



Stormwater 101: **Protecting our Coastal** **Community**

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Stormwater in Beaufort County

Beaufort County, SC, is a stunning coastal region known for its beautiful waterways and rich natural resources. Yet, this area faces unique challenges related to stormwater management. This presentation will explore the complexities of stormwater, its impact on our community, and how we can all play a role in protecting our precious environment.



History of Stormwater Management

- The Cuyahoga River fires were caused by industrial pollution and oil-soaked debris in the water.
- These fires drew attention to the U.S. polluted waterways
- The 1969 blaze then caused for the EPA to be created and lead to the creation of the Clean Water Act after in 1972



Cuyahoga River Fire Nov. 3, 1952. Courtesy of Cleveland Press Collection at Cleveland State University Library.

**The Cuyahoga caught fire
at least 13 times!**

Understanding Stormwater:

What is Stormwater Runoff?

Rainfall that flows over the ground surface.

It is created when rain falls on **impervious surfaces** that do not allow water to soak into the ground.

Impervious surfaces include: where water can't be absorbed.

- Parking lots
- Streets
- Driveways
- Roof tops

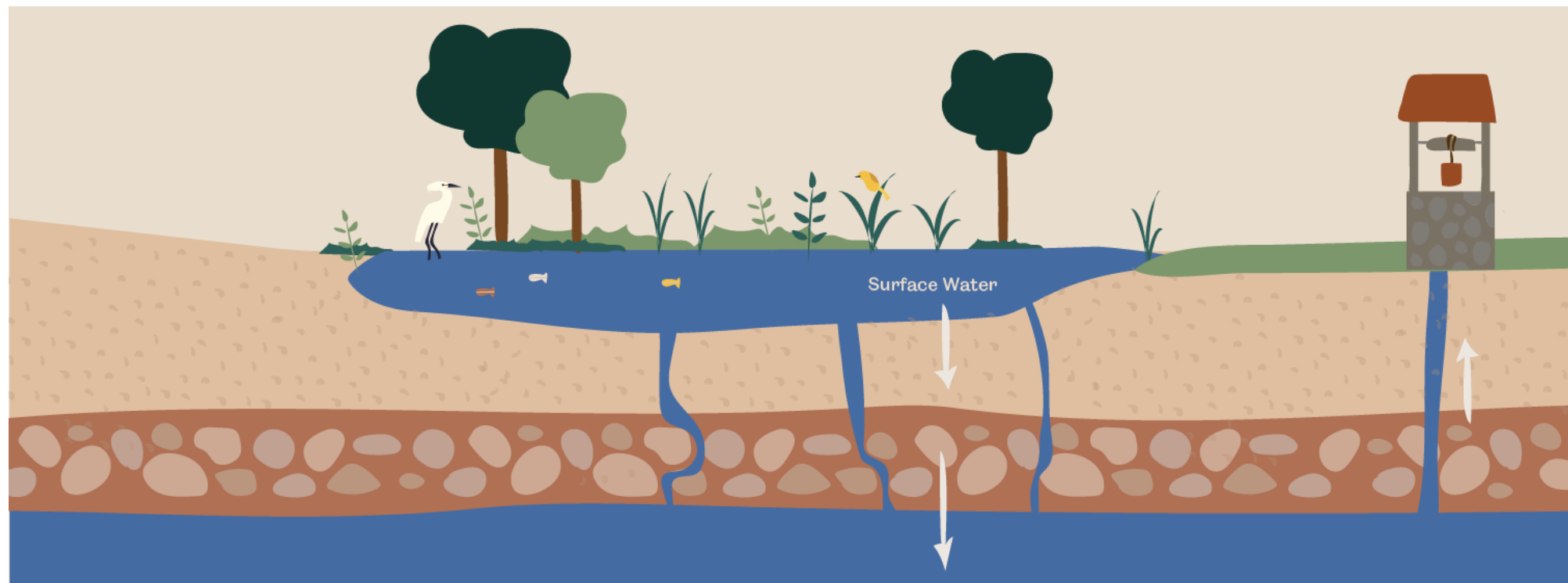
This is the #1 cause of stream impairment in urban areas.



