

*Your  
Sewer  
District...*

**Keeping  
our  
Great  
Lake  
great.**

# What is **stormwater?**

NORTHEAST OHIO REGIONAL SEWER DISTRICT

**Regional Stormwater Management Program**

- 
- **What are the problems?**
  - **How can we address them?**
  - **What are the costs?**





# FLOODING



Flooding of Interstate 77 in Cuyahoga Heights

# EROSION



Streambank erosion threatening residences along Big Creek in Parma

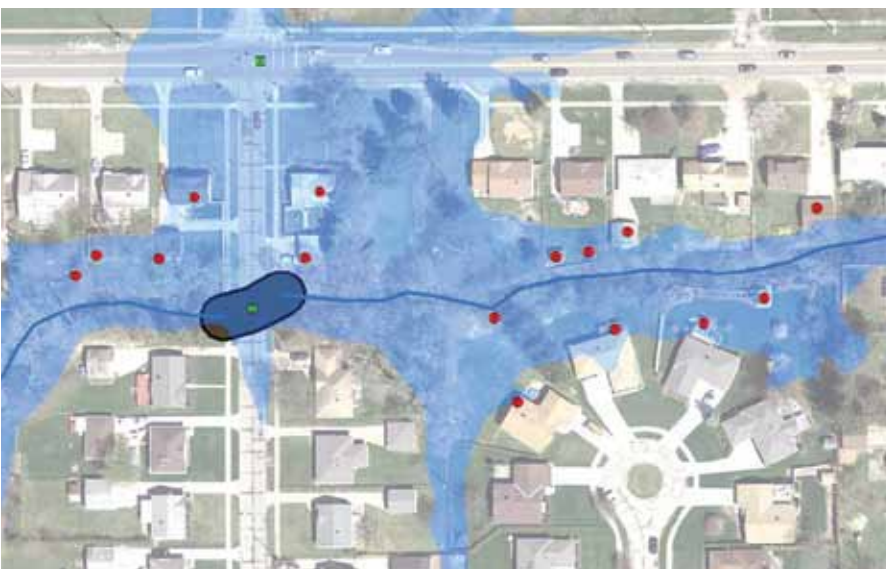
# STORMWATER PROBLEMS ARE REAL.



Streambank erosion alongside homes near Chippewa Creek in Brecksville



# POLLUTION



Houses and other structures (red dots) near Baldwin Creek located in the FEMA special flood hazard area

Problems like these require planning, modeling, construction, and innovative green practices like bioretention and stream restoration.

# WHY do we need a Stormwater Management Program?

THE INABILITY to effectively deal with stormwater results in flooded homes and streets, more pollutants entering our waterways, and serious erosion problems.

Across our region, pavement has replaced the natural green spaces that once slowed the pace of stormwater runoff (rain and melted snow and ice). Roads, parking lots, driveways, and sidewalks can't absorb water, so it moves quickly over these surfaces into nearby streams or sewers.

As stormwater flows over the ground, it picks up debris, chemicals, and pollutants that can contaminate our drinking and recreational water supply.

Unlike residential wastewater (from toilets, showers, and sinks) that is filtered through a wastewater treatment facility, anything that enters a storm sewer system or roadside ditches is discharged directly into local streams and eventually Lake Erie.

Solving stormwater problems can be difficult, since runoff from one community drains into another. A regional approach is needed.

An established regional organization, the Northeast Ohio Regional Sewer District is joining more than 1,000 communities—including Columbus, Cincinnati, and Toledo—that have created user fees to solve stormwater problems.

Fewer flooding incidents, healthier waterways, and a better quality of life for Greater Cleveland are the goals of the Regional Stormwater Management Program.

Stormwater problems must be addressed regionally, and the Northeast Ohio Regional Sewer District has the experience to manage them.

## WHAT does the Program do?

The Sewer District will continue to build projects and maintain streams and the large pipes that carry stormwater, and continue its rigorous water-quality monitoring activities.\* Under its Regional Stormwater Management Program, the Sewer District will also provide:

- Maintenance to the Regional Stormwater System, including routine inspection of culverts, stream sections, and other areas to assess problems and perform preventive maintenance. The Sewer District will carry this out in partnership with its member communities.

