

City of Alexandria



STORMWATER

What You Need to Know

Department of Transportation &
Environmental Services (T&ES)
Engineering Division



Eco-City Alexandria

Why the City of Alexandria Needs Additional Stormwater Funding

Anyone living in the City of Alexandria knows the problems a heavy rainfall or severe thunderstorm can create. Roads become flooded and standing water remains long after the storm passes.

Although destructive flooding is rare, less severe storms can result in public safety hazards, health risks, and environmental threats.

Past and present funding sources for stormwater management in the City are inadequate to address the critical need areas of stormwater runoff. Historically, money from the City's General Fund has provided limited funding for stormwater operations. However, the General Fund is needed for many other City services and the current level of funding is inadequate to maintain the existing stormwater system and fund the necessary improvements to address drainage problems and reduce pollution to the Potomac River and its tributary streams and creeks.



North West Street & Braddock Road

What is Stormwater Runoff?

Stormwater runoff is precipitation from rain or snow that does not soak into the ground. Impervious surfaces such as driveways, parking lots, roads, sidewalks, streets and roofs prevent stormwater runoff from naturally soaking into the ground.

The Issues:

- **Flooding**
Stormwater runoff from intense rainfall can at times exceed the carrying capacity of the stormwater piping system, creating a backup in the system, flooding of roads, and yards.
- **Water Quality**
When it rains stormwater mixes with spilled motor oil, pet waste, pesticides, paint, grease, and litter. This polluted stormwater is conveyed through the storm drain system and discharged to our local streams, which eventually flow to the Potomac River and the Chesapeake Bay. This may contribute to increased concentrations of nutrients, suspended solids, bacteria and other substances which effects water quality and may lead to low dissolved oxygen levels, entanglement, and smothering that-harm aquatic life. The City must meet State and Federal water quality regulations.
- **Soil Erosion**
Uncontrolled stormwater rapidly increases the amount of water flowing into a stream, which, over time, can wash away stream banks.

How Could It Be Financed?

Users could be charged a fee for the service of controlling stormwater runoff from their property in order to reduce flooding and protect water quality in our rivers and streams, just like the fees paid for water and sewage treatment, natural gas, and other vital utility services such as electricity and telecommunications. The City will consider this fee as part of the FY2011 budget process.



*Engineering & Maintenance of
City's Infrastructure*

Benefits of a Dedicated Funding Source

The stormwater utility is needed to provide a proactive, strategic and customer service driven approach to stormwater management that will produce increased benefits and improved services to residents and business owners.



Holmes Run, 2005

Dedicated funds for stormwater management will provide:

- Enhanced public safety and health
- Resources to help mitigate flooding
- Increased maintenance-actions
- Resources to meet existing and future regulatory requirements

As with any new program, it will take time for the full effect of the stormwater utility to be realized. However, substantial- improvements in maintenance services and better drainage should be visible shortly after implementation of the utility.

How will the City of Alexandria Pay for Stormwater Flooding Issues?

All owners of developed properties that contribute to stormwater runoff and pollution could be charged a fee under a stormwater utility. This potential funding source could treat runoff from residential properties, commercial and industrial properties, non-profit organizations, schools, churches, and parking lots within the City of Alexandria.

How a Fee Could be Calculated?

- A fee is based on an Equivalent Residential unit or ERU.
- An ERU equals 1970 square feet of impervious area. It was determined by calculation the median impervious area of all residential parcels within the City of Alexandria.
- Single Family Residential parcels could pay a flat fee, based on one ERU times the rate for an ERU.
- The fee for Non-residential and Multi-Family Residential could be based upon the number of ERUs a parcel has, times the rate for an ERU.
- Properties may be eligible for partial credits that meet defined criteria.
- Undeveloped properties that are pervious would be exempt.
- Current state law does not provide adjustments based on income levels.
- How schools and other tax exempt properties are handled is under consideration.

The City's Infrastructure

Approximately two-thirds of the City of Alexandria is served by a Municipal Separate Storm Sewer System (MS4). This mixture of underground storm sewer systems and open channels are separate from the sanitary sewer system.

The drainage system includes man-made components (ditches, pipes, inlets, catch basins, and ponds) and natural components (streams, flood plains, wetlands) that control the quantity of flow and enhance the quality of stormwater.

There are approximately 13,520 drainage structures, 185 miles of storm drainage pipe, and 25 miles of streams throughout the City of Alexandria. Annual maintenance includes cleaning catch basins and repairing storm drains.

Stormwater Management Program Objectives

- Protection of people and property from flood hazards
- Prevention of infrastructure failures
- Improvement of water quality by the reduction of non-point source pollution
- Prevention of stream bank erosion

What is Eco-City Alexandria?

Beginning in spring 2007, the City of Alexandria partnered with Virginia Tech's School of Urban Affairs and Planning (UAP) to design and facilitate a new, strategic collaborative planning process, called Eco-City Alexandria. This collaborative process ultimately created an Eco-City Charter adopted by City Council in June 2008 and an Environmental Action Plan adopted by City Council in June 2009. These documents will guide the City of Alexandria and residents towards environmental sustainability over the next thirty years.

The effort to explore a Stormwater Utility is consistent with mid-term actions in the Eco-City Environmental Action Plan 2030, which calls for establishing long-term dedicated funding mechanisms such as a Stormwater Utility fee.

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