

# Assessment of Health Risks Associated With Urban Flooding in Atlanta

Tests of microbes and metals in water samples from the Peoplestown Neighborhood

## What did we want to know?

- 1 How are residents being exposed to urban floodwaters?
- 2 What microbes and metals are present in urban floodwaters?

### Why?

Localized flooding is increasingly common due to overwhelmed drainage systems. Standing floodwaters from rainfall and sewage back-up may present a significant health risk to residents.

## What did we do?

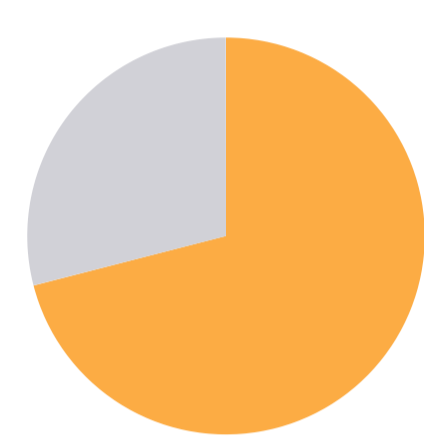
To learn about local flooding in an urban community, we:

- Surveyed 24 community members about their experiences
- Collected water samples from 10 flooding sites to analyze for microbes and chemicals (see picture)

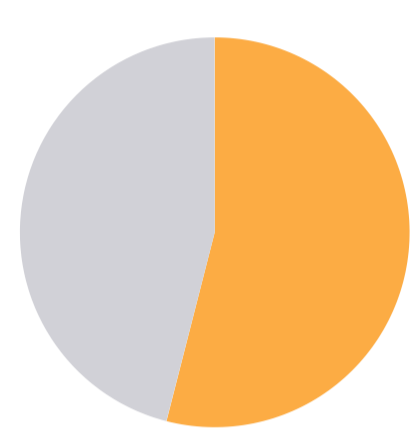


## What did we find?

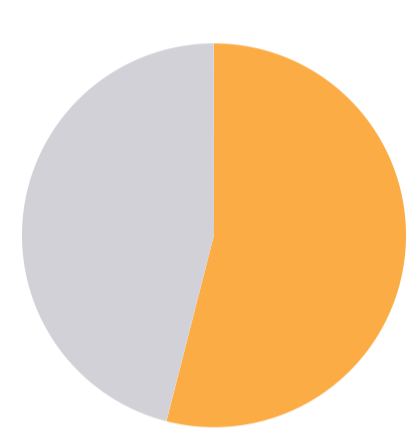
### Among 24 Community Members:



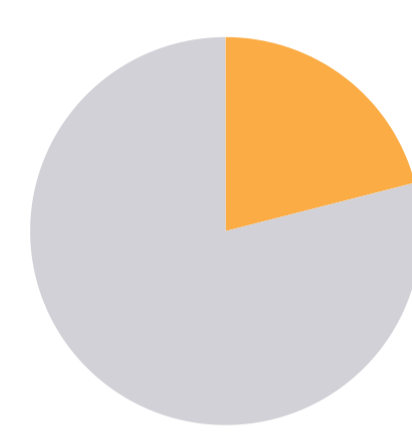
71% agree that flooding is a major issue in their community



54% report regular flooding in their yard or street



54% report tap water discoloration during flooding

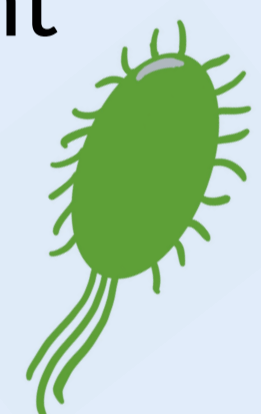


21% report direct contact with floodwater

### Among the Water Samples:

7 samples tested positive for *E. coli* at levels considered "High Risk" by the EPA (>253 colonies per 100mL).

Fecal material (including *E. coli*) can enter the environment from wastewater, sewage, landfills, and animals. The presence of *E. coli* indicates fecal contamination and a higher risk of illness especially through cuts or wounds.



6 samples reported an abundance of antibiotic-resistant genes.



