

ANNUAL
WATER QUALITY
REPORT

Water testing performed in 2005



Proudly Presented By:

VILLAGE OF
ALGONQUIN

PWS ID#: IL111-00-50

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Where Does Algonquin's Water Come From?

The Village of Algonquin currently draws water from seven wells. Two water treatment plants treat the water for public use. Wells 5, 6, 7 and 11 are all shallow wells at less than 150 feet and are located on the east side of the Fox River. These wells provide the water that is treated at Water Treatment Plant 1, which is on Souwanas Drive.

Wells 8 and 9 are shallow wells at less than 220 feet; they provide water to Water Treatment Plant 2, which is on Wynnfield Drive on the west side of the Fox River in Willoughby Farms Subdivision. Well 10 is a deep well (approximately 1,300 feet) that also provides water for treatment at Water Treatment Plant 2.

In 2005, the Village of Algonquin added a third water treatment facility that will provide an additional 3 million gallons of water per day for our customers. The facility, which is on Square Barn Road, became fully operational in February 2006. The new facility receives water from two newly developed shallow wells. The total combined design capacity from the three water treatment facilities is 12 million gallons per day. The village is already beginning plans to expand the new facility, which will receive water from deep well sources.

Continuing Our Commitment

Once again we proudly present our annual water quality report. This edition covers all required testing completed from January through December 2005 plus other pertinent information.



We are pleased to inform you that once again our system was in compliance with all state and federal drinking water laws. As in the past, our staff is committed to providing safe, reliable, high quality drinking water. To that end, we remain vigilant in meeting the challenges of source water protection,

water conservation, and community education while continuing to serve the needs of all of our water users.

For more information about this report, or for any questions relating to your drinking water, please call Dave Kublank, Chief Water Operator, at (847) 658-2754, ext. 421.

Working Hard for You

Under the Safe Drinking Water Act (SDWA), the U.S. Environmental Protection Agency (U.S. EPA) is responsible for setting national limits for hundreds of substances in drinking water and also specifies various treatments that water systems must use to remove these substances. Each system continually monitors for these substances and reports their findings to the U.S. EPA. The U.S. EPA uses the data to ensure that consumers are receiving clean water.

This publication conforms to the regulation under SDWA requiring water utilities to provide detailed water quality information to each of their customers annually. We are committed to providing you with this information about your water supply because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

Source Water Assessment

Based on information obtained in a well site survey published in 1990 by the Illinois EPA, 12 possible problem sites were identified within the survey area of Algonquin. Furthermore, information provided by the Leaking Underground Storage Tank and Remedial Project Management Sections of the Illinois EPA indicated several additional sites with ongoing remediation that may be of concern. The Illinois EPA has determined that Algonquin Community Water Supply's source water is not susceptible to contamination. This determination is based on a number of criteria: monitoring conducted at the wells; monitoring conducted at the entry point to the distribution system; and the available hydrogeologic data on the wells. The Illinois Environmental Protection Act provides minimum protection zones of 200 feet for Algonquin's wells. The Illinois EPA regulates minimum protection zones. To further minimize the risk to Algonquin's groundwater supply, the Illinois EPA recommends that three additional activities be assessed. First, the village may wish to enact a "maximum setback zone" ordinance. These ordinances are authorized by the Illinois Environmental Protection Act and allow county and municipal officials the opportunity to provide additional protection up to a fixed distance, normally 1,000 feet, from their wells. Algonquin is currently working on establishing its own set wellhead protection zone ordinance. Second, the water supply staff may wish to revisit their contingency planning documents, if available. Contingency planning documents are a primary means to ensure that, through emergency preparedness, a village will minimize its risk of being without safe and adequate water. Algonquin has a current contingency plan document on file. Finally, the water supply staff is encouraged to review their cross-connection control program to ensure that it remains current and viable. Cross-connections to either the water treatment plant (for example, at bulk water loading stations) or in the distribution system may negate all source water protection initiatives provided by the village. This past year, the Algonquin Water Department has reviewed and updated our cross-connection control program. This ensures that our water system is receiving the best possible protection from contaminants that could be introduced to our system by backpressure or backsiphoning.