Understanding Stormwater:

Why is Stormwater Important?

Stormwater plays a vital role in the environment by replenishing groundwater and providing water for plants and wildlife. However, runoff can carry pollutants that harm our ecosystems.



Understanding Stormwater:

Beaufort County is under DES's MS4 permit

- Municipal
- Separate
- Storm
- Sewer
- System

Places requirements on local community to have MCM in place, to minimize pollution of stormwater entering waterways



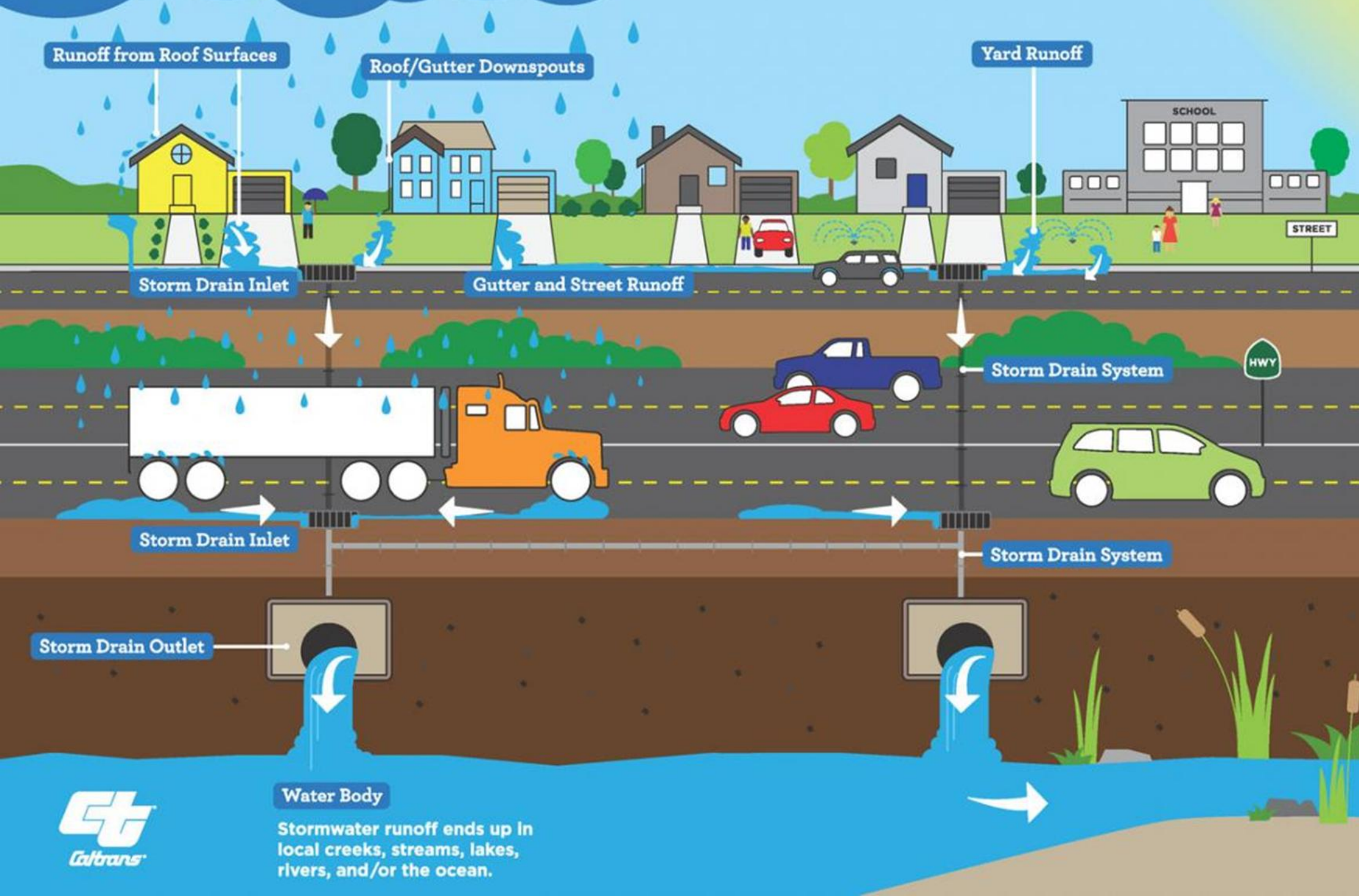


What goes in....

