Flood Water

What chemicals might be in the water?

Background

Floods are happening more often across the Midwest\(^1-3\). 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\(^5,6\). 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
- **Determine who will collect sample and deliver to lab**
- **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\(^4,8,9\)
- **Check out/replace** protective equipment as flood season approaches

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5. [https://apnews.com/e0ceae76d5894734b0041410a902218d](https://apnews.com/e0ceae76d5894734b0041410a902218d)
8. [https://www.med.uc.edu/eh/academics/training/mwc/people](https://www.med.uc.edu/eh/academics/training/mwc/people)
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