To receive a copy of the source water assessment, contact the Algonquin Village Water Department at (847) 658-2755.

Community Participation

The public is encouraged to attend Algonquin Village Board meetings, which are held at the Village Board Room, 2200 Harnish Drive, Algonquin. The meetings are held on the first and third Tuesday of each month beginning at 8 p.m.

What Makes Water "Hard"?

If substantial amounts of either calcium or magnesium, both nontoxic minerals, are present in drinking water, the water is said to be "hard." Hard water does not dissolve soap readily, so making lather for washing and cleaning is difficult (hard). Conversely, water containing little calcium or magnesium is called "soft" water.



Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. Also, the Illinois Environmental Protection Agency has a Web site (www.epa.state.il.us) that provides complete and current information on water issues in our state.

Substances That Might Be in Drinking Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.



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 can acquire naturally occurring minerals, in some cases, radioactive material; and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile

organic chemicals, which are by-products of industrial processes and petroleum production, and which may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Lead in Drinking Water

Infants and young children are typically more vulnerable to lead in drinking water than the general population. 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; you could also flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline at (800) 426-4791.





Water Conservation

Water Conservation is a concern for many communities. Because of this concern, Algonquin has taken steps to protect its public water supply by the adoption of a water conservation ordinance. A few of the features of the ordinance are no outside watering of the landscape between 9:00 a.m. and 6:00 p.m. every day, possible even/odd watering restrictions during the summer months and a ban on laying new sod during the summer months.

Water conservation measures are an important first step in protecting the water supply. Such measures not only save the supply of our source water, but also can save you money by reducing your water bill. Here are a few water conservation suggestions:

INSIDE YOUR HOME:

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- Do not let the water run while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.

OUTDOORS:

- Water the lawn and garden in the early morning or evening.
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.
- Use water-saving nozzles.
- Use water from a bucket to wash your car, and save the hose for rinsing.

Information on other ways that you can help conserve water can be found at www.epa.gov/safewater/publicoutreach/index.html.

Table Definitions

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

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

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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 contaminants.

NA: Not applicable

ND: Not detected

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

Sampling Results

During the past year, our operators have taken numerous water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water. The Illinois EPA requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNITS)	YEAR SAMPLED	MCL (MRDL)	MCLG (MRDLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha emitters (pCi/L)	2005	15	0	8.7	ND-8.7	No	Erosion of natural deposits
Arsenic (ppb)	2005	10 ¹	0 ¹	1.6	0.7-1.6	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2005	2	2	0.69	0.13-0.69	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	2005	(4)	(4)	0.9491	0.7543-0.9491	No	Water additive used to control microbes
Chromium (ppb)	2005	100	100	5	NA	No	Discharge from steel and pulp mills; Erosion of natural deposits
Combined radium (pCi/L)	2005	5	0	3.5	1.2-3.5	No	Erosion of natural deposits
Fluoride (ppm)	2005	4	4	1.08	0.71-1.08	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate+Nitrite (ppm)	2005	1	1	1.45	0.11-1.45	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from 31 homes throughout the service area

SUBSTANCE (UNITS)	YEAR SAMPLED	ACTION LEVEL	MCLG	AMOUNT DETECTED (90TH%TILE)	HOMES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2004	1.3	1.3	0.721	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2004	15	0	15.3	4	No	Corrosion of household plumbing systems; Erosion of natural deposits

STATE REGULATED

SUBSTANCE (UNITS)	YEAR SAMPLED	MCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Iron (ppb)	2005	1,000	NA	240	140-240	No	Erosion from naturally occurring deposits
Manganese (ppb)	2005	150	NA	25	NA	No	Erosion from naturally occurring deposits
Sodium (ppm)	2005	NA	NA	82	28-82	No	Erosion of naturally occurring deposits; used in water softener regeneration

¹These arsenic values were effective January 23, 2006; however, during 2005 the MCL was 50 ppb and there was no MCLG.