Must come out...



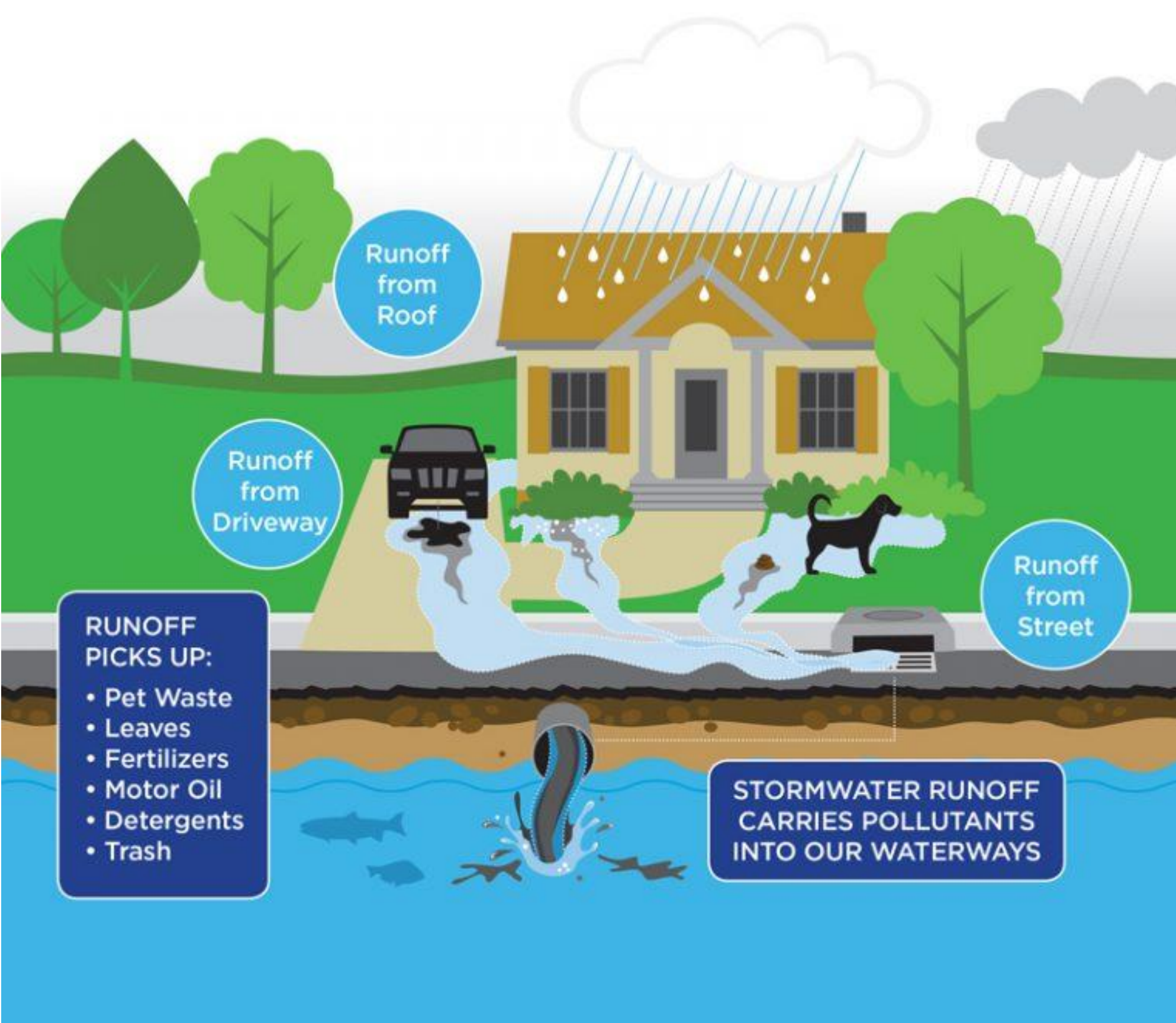
Stormwater Runoff



Stormwater Runoff:

