Flood Water
What chemicals might be in the water?

Background

Floods are happening more often across the Midwest\(^1\text{-}^3\). Community members are always concerned about getting the water out of homes and other structures and then cleaning up the flooded areas as soon as possible. Guidance is available on how to do flood cleanup safely, especially for mold\(^4\). But communities can also prepare by looking for some information in advance on potential chemical hazards that may be in water and make appropriate plans to limit these exposures.

Hurricane Harvey in 2017 gives an example: Research teams found a number of cancer-causing chemicals such as benzene and vinyl chloride in the Houston flood water\(^5\text{-}^6\). Had this been known prior to cleanup efforts, workers and community members might have used additional protection during cleanup.

What might be in flood water in the neighborhood?

Every neighborhood is different, so there is no one answer. But thinking about this in advance can help communities prepare to avoid possible exposures. Here are some ways to find out about possible hazards:

- Identify sources of recent floods (torrential rain, river bank breach)
- Talk with neighbors and ‘old timers’ who remember prior land uses
- Access land use maps at the library, city hall, on the internet\(^7\)
- Review what you have found: Are there…
  - Superfund sites nearby?
  - Industrial/chemical facilities along the water body that floods?
  - Brownfield sites nearby?
  - Abandoned underground storage tanks, like former gas stations?
  - Small-scale chemical users, like dry cleaners or printing companies?
  - Underground storage tanks?
  - Other sources of chemicals that could get swept up in water?

How can I find out what is in flood water?

Plan ahead, before a flood….

- Share your information about possible hazards with health officials
- Ask: will these compounds be measured in flood water?
- Obtain guidance and cost from local water analysis laboratory
- Identify how to pay the cost
- Determine when and how to obtain recommended containers
- Review sample collection directions and ask questions
- Identify a resource to help interpret the results
- Partner with a research group in the area
- Obtain additional training\(^9\)

What other actions should be taken?

- Identify personal protective equipment to prevent possible exposures\(^4\text{-}^8\text{-}^9\)
- Check out/replace protective equipment as flood season approaches

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\(^2\) [https://www.epa.gov/climate-indicators/climate-change-indicators-river-flooding](https://www.epa.gov/climate-indicators/climate-change-indicators-river-flooding)
\(^5\) [https://apnews.com/e0ceae76d5894734bb0041210a902218d](https://apnews.com/e0ceae76d5894734bb0041210a902218d)
\(^7\) [https://www3.epa.gov/myem/envmap/find.html](https://www3.epa.gov/myem/envmap/find.html), [https://www.epa.gov/superfund/search-superfund-sites-where-you-live](https://www.epa.gov/superfund/search-superfund-sites-where-you-live)
\(^8\) [https://www.med.uc.edu/eh/academics/training/mwc/training-manuals](https://www.med.uc.edu/eh/academics/training/mwc/training-manuals)

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For More Information Contact:

mwc@umn.edu

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