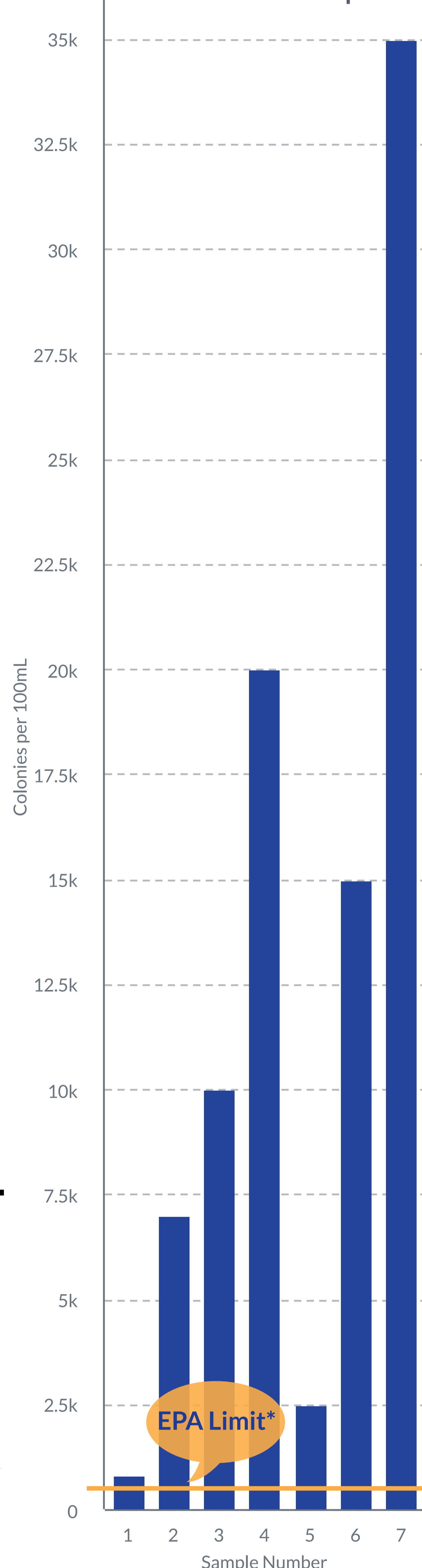
Antibiotic resistance genes (ARGs) exist naturally in bacteria and can make bacterial infections more difficult to treat. The ARGs detected in our samples were likely carried by bacteria that live in the environment and do not typically cause human infections.

Heavy metals were detected at low levels that are not considered a health risk.

## What does this mean for you?

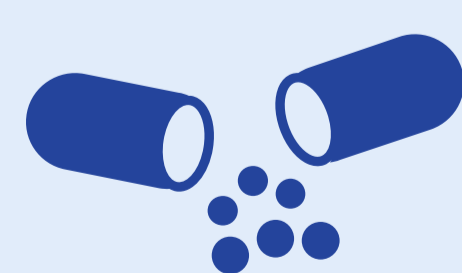
- Avoid contact with urban floodwater. If an open cut comes in contact with floodwater, wash it with soap and water as soon as possible and monitor for infection.
- If your tap water changes color after heavy rainfall, boil water before drinking or switch to bottled water for a few days.
- To reduce antibiotic resistance in the environment, refrain from flushing antibiotics down the toilet.

### Amount of *E. coli* in Water Samples



■ *E. coli* colonies per 100mL (about 3.5oz)  
\*2012 EPA Recreational Water Quality Criteria  
<https://www.epa.gov/sites/default/files/2015-10/documents/rec-factsheet-2012.pdf>

## Additional Resources



To find an antibiotic disposal in GA:  
<https://prescriptiondrugdisposal.com/>  
(or search 'medication disposal near me' for your nearest CVS dropoff)



Call 311 or visit [ATL311.com](http://ATL311.com) to report urban flooding or drain blockage to your local watershed

This infographic summarizes a pilot study funded by the HERCULES Pilot Project Program and led by a partnership between the Peoplestown Revitalization Corp and a HERCULES investigator.



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