally occurring; road salt; water softeners; animal waste |
| Inorganic Chemicals – Sampling Required Every Three Years (Village of Baldwinsville) | | | | | | | |
| Barium – Doan Wellfield | No | 2/7/07 | 0.32 | mg/L | 2 | 2.00 | Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits |
| Inorganic Chemicals – Sampling Required Every Five Years (Village of Baldwinsville) | | | | | | | |
| Sulfate - Canton St. Well | No | 2/7/07 | 37.3 | mg/L | N/A | 250 MCL | Naturally occurring |
| Sulfate - Doan Wellfield | No | 2/7/07 | 33.2 | mg/L | N/A | 250 MCL | Naturally occurring |
| Chloride - Canton St. Well | No | 2/7/07 | 127 | mg/L | N/A | 250 MCL | Naturally occurring or indicative of road salt contamination |
| Chloride - Doan Wellfield | No | 2/7/07 | 39 | mg/L | N/A | 250 MCL | Naturally occurring or indicative of road salt contamination |
| Color – Canton St. Well | No | 2/7/07 | 10 | Units | N/A | 15 MCL | Large quantities of organic chemicals, inadequate treatment, high disinfectant demand and the potential for production of excess amounts of disinfectant by-products such as trihalomethanes, the presence of metals such as copper, iron and manganese; Natural color may be caused by decaying leaves, plants, and soil organic matter. |
| Color – Doan Wellfield | No | 2/7/07 | 2 | Units | N/A | 15 MCL | |
| Iron – Canton St. Well*** | Yes | 2/7/07 | 0.43 | mg/L | 0.3 | N/A | Naturally occurring. |
| Manganese – Doan Wellfield | No | 2/7/07 | 0.08 | mg/L | 0.3 | N/A | Naturally occurring; Indicative of landfill contamination. |
| Zinc – Canton St. Well | No | 2/7/07 | 0.20 | mg/L | 5 | N/A | Naturally occurring; Mining waste. |

* “Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.” We were required to monitor nitrates once in 2009.

** Water containing more than 20 mg/L (ppm) 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 drinking by people on moderately restricted sodium diets.

*** Iron has no health effects. At 1,000 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 3,000 or 4,000 micrograms of iron per capsule.

Lead & Copper - Sampling Required Every 3 Years (Town of Lysander Distribution System)

| Table of Detected Contaminants | | | | | | | |
|--------------------------------|------------------|----------------|-------------------------------------|--------------------|------|---------------------|--|
| Contaminant | Violation Yes/No | Date of Sample | 90 th Percentile (Range) | Unit Measure -ment | MCLG | Regulatory Limit AL | Likely Source of Contamination |
| Lead | No | 7/08 | 1.0* (nd – 4.0) | ug/L | 0 | AL = 15* | Corrosion of household plumbing, erosion of natural deposits |
| Copper | No | 7/08 | 0.27* (0.10 - 0.29) | mg/L | 1.3 | AL = 1.3* | Corrosion of household plumbing, erosion of natural deposits |

* The level presented represents the 90th percentile of the 10 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 Lead and Copper values detected at your water system. The Action Levels for Lead and Copper were not exceeded at any of the sites tested.

Lead: Infants and young children are typically more vulnerable to lead in drinking water than the general population. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. 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. If you are concerned about elevated lead levels in your home’s water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791)

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.

The State allows for testing 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.

Radionuclides (Village of Baldwinsville)

| Table of Detected Contaminants | | | | | | | |
|--------------------------------|------------------|----------------|----------------|--------------------|------|-----|--------------------------------|
| Contaminant | Violation Yes/No | Date of Sample | Level Detected | Unit Measure -ment | MCLG | MCL | Likely Source of Contamination |
| Gross Alpha | | | | | | | |
| Doan Well #2 | No | Year 2008 | 2.3 | pCi/L | 0 | 15 | Erosion of natural deposits |

| | | | | | | | |
|-------------------|----|-----------|----------------------------------|-------|---|------|--|
| Doan Well #3 | No | Year 2008 | 2.6 | pCi/L | 0 | 15 | Erosion of natural deposits |
| Doan Well #4A | No | Year 2008 | 3.0 | pCi/L | 0 | 15 | Erosion of natural deposits |
| Radium 226 | | | | | | | |
| Canton St Well | No | Year 2008 | 0.11 | pCi/L | 0 | 5* | Decay of natural deposits and man made emissions |
| Doan Well #2 | No | Year 2008 | 0.28 | pCi/L | 0 | 5* | Decay of natural deposits and man made emissions |
| Doan Well #3 | No | Year 2008 | 0.15 | pCi/L | 0 | 5* | Decay of natural deposits and man made emissions |
| Doan Well #4A | No | Year 2008 | 0.16 | pCi/L | 0 | 5* | Decay of natural deposits and man made emissions |
| Radium 228 | | | | | | | |
| Doan Well #2 | No | Year 2008 | 1.9 | pCi/L | 0 | 5* | Erosion of natural deposits |
| Doan Well #3 | No | Year 2008 | 0.8 | pCi/L | 0 | 5* | Erosion of natural deposits |
| Gross Beta | | | | | | | |
| Canton St Well | No | Year 2000 | 0.275 (Avg. of qtrly samples) | pCi/L | 0 | 50** | Decay of natural deposits and man made emissions |
| Doan Wellfield | No | Year 2000 | 0.3375 (Avg. of qly samples) | pCi/L | 0 | 50** | Decay of natural deposits and man made emissions |

* 5 pCi/L is the regulatory limit for Combined Radium 226 & 228.

