



Flooding Questions and Answers

Please refer to the following questions and answers to learn more about flooding in the City of Alexandria.

What types of flooding occur in the City?

There are different types of flooding that may occur within the City of Alexandria. These include:

- **River Flood:** A river flood occurs when water levels rise over the top of river banks due to excessive rain from tropical systems making landfall, persistent thunderstorms over the river's watershed for extended periods of time, combined rainfall, and snowmelt.
- **Sanitary Sewer Backups:** Sanitary sewer backups occur when rising ground water and inflow from stormwater get into the sanitary sewers through cracks and joints in pipes, roof downspouts, and holes in manhole lids. During large storm events, they can become surcharged from various sources and flood basement drains along with drains in walkout basement stairwells.
- **Flash Flood:** A flash flood is caused by heavy or intense rainfall over a short period of time, generally less than six hours. Flash floods are usually characterized by raging torrents after heavy rains that rip through streams, streets, or alleys. They can occur within minutes or a few hours of intense rainfall.
- **Riverine Flood (Tidally Influenced):** A riverine flood (tidally influenced) is caused by a higher than average high tide and worsened by heavy rainfall, generally occurring along the Potomac River waterfront.

What causes the Potomac River to flood in Old Town?

The area of the Potomac River that borders Alexandria — as well as parts of Four Mile Run — are tidally influenced, which means the levels rise and fall during the day at predicted intervals with the tide. Water levels may rise far greater than the natural tidal rise and fall due to excessive rain or snowmelt entering the Potomac River system. Smaller creeks and streams feed into the Potomac River far upstream of Alexandria which, in combination with the rising tide, may lead to a delay in river flooding.



What is the FEMA floodplain and remapping process?

The City is participating in a Flood Insurance Study being conducted by the Federal Emergency Management Agency (FEMA) to update the City's current floodplain maps. FEMA's mapped floodplains focus on the regulatory 100-year floodplain that the agency maps to assign risk.

Flood risk associated with the 100-year floodplain changes over time due to weather patterns, land development, and erosion. The changes can likely affect some residential and commercial property owners, who may need to obtain coverage under a new flood insurance policy or alter existing policies. FEMA began this process in 2014. More information about this can be found [here](#).

What is the City doing to fix the flash flooding from increasingly frequent large flooding events?

The City Manager initiated a [Flood Strike Team](#) to support flood management and mitigation.

What do I do if I notice swift flood water that's posing a threat to public safety?

Please contact the local police or fire department.

How can I tell if a flooded road is safe to drive through?

Floodwaters can rise quickly and unexpectedly, and it is safest to turn around and do not attempt to pass through them.

How do I request sandbags?

If there is a high risk of coastal flooding, the City will often make sandbags available to residents and businesses. For several years, the City of Alexandria's Department of Transportation and Environmental Services (T&ES) has operated a flooding prevention program that included the limited provision of sandbags to affected businesses and residential areas. This information will be shared via email (eNews) and via the City's social media platforms (Facebook, Twitter, Instagram).



What's the most effective way to use sandbags?

The use of sandbags is a simple but effective way to prevent or reduce floodwater damage. Sandbags can act as a barrier to divert moving water around instead of through buildings. Sandbag construction does not, however, guarantee a watertight seal.

- Remove any debris from the area where bags are to be placed.
- If tied bags are used, flatten them and flare the tied end. If untied bags are used, fold the open end to form a triangle.
- To form a sandbag wall, place bags tightly against one another to form the first layer of defense.
- Place succeeding bags on the folded or flared portion of the previous bag and stamp them into place to eliminate gaps and to form a tight seal.
- Stagger the second and subsequent layers of bags, similar to the pattern of bricks on a wall.
- Never use bags to build a fortress around your property because this approach can trap water between sandbag walls and structures, causing further damage.

Why did water get in my home during recent rain events?

The City experienced several events of flash flooding from severe thunderstorms in 2019 and 2020. The storm on July 23, 2020, dropped 2.5 to 3 inches of rain in 30 minutes, creating a brief, extremely high-intensity event that caused significant flash flooding in many areas, including some not normally impacted by flooding.

Heavy rains, which typically occur during hurricane season, sometimes cause sanitary sewer backups in some parts of Alexandria. With many hours of heavy rain, or an intense burst of rain, the sanitary sewer line may fill up with water and some sewage. Because of this, the sewer system may approach its carrying capacity and may overflow in some areas, such as streets. It may also back up into homes through floor or plumbing drains. The City offers financial relief to homeowners for backflow preventers.

Using the Capital Improvement Program (CIP) process, the City is undertaking several infrastructure projects focused on spot improvements across the city to improve storm sewer capacity. Learn more [here](#).