- Construction to address flooding and erosion problems, also in cooperation with member communities.

- A community cost-share program to support community-specific stormwater projects. The Sewer District will provide a portion of the revenue it collects from any member community back to that community for use on non-regional stormwater projects (including catch basin cleaning and other projects that would otherwise not be completed under the regional program).

- Educational programs that promote the importance of healthy drainage systems.

### TERMS TO KNOW:

#### Bioretention

A shallow, vegetated depression that filters and stores stormwater.

#### ERU

Equivalent Residential Unit. Under the District's program, one (1) ERU equals 3,000 sq. ft. of impervious surface.

#### Floodplain

Land next to a river or stream that experiences flooding.

#### Impervious surface

Developed surfaces that either prevent or significantly slow the infiltration of water into the ground, compared to how water entered the ground prior to development.

#### Low-impact development

Planning and engineering approaches that maintain, restore, or enhance pre-development flow patterns in watersheds.

#### Stormwater

Rainwater and melted snow or ice that flows downhill to streams and the lake.

#### Stormwater Control Measure

Practices or activities that manage stormwater discharge rates and water quality.

#### Watershed

The area of land that drains into a common body of water. Healthy watersheds provide drinking water and water for irrigation, industry, and recreation.

\* The District's program focuses on large regional problems. Catch basins and small sewers will remain the responsibility of local communities.



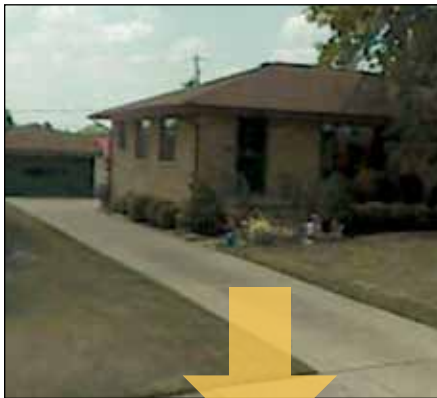
# HOW MUCH will the Program cost?

A STORMWATER UTILITY is based on the premise that the urban drainage system is a public system, similar to water or sanitary systems. When a demand is placed on these systems, the user pays.

When a forested or grassy area is paved, a greater flow of water enters the drainage system. The greater the demand created (i.e. the more the parcel of land is paved), the greater the user fee.

## Residential Properties

The stormwater user fee is based on an Equivalent Residential Unit (ERU) equal to 3,000 sq. ft. of impervious surface (such as roof and driveway). The approved rate for one (1) ERU is \$5.15 per month.



**Roof + driveway**  
**= 3,000 sq. ft. impervious surface**  
**= 1 Equivalent Residential Unit (ERU)**

Residences are placed in one of three categories:

- **Tier 1 (less than 2,000 sq. ft.)**
- **Tier 2 (2,000 to 4,000 sq. ft.)**
- **Tier 3 (more than 4,000 sq. ft.)**

In 2016, a Tier 1 house pays \$3.09 per month, a Tier 2 house pays \$5.15 per month, and a Tier 3 house pays \$9.27 per month.

## Non-residential Properties

A typical non-residential property is billed on the number of ERUs of impervious surface it has.



**Roof + parking lot**  
**= 27,000 sq. ft.**  
**= 9 ERUs**  
**(minus any credits)**

In this example, the amount of paved surface is 9 times the size of one ERU, so the fee is based on 9 ERUs. So if the fee is \$5.15 per ERU, the monthly bill to this property would be 9 x \$5.15 = \$46.35 (minus any credits).

## Credits

Customers can receive a reduction in fees if they take measures to reduce the stormwater volume or minimize the pollutants flowing from their properties.

Credit levels vary depending on the type of stormwater control measures (SCMs) used. The Sewer District's *Stormwater Fee Credit Manual* details credit opportunities and application instructions for residential and non-residential customers.

Non-residential customers cannot apply for credit using residential-type SCMs. To be eligible for credit, SCMs must meet all community standards and ordinances.



Above are some examples of stormwater control measures that are common to residential properties.



Above are some examples of stormwater control measures more common to non-residential properties.

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