

Fact Sheet

Crestwood Groundwater Contamination Health Consultation

March 2010

Summary

Evidence suggests that chemicals in well water at one time affected Crestwood's water supply. The Illinois Environmental Protection Agency (EPA) estimates that the contamination levels did not exceed levels permitted by federal drinking water standards.

The Agency for Toxic Substances and Disease Registry (ATSDR) and the Illinois Department of Public Health (IDPH) evaluated the available information to learn more about possible health effects from the contamination. We concluded that not enough information is available to know actual past contaminant levels in drinking water. As a result, we cannot conclude with certainty whether past exposure to contaminants in Crestwood drinking water could have harmed people's health.

However, ATSDR and IDPH will review any additional information regarding historical contamination of the Crestwood water supply that on-going investigations may reveal.

Background

The Crestwood Community Water Supply provides water to approximately 11,000 persons. Crestwood purchases its water from the nearby village of Alsip.

Crestwood Well #1, located in Playfield Park, was an emergency stand-by well. Sampling conducted by Illinois EPA in 1985 and 2007 indicated that the well was contaminated with break-down products of dry cleaning chemicals, including forms of dichloroethylene and vinyl chloride (only reported in 2007).

In December 2007, Illinois EPA determined that evidence suggested the Village of Crestwood had been using Community Well #1 as a water source and had been mixing this well water with the Lake Michigan water purchased from Alsip for delivery to Crestwood customers. Illinois EPA determined that this mixing occurred from 1985-2007.

Extent of contamination

Illinois EPA estimates that the concentration of contamination from volatile organic compounds (VOCs) in the drinking water from 1985-2007 met federal drinking water standards. Illinois Department of Public Health (IDPH) agrees with this estimate; however, ATSDR and IDPH recognize that not enough information is available to know the actual past contamination levels in the drinking water. Therefore, we cannot conclude with certainty whether past exposure to contaminants in Crestwood drinking water could have harmed people's health.

The concentrations of lead detected in surface soil in Playfield Park meet USEPA residential screening levels. Lead in soil will not pose a health hazard to children using the park.

Chemicals of interest Sampling showed that chemicals associated with dry cleaning were in the Crestwood Well #1 water. ATSDR and IDPH compared sample results from the well to health-based screening levels and to USEPA drinking water standards. Based on these comparisons, vinyl chloride (a known cancer-causing chemical) is the focus of our attention for evaluating health concerns for the Crestwood drinking water.

Vinyl chloride exposure Vinyl chloride was first detected in Crestwood Well #1 in 2007. The level of vinyl chloride that was detected in the well is not the same concentration that was delivered to the Crestwood customers.

In order to determine the level of vinyl chloride in people's drinking water, ATSDR and IDPH estimated a blending ratio of 20% Crestwood Well #1 and 80% of Lake Michigan water. (In fact, records indicate that over time less than 10% of the contaminated well water was blended with the Lake Michigan water.) Using the highest level of vinyl chloride detected (5.4 ug/L) in the well, the maximum estimated concentration (1.08 ug/L) in the blended water met the USEPA drinking water standard and is within USEPA's target cancer risk range.

Current exposure Currently, the Crestwood public water system is in compliance with drinking water regulations. Consumption of the village water supply is not expected to harm people's health.

ATSDR and IDPH also looked for chemical contamination in samples from shallow groundwater in Playfield Park. They did not detect VOCs. There is no evidence that vapors have migrated into the air in Playfield Park or into the homes to the east of Crestwood Well #1. This indicates that people will not come in contact with chemicals from using the park.

There is not enough information to know whether vapors from the chemicals in the soil and shallow groundwater behind Playfield Dry Cleaners have migrated into the buildings at Playfield Plaza.

IDPH and ATSDR conclusions and recommendations

IDPH and ATSDR's top priority is to make sure that the Crestwood community has the best information possible to safeguard its health.

IDPH and ATSDR recommend that:

- Illinois EPA and USEPA continue their investigation of village records to determine if additional data exist that would better characterize past exposures.
- USEPA evaluate the Playfield Plaza Shopping Center businesses for potential vapor intrusion of VOCs detected in subsurface soils and shallow groundwater near the Playfield Dry Cleaners facility.
- The IDPH Division of Epidemiologic Studies complete its updated cancer incidence review of the Crestwood area, and continue cancer incidence surveillance for the Crestwood community.

ATSDR and IDPH will follow the developments of these investigations. They will review any additional data to determine whether they should revise conclusions of this health consultation based on newly available information.

**Where can I
find the health
consultation**

You can read the health consultation report at:

<http://www.atsdr.cdc.gov/HAC/pha/CrestwoodHC-FinalPublicCommentRelease/CrestwoodHC-FinalPublicCommentRelease.pdf>

A copy of the report is also in the reference services area of the Crestwood Public Library at 4955 135th Street.

ATSDR is receiving public comment on the report until April 19, 2010. Please send your comments, referencing Crestwood Groundwater Contamination in your comments, by email (AtsdrRecordsCenter@cdc.gov) or by mail to:

Agency for Toxic Substances and Disease Registry
ATTN: ATSDR Records Center
1600 Clifton Road, NE, MS F-09
Atlanta, GA 30333

**IDPH and
ATSDR
Agency
Contacts**

Ken Runkle, Environmental Toxicologist
Illinois Department of Public Health
525 West Jefferson St
Springfield, IL 62761
217-782-5830
Ken.runkle@illinois.gov

Mark Johnson, Regional Representative
ATSDR, Region 5 Office
77 West Jackson Blvd
Chicago, IL 60604
312-886-0840
mdjohnson@cdc.gov
