

GRAND HAVEN AREA GROUNDWATER CONTAMINATION
MAY, 2002

FREQUENTLY ASKED QUESTIONS:

1. What is Vinyl Chloride? Can I smell it or taste it?

Vinyl chloride is a breakdown product of degreasers such as Trichloroethylene, trichloroethane, or tetrachloroethylene, commonly used in dry cleaners, parts cleaning operations, electroplating facilities etc. Vinyl chloride is a known carcinogen (cancer causing) based on long term exposures (greater than 70 years).

At the low levels detected in the groundwater, it would not be possible to smell or taste the vinyl chloride contamination. Most people begin to taste vinyl chloride in water at 3400 parts per billion.

2. How could vinyl chloride affect my health?

According to the ATSDR, "Most studies on long term exposure (365 days or longer) to vinyl chloride are about workers that make or use vinyl chloride. They were exposed to much higher levels of vinyl chloride in the air than is the general population. People who breathe vinyl chloride for long periods of time can have changes to the structure of their livers." Long term exposure to vinyl chloride can result in liver cancer.

3. Why can't I keep using my well water?

Continued use of your private well could pull the contamination off of the bottom of the aquifer and potentially allow the vinyl chloride to volatilize from the groundwater into the soil under the basement. Once the vinyl chloride is in the soil gas as a vapor, it could then enter into the basement through the cracks. Also, continued use may draw higher levels of contamination into your well and put users at risk of exposure to the contaminants.

4. Could my health problems be related to this groundwater contamination?

If you think you have health problems, you should visit your doctor to discuss your specific concerns. Although, it is impossible for the DEQ to know how much contamination you may have been exposed to, it should be noted that the risk based screening levels developed by DEQ are based on long term and frequent exposures up to 70 years worth.

5. If my kids have been playing in this water, were they at risk?

In order to assess the potential risks, MDEQ developed screening levels that are based on long term (i.e. years), and frequent exposure to the groundwater. Although these screening levels are very cautious, MDEQ is recommending to discontinue the use of the groundwater, especially where small children may come in contact with it.

6. I used this water in the past for my garden and lawn, did I put myself at serious risk?

Vinyl chloride does not accumulate in plants and vegetables. However, if you are concerned about your health, please consult your physician.

7. Can I get my private well tested?

MDEQ will be compiling a list of private well owners that would like their wells tested. If you call MDEQ, Abigail Hendershott at 616-356-0027, we will test your well. However, if

your well is tested and is “clean” of contaminants, and you continue to use the groundwater it is likely that your well may be contaminated by the end of the summer.

8. Will this contamination affect my property values?

Since value is an individual perception, it is difficult to assess if or how the presence of groundwater contamination would affect your property values given that the area is already serviced with clean municipal drinking water.

9. Are there tests to determine if I have been exposed to vinyl chloride?

According to the ATSDR, the specialized tests available are not helpful for measuring very low levels of vinyl chloride and would have to be conducted shortly after an exposure.

10. How deep is the contamination?

The highest levels of vinyl chloride contamination are found at 28-30 feet below ground level (depending on your location in the City). The contamination gradually lessens as you get closer to the ground surface. Almost no vinyl chloride contamination has been found at the top of the groundwater table (6-8 feet).

11. Why is the DEQ telling me about this contamination now?

MDEQ is seeking to inform the residents of Grand Haven about the groundwater contamination, so that residents can discontinue the use of the impacted groundwater and prevent future exposures.

12. Who pays for the reconnection of my sprinkling system to City Water?

Since the connection of your sprinkling system is specific to your type of system, it will be the property owners responsibility to reconnect their sprinkling system to City water. Please contact the City of Grand Haven Public Works Department for specific requirements for hookups.

13. If I just use this groundwater to water my lawn, am I really hurting anyone?

Continued use the groundwater may not seem like you are hurting anyone, however, pumping of the private well could bring the contamination closer to the surface. If the vinyl chloride is brought to the surface, it has the potential to volatilize and enter into basements/homes as a vapor.

14. What level of vinyl chloride is a concern for me?

MDEQ criteria and screening levels are based on a increased cancer rate of 1 in 100,000 cases. Various factors have a role in developing the screening levels such as duration of exposure, volume of consumption, body size, frequency of exposure, level of exposure and what pathway the contamination entered the body. All of these factors and more, are important in determining the potential for risk to adults and children. With these factors in mind, MDEQ has set residential criteria for drinking water at 2 parts per billion. Some of the screening levels have also been developed by using cautious assumptions as to the expected uses of the contaminated groundwater. For example, MDEQ assumed a wading pool filled with the contaminated groundwater may be used for one hour per day for 60 days per year for 6 years for a child. This scenario resulted in a screening criteria of 110 parts per billion or less of vinyl chloride would be protective for children.