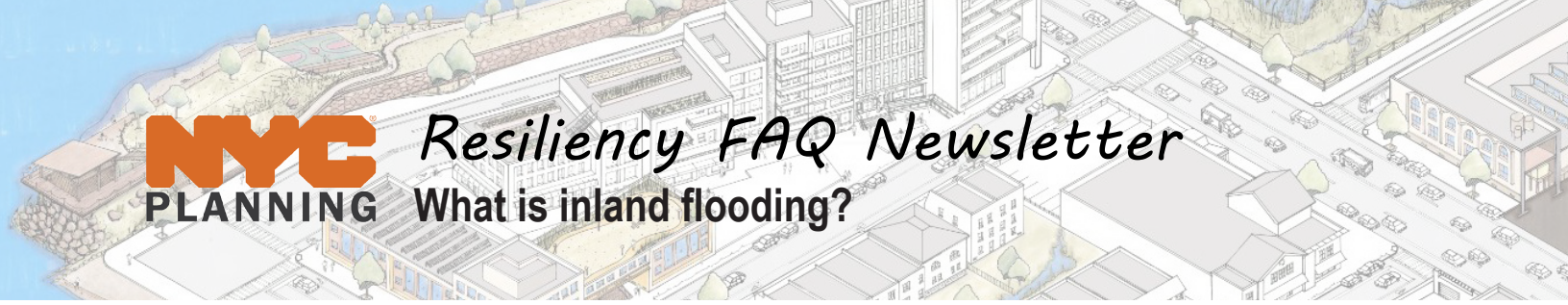


Resiliency FAQ Newsletter

What is inland flooding?

Over the last year, the Department of City Planning met with you and other community members from across the floodplain to discuss strategies to make buildings resilient to flooding. We heard many of you express an interest in learning more about flood resilience more broadly. This newsletter addresses some of the most common questions.

While waterfront communities are vulnerable to flooding from coastal storms, you could live far from the coast and still be affected by inland flooding. When meeting with coastal communities to discuss a future update to Flood Resilience Zoning, we heard questions about how **coastal flooding** (which we covered in our last newsletter) differs from **inland flooding**.

What is inland flooding?

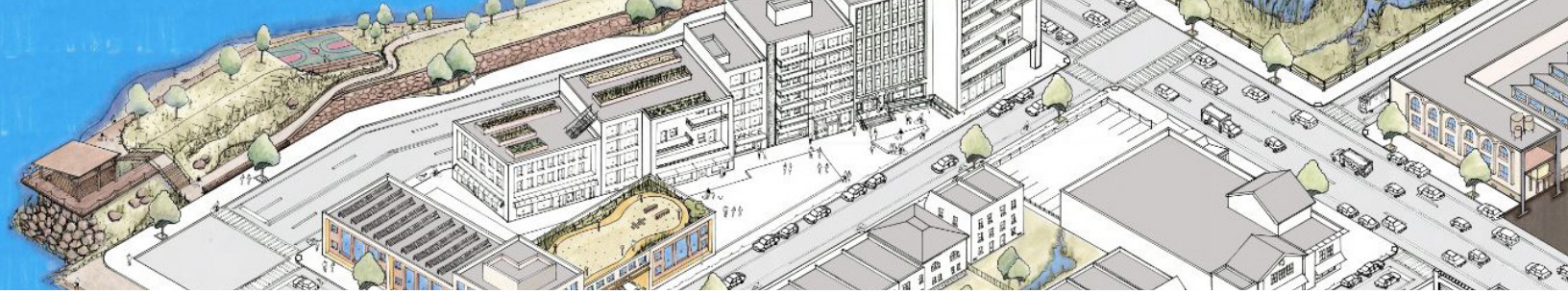
Inland flooding, also known as "urban flooding" or "flash flooding", can be caused by intense, short-term rain or by moderate rainfall over several days that can overwhelm existing drainage infrastructure. New York City's density and limited green space reduces the ability of the ground to absorb stormwater. This causes stormwater to collect in low-lying areas and flow into below-ground spaces such as subways, basements, and garages.

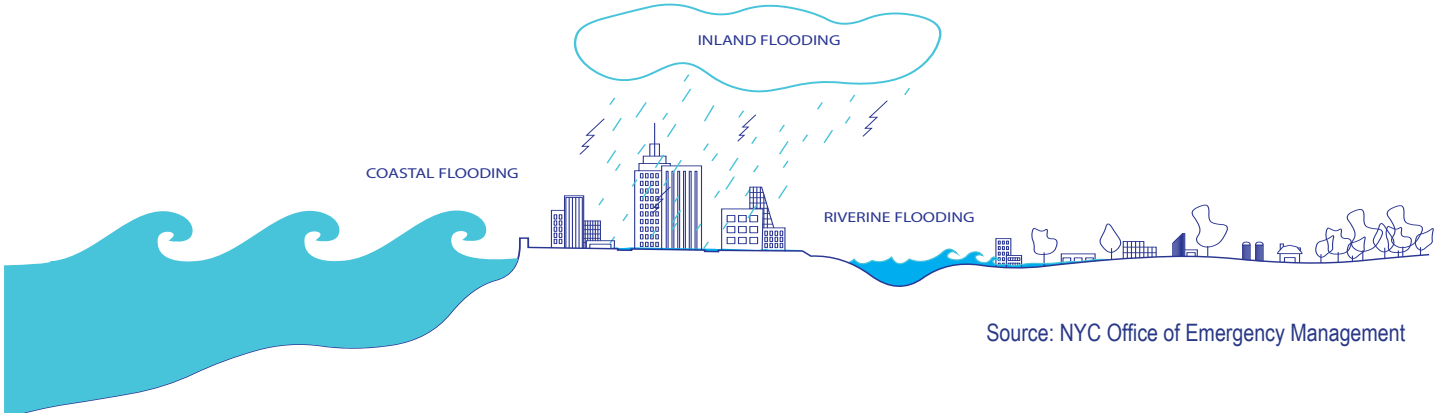
The NYCDEP Green Infrastructure Grant Program provides funds for the design and construction of a green infrastructure system, which aims to reduce pressure on the sewer system.

