



State of Illinois  
Pat Quinn, Governor

Illinois Environmental Protection Agency  
John Kim, Interim Director

Illinois Department of Public Health  
LaMar Hasbrouck, MD, MPH, Director

## Fact Sheet # 2

# Sauk Village Water Supply Contamination Issue

Cook County, Illinois  
July 2012 Update

## Background

Detections of vinyl chloride have occurred in the source water wells providing water for the Sauk Village community drinking water supply since 2009. Vinyl chloride is a man-made chemical that is found in groundwater from break-down products of solvent-type chemicals. When vinyl chloride is detected, it can indicate spills or releases that occurred 25 years or more in the past. The water supply wells and the finished water that is provided to residents is being sampled and analyzed by the Illinois EPA staff on a weekly basis to make sure that water provided to the community is safe to drink.

At one-half the federal Safe Drinking Water standard (which is 1 part per billion for vinyl chloride), notification is required to all water users. On July 16, 2012, Illinois EPA sent a notification letter to the Village that they are required to notify residents that vinyl chloride has been found in the finished water that enters the distribution system. This notification level – 1 part per billion for vinyl chloride – is the new “early warning” prevention standard enacted by the State of Illinois. This notification level does not indicate that the water is unsafe to drink.

At this lower level, steps must be taken by Sauk Village to reduce the concentration of the vinyl chloride to below the prevention level of 1 ppb. The Illinois EPA and the Illinois Office of the Attorney General are pursuing legal enforcement against Sauk Village to correct water quality problems related to the community water supply and provide bottled water to residents and businesses who want it.

### Is the Sauk community water supply currently safe to drink?

The community water supply detection level is still less than the federal drinking water quality standard for vinyl chloride. Illinois EPA and Illinois Department of Public Health are advising no restrictions on use of the Sauk Village water supply at this point – either by residents or businesses. Those uses include drinking, bathing or showering and cooking with the water. However, the contaminant level in the water supply is getting close to violating the federal drinking water standard. Consequently, Illinois EPA is sampling both the well water and the finished water on a weekly basis to make sure the water is safe to consume and is requiring that the Village make bottled water available to those who want it.

### What health effects can result from consuming vinyl chloride in drinking water?

Exposure to low levels of vinyl chloride at or above the maximum contamination level (MCL) of 2 ppb over many years may lead to impaired immune system function; kidney or liver damage; and may increase the risk of liver cancer. The United States Environmental Protection Agency has determined that drinking water with 2 parts per billion of vinyl chloride over an entire lifetime corresponds to an excess lifetime cancer risk of 1 in 10,000.



Illinois Environmental Protection Agency  
Office of Community Relations  
1021 N. Grand Avenue East  
Springfield, Illinois 62702

www.epa.state.il.us  
Phone: (217) 782-2829  
Fax: (217) 785-7725  
TDD: (217) 782-9143

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**Can the vinyl chloride be removed from the well water?**

Yes. There are various forms of treatment to remove the contamination after the well water is drawn at the well, before it goes into the system that delivers water to the users. Part of the enforcement action by the Illinois Attorney General's Office and Illinois EPA is to demand that the Village begin treatment of the water right away.

**Does Illinois EPA know the source of the contamination in the groundwater?**

The Illinois EPA does not currently know the source or sources of vinyl chloride contamination. The Agency is currently conducting investigations and gathering information about potential sources.

**How can I reduce my risk?**

There is no immediate health risk from using the water with vinyl chloride levels below 2ppb. Exposure to vinyl chloride may increase the risk of cancer over many years – the higher the level and the longer the exposure, the greater the risk. However, if you are concerned that any exposure to vinyl chloride may pose a threat to the health of you or your family, you may choose to drink bottled water or water from an alternate source. You may also reduce your exposure to vinyl chloride vapors from contaminated water by running an exhaust fan or opening a window during showering and bathing. Risk posed by water uses should be very small.

**Does Sauk Village have other water quality issues besides the vinyl chloride contamination?**

Yes. Other aesthetic water quality issues may include iron or manganese content or other naturally-occurring substances that cause issues with taste or may form stains on clothing and fixtures. This in itself is not usually a problem for public health; however these water quality parameters are monitored as well. Please see Illinois Department of Public Health's brochure, "**Commonly Found Substances in Drinking Water:**" <http://www.idph.state.il.us/envhealth/pdf/DrinkingWater.pdf>.

**How can I look up water quality data about the Sauk Village System?**

Attached is a list of steps (page 4) to take, using Illinois EPA's web site (<http://epa.state.il.us>), that will allow you to view sampling data information for public water supplies. You may want to view information on bacterial contamination (coliform sample results) or chemical (non-coliform sample results by analyte).

**Who to contact for more information:**

Carol Fuller  
Illinois EPA  
Community Relations Coordinator  
Office of Community Relations  
217/524-8807  
[carol.fuller@illinois.gov](mailto:carol.fuller@illinois.gov)

Maggie Carson  
Illinois EPA  
Communications Manager  
217/558-1536  
[maggie.carson@illinois.gov](mailto:maggie.carson@illinois.gov)

Sabrina Miller  
Illinois Dept. of Public Health  
Communications Manager  
312/814-8194  
Sabrina.miller@illinois.gov



An earlier fact sheet regarding this groundwater contamination in Sauk Village can be found at:  
<http://www.epa.state.il.us/community-relations/fact-sheets/sauk-village/fact-sheet-1.html>

A fact sheet on vinyl chloride by the Agency for Toxic Substances and Disease Registry - ToxFAQs about Vinyl Chloride: <http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=281&tid=51>

Illinois Department of Public Health's Fact Sheet about Vinyl Chloride in Groundwater:  
<http://www.idph.state.il.us/envhealth/factsheets/vinyl-chloride.htm>

**You may view water sampling results for the Sauk Village community water supply on the Illinois EPA web site at <http://www.epa.state.il.us/>**

1. Choose the “Drinking Water Information” (blue) button on the right side of the home page;
2. On the Drinking Water Information page, click on “Drinking Water Watch;”
3. On the page for search parameters, enter “Sauk” in the field for the water system name. Two systems will be listed; choose “Sauk,” which is IL 0312790;
4. For coliform indicator bacteria results, choose “coliform sample results” in the left-hand column;
5. This will bring up a chronological list showing the presence (P) or absence (A) of the coliform indicator bacteria. In the last 300 sample records, coliform was present one time in April 2010, and that did not result in a violation of a bacteria standard for community water supplies.
6. For vinyl chloride sampling results, go back to the “Water System Detail” (left hand button); Choose “non-coliform sample results by analyte.” This takes you to a list of chemicals (analytes). Scroll down to vinyl chloride (2976) and click on it;
7. This will take you to the historical list of sample results for all volatile organic compounds, which includes vinyl chloride, that were taken from the various taps in the village distribution system (TP 01 and TP 02) as well as raw water sampling locations;
8. Click on the blue sample number at the left for whatever sample you are interested in. The first sample that shows up (the most recent), from January 17, 2012, shows that vinyl chloride was detected at 0.880 micrograms per liter (ug/L), or less than one part per billion. By comparison, the federal drinking water standard is two parts per billion, or 2 ug/L.

At a concentration of 1.5 ug/L of vinyl chloride in the finished water, Illinois EPA can issue a violation notice to a community water supply to compel them to take some action. Except for well #3, which was shut down in 2009, the other two well/tap locations have not had vinyl chloride contamination concentrations that would result in a violation of a state or federal drinking water standard.