Rain or snowmelt that flows over the land's surface instead of soaking into the ground

What pollutants do we see?



- Oil and chemicals leaking from the car
- Excess fertilizer getting washed away from the bushes
- Pet waste bacteria being washed away

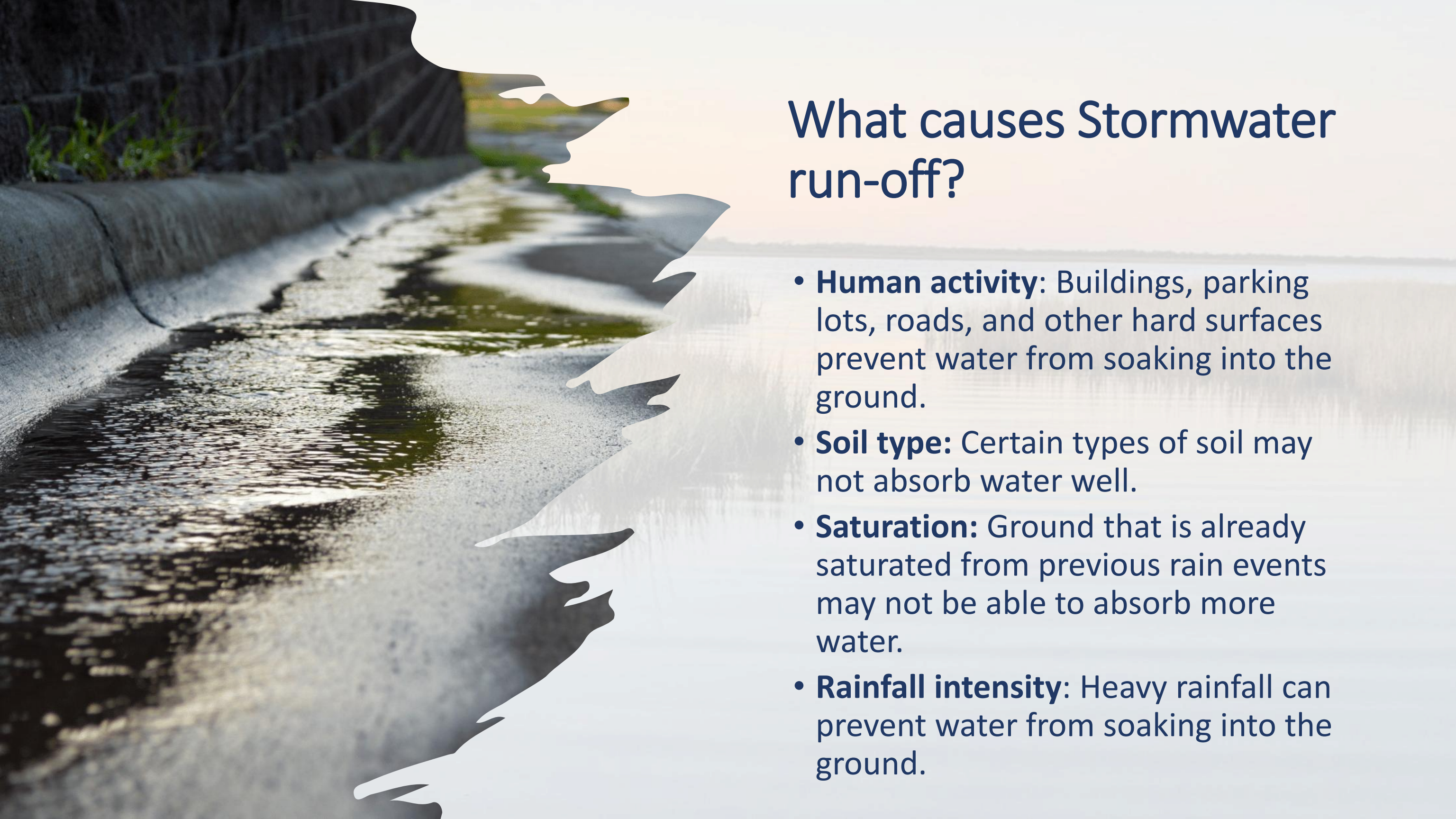
These are all considered **Nonpoint source pollution**.