Unlike coastal floods, which are caused by a practically unlimited source of ocean water, inland floods can be reduced by storing or redirecting water through sewer infrastructure, changing topography, and increasing permeable surfaces. Also, unlike coastal flooding, inland flooding can be difficult to predict and occur with little notice.

In Staten Island and parts of the Bronx, where the city's rivers are primarily located, heavy rainfall can overwhelm the flow capacity of rivers and streams, also causing inland floods. Like areas at risk from coastal floods, areas with a 1% annual chance of riverine flooding are identified on FEMA's Flood Insurance Rate Maps. Flood insurance can help protect you from inland flooding, and if you live outside of the mapped flood zone, the cost should be reduced. Keep in mind that FEMA's flood maps take coastal and riverine flood risks into account, but not flash flooding. For more information, check out some of our previous newsletters on the cost and coverage of flood insurance!

Simple ways to help prevent inland flooding	
Install a backwater/check valve in your basement	This prevents sewer water from rising into your home through basement plumbing.
Keep grease out of sewers	Improper disposal of grease and cooking oil can clog your home's internal pipes, as well as city sewers, exacerbating backups.
Keep catch basin grates clear	Dispose of litter properly and remove leaves and trash from the catch basin grate. When debris covers street level gratings, storm-water cannot enter the catch basin and can cause street flooding, even before the sewer is full.
Ensure proper roof drainage	Clean your gutters regularly, connect downspouts to appropriate drains, and consider installing a rain barrel.





Source: NYC Office of Emergency Management

While inland floods often occur with little notice, signing up for official emergency notifications through Notify NYC allows you to be aware of any dangers as soon as possible. Similarly, preparing an emergency plan (including an evacuation route) and an emergency supply kit ahead of time, can help keep you safe. During a flash flood, the best way to protect yourself is to move to higher ground and avoid floodwaters as much as possible. Even if the water looks like it is only a few inches deep, 6 inches of moving water is all it takes to knock you down. Be sure to avoid floodwaters even after the storm has passed, as it can contain dangerous debris and be contaminated.

Are you finding these newsletters helpful? Any topic youd wish we cover? We hope you'll write to us with any feedback!

The recent impacts of Hurricane Florence highlight the dangers of inland flooding and the importance of taking precautionary measures. New York Task Force 1 (NYTF-1) was deployed to North Carolina to support Hurricane Florence rescue and relief efforts. The team of specially trained individuals conducted water evacuations, welfare checks, and helped local officials and residents in recovery efforts. NYTF-1 is managed by the NYC Office of Emergency Management and was activated by FEMA. NYTF-1 also responded to Hurricanes Harvey, Irma, and Maria in 2017.**To help support those affected visit:**

North Carolina Disaster Relief Fund
https://governor.nc.gov/donate-florence-recovery

National Voluntary Organizations Active in Disasters
https://www.nvoad.org/howtohelp/current-responses/

Did you know?
Neither the East River, Harlem River, nor the Hudson River are technically rivers, they are tidal straits and estuaries.

Why DCP developed this newsletter

Over the last year, the NYC Department of City Planning met with community members from across the floodplain to discuss strategies to make buildings resilient to flooding. At these meetings, we heard valuable input that will help shape our climate resiliency initiatives, and we are planning to release a draft proposal to update the Flood Resilience Zoning Text later this year.

We also heard many of you express an interest in learning more about flood resilience more broadly. So we've put together this newsletter to begin addressing some of the most common questions. In the coming months, you can expect to learn from this newsletter about the importance of flood insurance, the City's plans for coastal resiliency, and how zoning can promote flood-resistant building design.

We hope you'll stay engaged by sharing this newsletter with friends and colleagues, and e-mailing us ideas for future topics at:
ResilientNeighborhoods@planning.nyc.gov

Additional Resources

Flooding
https://www1.nyc.gov/site/em/ready/flooding.page
Severe Weather
https://www1.nyc.gov/site/severeweather/resources/resources.page
DEP Homeowner's Guide to Rain Event Preparedness
http://www.nyc.gov/html/dep/pdf/brochures/flood-preparedness-flyer.pdf