

Household Flooding in Detroit

Highlights from a report by Healthy Urban Waters & partners*

How flooding happens

Flooding can be caused by excess rain, overflowing rivers, and shortcomings of wastewater infrastructure. Because Detroit has a combined sewer system, overflows and flooding caused by excessive rain can contain untreated sewage.

The impacts of flooding

- Missed school & work
- Displacement
- Recovery costs (e.g., health care, home repair, trash removal, or mold removal)
- Injuries or death (e.g., from electrocution or drowning)
- Respiratory issues due to mold or other microbes
- Gastrointestinal issues
- Skin rashes
- Eye irritation
- Psychological distress

Between 2012-2020, 43% of 4,667 Detroit households surveyed reported flooding in their homes.

Renters are 1.7x more likely to report household flooding.

Learn more about this research: www.mdpi.com/1660-4601/18/14/7659

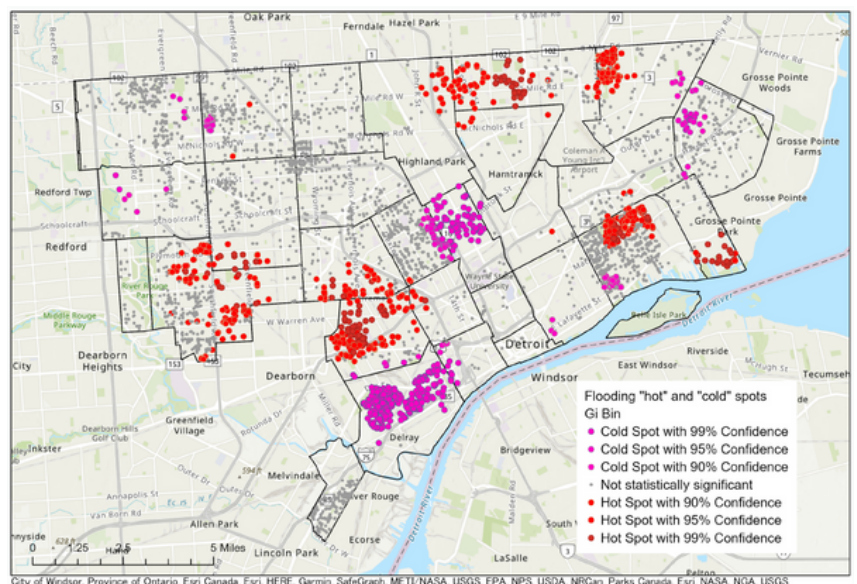
...But it's much more than just money that's needed to mitigate the situation. It's just, what are you doing to prevent it? Because you can't pay me for the stress I feel every time I see a heavy rain happen. There's no paying for that.

- Detroit Resident

Climate change, flooding, & health equity

Over the next 25 years, rain events in the Midwest are expected to become more frequent, more severe, and last longer than in previous years. Flooding risk is not equal throughout Metro Detroit. Our most vulnerable neighbors are likely to be impacted the most by flooding, and we must work to ensure health equity.

On the next page, learn about ways to protect communities as our climate changes.



Red dots represent clusters of homes that reported flooding in surveys conducted between 2012 and 2020. Purple dots represent clusters that did not report flooding.

How can we improve our preparation and response to flooding in Detroit?

1. Major Infrastructure Updates

Government agencies and regional authorities should prioritize funding for new infrastructure to control rainwater and flooding.

2. Maintenance of Vacant Lots & Flood-Prone Areas

Unmaintained and vacant lots can contribute to flooding. Greening and maintenance efforts that encourage use of native plants and local sources of compost may be particularly beneficial.

3. Improve Process for Flood Related Claims & Ensure Equity in Settlements

The process to submit a claim to Detroit Water and Sewerage Department for flood damage can be difficult to navigate. It should be straightforward, and compensation should be distributed quickly and equitably.

4. Address Remaining Research & Policy Questions

Investment in research is needed to find the specific causes and effects of flooding in different neighborhoods. Such research can inform solutions to ensure they are long lasting and equitable, as well as reflective of residents' preferences.

5. Hold Landlords Accountable for Flood Prevention & Response

Landlords must be responsible for basic household maintenance and flooding prevention on their properties.

6. Develop Grants and Technical Assistance Programs to Support Household Flood Related Maintenance

Flood related maintenance can be costly and unaffordable for many people. Grants and assistance programs would make it easier to put these protections in place.

Here is the Detroit Water & Sewerage Department's Basement Backup & Flood Protection Handbook: <https://detroitmi.gov/departments/water-and-sewerage-department/dwsd-resources/basement-backup-and-flood-protection>

Read the full report at:

https://huw.wayne.edu/learning-center/detroit_flood_report_2021.pdf



Highlights compiled by The University of Michigan Lifestage Environmental Exposures and Disease Center (M-LEEaD) Community Engagement Core (CEC), supported by grant P30ES017885 from the NIEHS. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.