Its pollution **that can't be traced back to a single source**, such as a pipe, ditch, or smokestack

Why Stormwater pollution matters?

- Stormwater runoff can pick up pollutants and flows into streams, lakes, and groundwater.
- Pollutants can harm aquatic organism
- Humans and land animals can also become sick or die from consuming polluted water or eating diseased fish and shellfish





What causes Stormwater run-off?

- **Human activity:** Buildings, parking lots, roads, and other hard surfaces prevent water from soaking into the ground.
- **Soil type:** Certain types of soil may not absorb water well.
- **Saturation:** Ground that is already saturated from previous rain events may not be able to absorb more water.
- **Rainfall intensity:** Heavy rainfall can prevent water from soaking into the ground.



The Lowcountry's Unique Stormwater Challenges

High Rainfall

The Lowcountry experiences significant rainfall, leading to increased stormwater runoff.

Coastal Sensitivity

The proximity to the coast makes stormwater runoff a major concern for water quality and marine life.

Rapid Development

Increased development contributes to impervious surfaces that hinder natural water absorption.

Impact of Stormwater on the Community

Flooding

Excessive stormwater runoff can lead to localized flooding, impacting homes, businesses, and infrastructure.

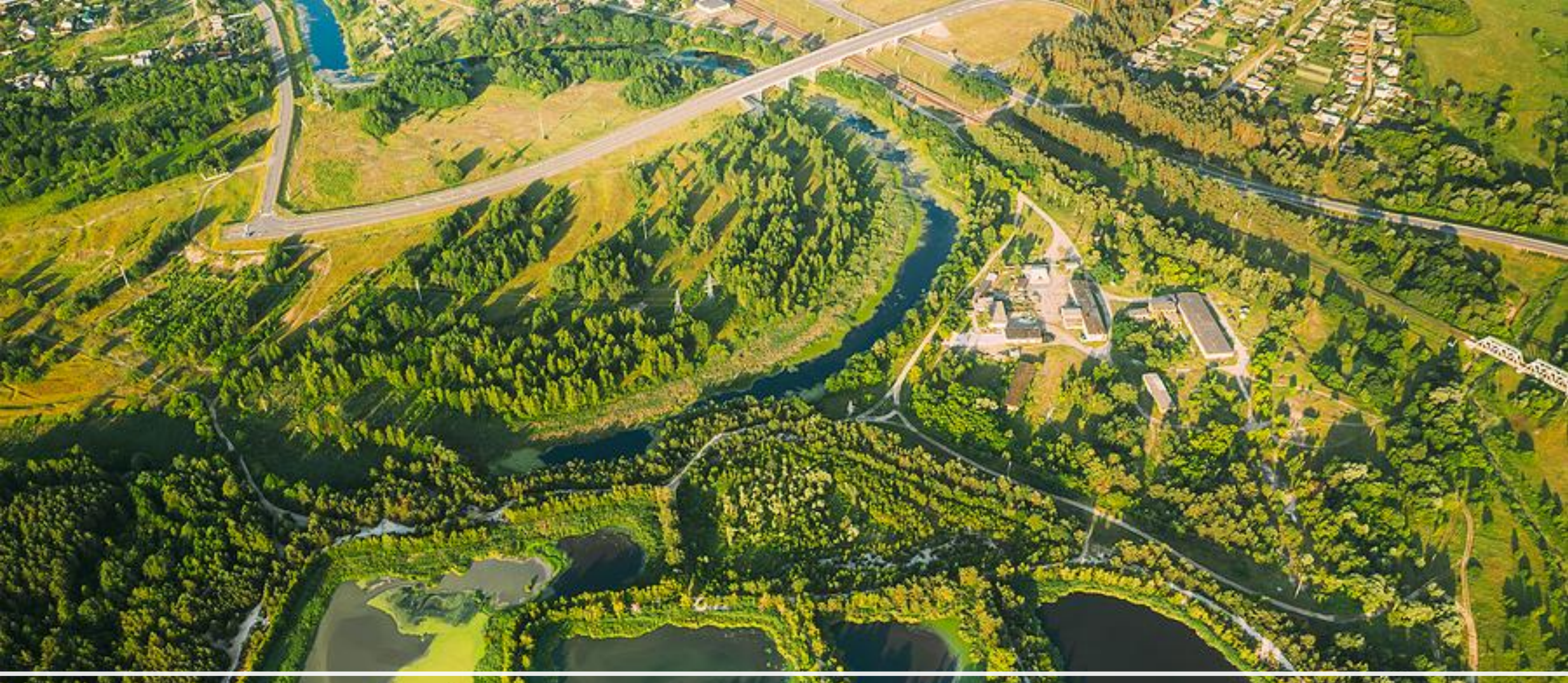
Water Quality

Pollution carried by stormwater runoff can contaminate water bodies, harming fish, shellfish, and other aquatic life.

Erosion

Heavy runoff can erode shorelines and waterways, altering the landscape and impacting habitats.





Green Stormwater Management Practices



Stormwater Best Management Practices (BMPs)

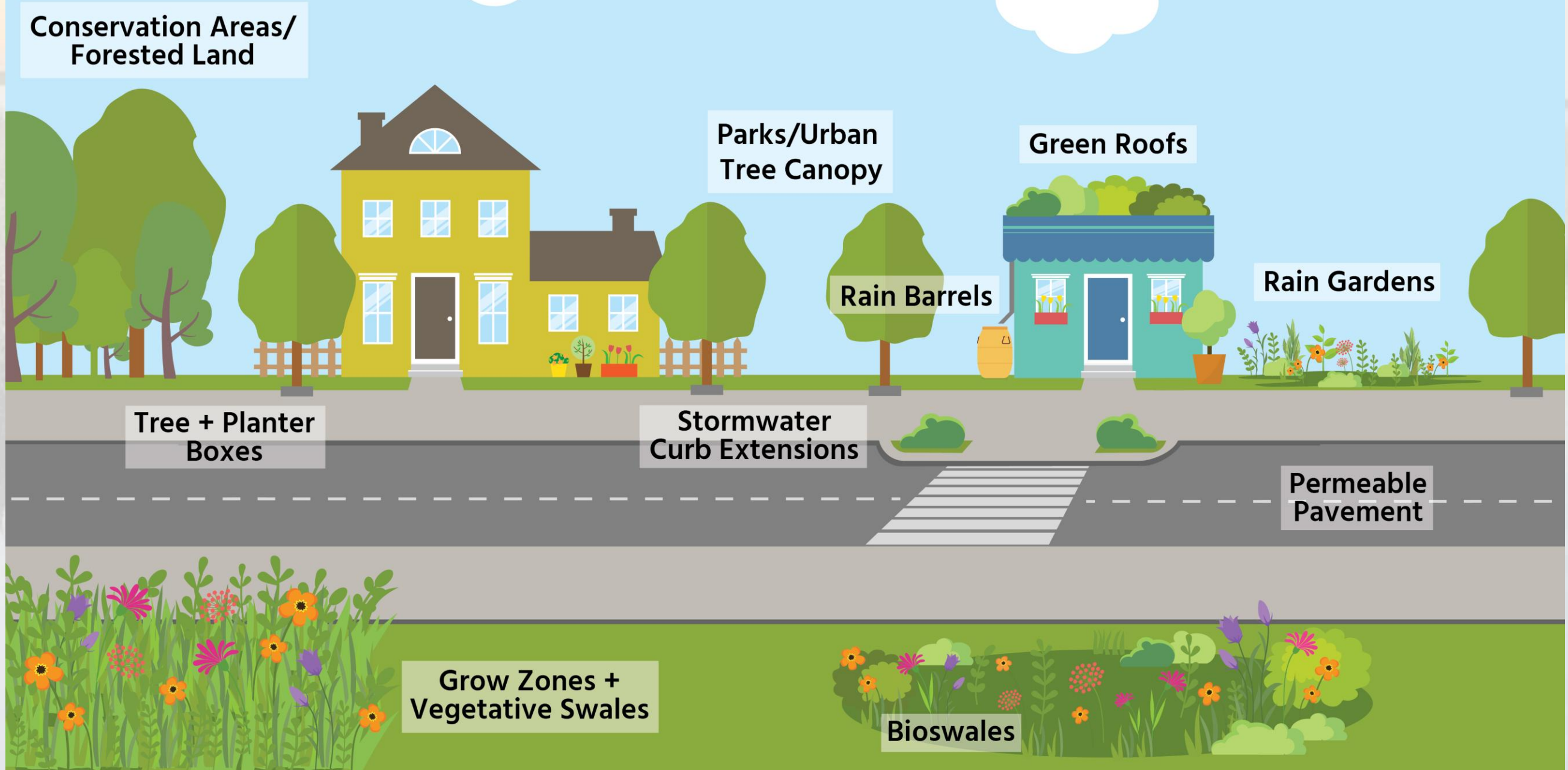
- Best Management Practices (BMPs) are sustainable solutions to address stormwater runoff and minimize its impact on our environment.
- BMPs aim to manage the flow, volume, and quality of stormwater by mimicking natural processes.
- **Can be structural** (e.g., rain gardens, retention ponds, permeable pavements) **or non-structural** (e.g., public education, proper disposal of hazardous waste, minimizing impervious surfaces).



