



# Glossary of Stormwater and Flood Terms

*The purpose of this document is to explain the terminology commonly used that is related to stormwater and flooding in the City of Alexandria.*

**Catch basin:** Curbside opening that collects rainwater from streets and serves as an entry point to the storm drain system.

**Capital Improvement Program (CIP):** Outlines the large infrastructure projects to be undertaken across City departments during a 10-year time horizon. The list of Capital Projects is updated annually during the budgeting process undertaken by the Mayor, City Council, and City Manager's Office in coordination with all City departments. As a basic tool for prioritizing and scheduling anticipated capital projects and capital financing, the CIP is a key element in planning and managing future debt service requirements.

**Capital Improvement Projects:** Include many of the City's large infrastructure projects and those that had an active public engagement process as part of the planning of the project.

**Capacity Project:** Aim to increase storm sewer capacity and help mitigate flooding.

**CASSCA:** In February 2016, the City finalized a summary report of the City of Alexandria Storm Sewer Capacity Analysis (CASSCA) project, the purpose of which was to analyze the storm sewer system, identify problem flooding areas, and develop and prioritize solutions. As a high-level conceptual planning exercise, the storm sewer system was modeled to predict potential capacity issues for the City's current design standard, which is a 10-year storm.

**Channel:** A long, narrow excavation or surface feature that conveys surface water and is open to the air.

**Culvert:** A closed conduit such as a pipe or concrete box structure which drains open channels, swales, or ditches under a roadway or embankment typically with no catch basins or manholes along its length.

**Drainage:** The collection, conveyance, containment, and/or discharge of surface and stormwater runoff.

**Erosion:** The detachment and transport of soil or rock fragments by water, wind, ice, etc.

**Federal Emergency Management Agency (FEMA) 100-year floodplain:** The area that has a 1% chance of being inundated by at least 1-foot deep flooding in any given year. Put another way, it has about a 26% chance of being flooded over the life of a 30-year mortgage. Smaller floods have a greater chance of occurring in any year and can still create a significant flood hazard to people and property close to the channel.

**Flash flood:** Flooding that is sudden and unexpected and of short duration; flash floods are often caused by heavy rainfall. Also known as inland flooding.

**Flash flood warning:** A warning issued by the National Weather Service (NWS) to warn of flash flooding that is imminent or occurring.

**Flash flood watch:** A statement issued by the NWS which alerts communities to the possibility of flash flooding in specified areas.

**Floodproofing:** Any combination of property changes which reduces or eliminates flood damage to buildings or property.

**Floodplain:** Land adjacent to a waterway, subject to predictable periodic flooding.

**Gutter:** The edge of a street (base of the curb) designed to drain water runoff from streets, driveways, parking lots, etc. into storm drain inlets.

**Outfall:** A point where collected and concentrated surface and stormwater runoff is discharged from a pipe system or culvert.

**Riverine flood:** This flooding occurs when streams and rivers swell to beyond their banks and flood adjacent properties.

**Runoff:** Water originating from rainfall and other precipitation that ultimately flows into drainage facilities, rivers, streams, springs, seeps, ponds, lakes, and wetlands as well as shallow groundwater.

**Sanitary sewer system:** The system of pipes and pump stations that collect and transport wastewater from homes and businesses to a wastewater treatment plant.

**Spot improvement projects:** Small capital projects to help address localized flooding and drainage issues. Spot improvement projects support the increased functionality of the City's storm sewer system which is comprised of hundreds of miles of underground pipes, culverts, inlets, grates, manholes, and "flap gates" or "check valves".

**Storm sewer system:** A network of underground pipes, culverts and open channels, the purpose of which is to allow for stormwater to be drained away and prevented from accumulating to cause a nuisance. They usually lead to nearby receiving bodies of water, such as lakes, oceans, streams and rivers.

**Stormwater:** Rainwater that runs off an area and enters the storm drain system and empties into streams, rivers, and other bodies of water.

**Stormwater pollution:** Everything in rainwater runoff that is harmful to the environment. Storm sewers carry runoff from more than just the rain. All runoff from irrigation, garden hoses, or other activities that drops water onto the ground or street can pick up pollutants before entering the storm sewer system that leads straight to local streams and rivers.

**Tidal flood:** Also known as coastal flooding. Some areas of the Potomac River and its tributaries are influenced by the ocean tides and fluctuate high and low relative to the shoreline. Some tides can be higher than normal, causing some coastlines to become inundated by the waterbody. This can be seen when Spring tides swell the Potomac River and flood the foot of King Street on the waterfront on a sunny day.

**Watershed:** An area of land that drains water or runoff to a single point.