** The State considers 50 pCi/L to be the level of concern for beta particles

WHAT DOES THIS INFORMATION MEAN?

As you can see by the tables, the Village of Baldwinsville uncovered some problems. In 2007, Iron was detected above the MCL in the Canton St. well. Please see the table and note above for more information. We have learned through our testing that some other contaminants have been detected; however, these contaminants were detected below New York State requirements. Although nitrate was detected below the MCL, it was detected at greater than one-half of the MCL in the Doan Wellfield. Therefore, we are required to present the following information on nitrate in drinking water:

“Nitrate in drinking water at levels above 10 mg/l is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from you health care provider.”

IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?

During 2009, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements.

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 FLUORIDE ADDITION

Our system is one of the many drinking water systems in New York State that provides drinking water with a controlled, low level of fluoride for consumer dental health protection. Fluoride is added to your water by the Village of Baldwinsville before it is delivered to us. According to the United States Centers for Disease Control, fluoride is very effective in preventing cavities when present in drinking water at an optimal range from 0.8 to 1.2 mg/l (parts per million). To ensure that the fluoride supplement in your water provides optimal dental protection, the State Department of Health requires that the Village of Baldwinsville monitor fluoride levels on a daily basis. During 2009 monitoring showed fluoride levels in your water were in the optimal range 83.3 % of the time. None of the monitoring results showed fluoride at levels that approach the 2.2 mg/l MCL for fluoride.

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.
- ◆ Take showers instead of baths. The usual bath requires a 36 gal., the usual shower 25 gal.; 20 gal. is enough for a bath, 10 gal. is enough for a shower if you turn it off while you lather.
- ◆ Keep a bottle of drinking water in the refrigerator - running it until cold will waste a gallon.
- ◆ Be careful to water the lawn, not the sidewalk or street.
- ◆ Think before you turn on the tap.

Town of Lysander Minimum rates are \$9.50-\$14.00 for the first 1000 cubic feet (7840 Gallons)

| Leak would result in waste listed: | Diameter of steam in: | Waste per Quarter at 60 psi Water | Pressure in: | |
|---|------------------------------|--|---------------------|-------------------|
| 3 Month Period | Inches | Gallons | Cubic Feet | Cost |
| | 1 / 4 | 1,181,500 | 158,000 | \$1,598.50 |
| | 1 / 8 | 296,000 | 39,400 | \$532.50 |
| | 1 / 16 | 74,000 | 9,850 | \$115.30 |
| | 1 / 32 | 18,500 | 2,465 | \$31.58 |

SYSTEM IMPROVEMENTS

Capital Projects:

2009 – A new electric service was installed at the Canton Street Water Plant.

Groundwater Protection Plan:

For the past nine (10) years, the Village of Baldwinsville has been working on a groundwater protection plan in conjunction with the New York Rural Water Association, with the aid of a grant provided by the Rural New York Grant Program through the New York Planning Federation. This plan delineates the areas, which supply water to the two (2) aquifers that the Water Department utilizes and outlines methods of protection from contamination for these areas by overlay zoning requirements. The village adopted the village local law in May 1999. The Town of Van Buren has implemented the Groundwater Protection Plan as a part of their zoning and subdivision review process by the Planning Board. The Town of Lysander has been reviewing methods, which would incorporate the groundwater protection plan in their zoning or review process, but has not solidified any review parameters. A copy of the groundwater protection plan and other pertinent information is available by contacting Timothy C. Baker, P.E., Village Engineer at (315) 635-9665.

WATER INFORMATION

- ◆ We receive many calls each year regarding the hardness of our water in anticipation of the purchase of water softening equipment. We have two well sources. Canton Street Well serves the south side of the Village and registers a 380 mg/L total hardness. Doan Well serves the north side of the Village and registers a 320 mg/L total hardness. The measurements are taken by EPA method 130.2.
- ◆ The sodium content in each well is as follows: Canton Street Well – 94 mg/L and Doan Well – 13.33 mg/L.
- ◆ Please be advised that any delinquent balances as of November 15th will be added to January property taxes.
- ◆ If you plan to sell your property please remember to contact Village Hall at 635-3521 for a final reading.
- ◆ The events of 9/11/01 have prompted the water supply industry to re-evaluate water system security. The Village of Baldwinsville Water Department has increased preventive security measures to protect our water supplies and distribution system. We request that you, as customers of the Village of Baldwinsville Water Department, aid us in the protection of our water supplies and distribution system. If you see any suspicious activity involving the water system, i.e. hydrant or valve tampering, please contact the Baldwinsville Police Department at 635-3131 or the Water Department at 635-3631 or 635-9665.

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 at (315) 638-4264 if you have questions.