Green Infrastructure

a nature-based approach to managing stormwater that uses plants, soil, and permeable surfaces to absorb and filter rainwater, reducing flooding and pollution.

WHAT IS GREEN INFRASTRUCTURE?





Easy Ways for Residents to Help

1

Plant Native Vegetation

Native plants are adapted to the local climate and can help absorb rainwater and prevent erosion.

2

Reduce Impervious Surfaces

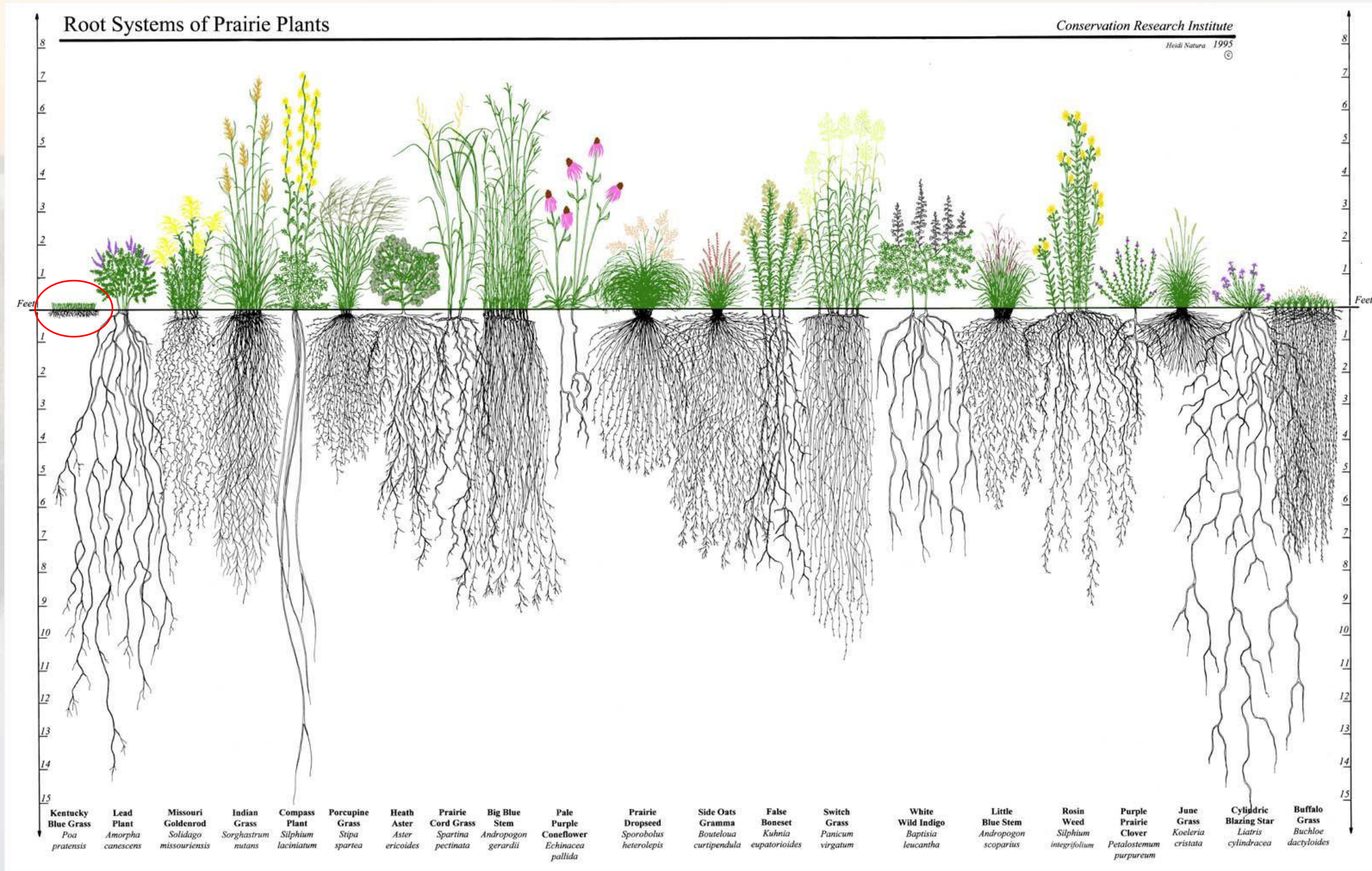
Replace concrete driveways with permeable paving materials or gravel to allow water to soak into the ground.

3

Use Fertilizers Sparingly

Excess fertilizer runoff can pollute waterways, harming fish and other aquatic life.

Native Plants



More ways to help with Stormwater management

- Clean up storm drains
- Get a rain barrel
- Plant a rain garden
- Stay educated on the subject!



**Clemson Extension has various programs year-round if
you want to continue to learn more about Stormwater!**

A serene landscape featuring a body of water with reeds in the foreground. The sky is a soft mix of orange and blue, suggesting a sunset or sunrise. The word "Questions?" is centered in a dark blue font.

Questions?

BC Connect to report any issues you may have:

Scan QR Code to access:



Form to be added to Beaufort County Environmental Events Mailing list

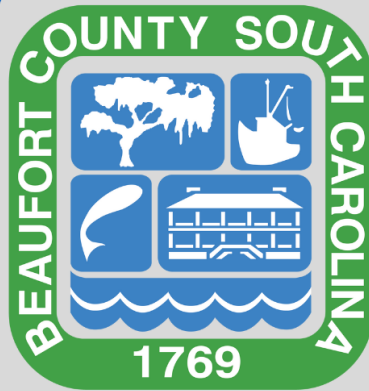
Scan QR Code to access:



Fill out this survey regarding editing Beaufort County's Plastic Bag Ordinance

Scan QR Code to access:





Stormwater

*Our County
Our Environment
Our Home*

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"Protect our waterways, preserve our coasts, and prevent pollution—every drop matters!"