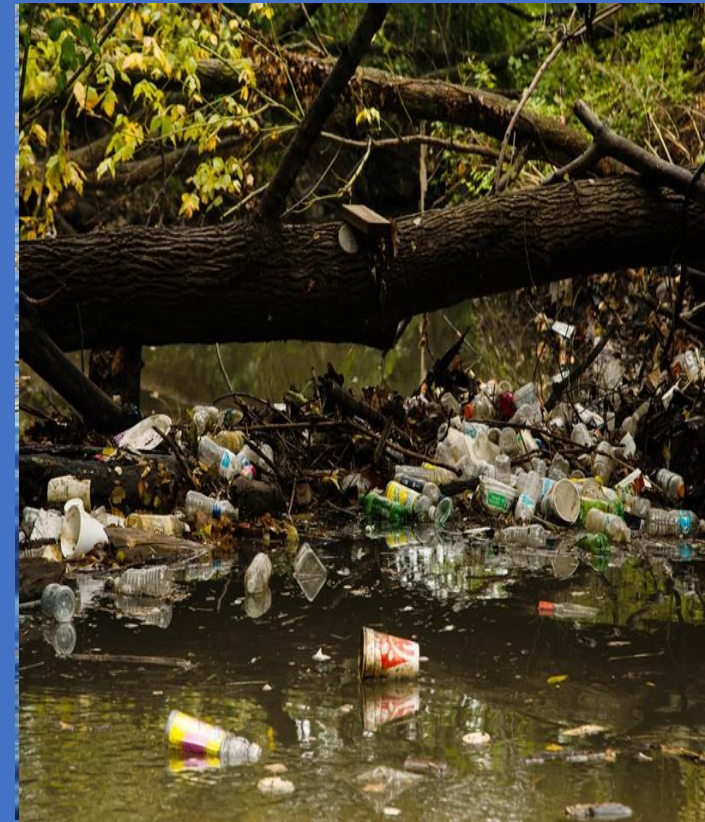




## Illicit Discharge

Andrew Uglow  
Environmental Management Division of Public Works  
Prince William County

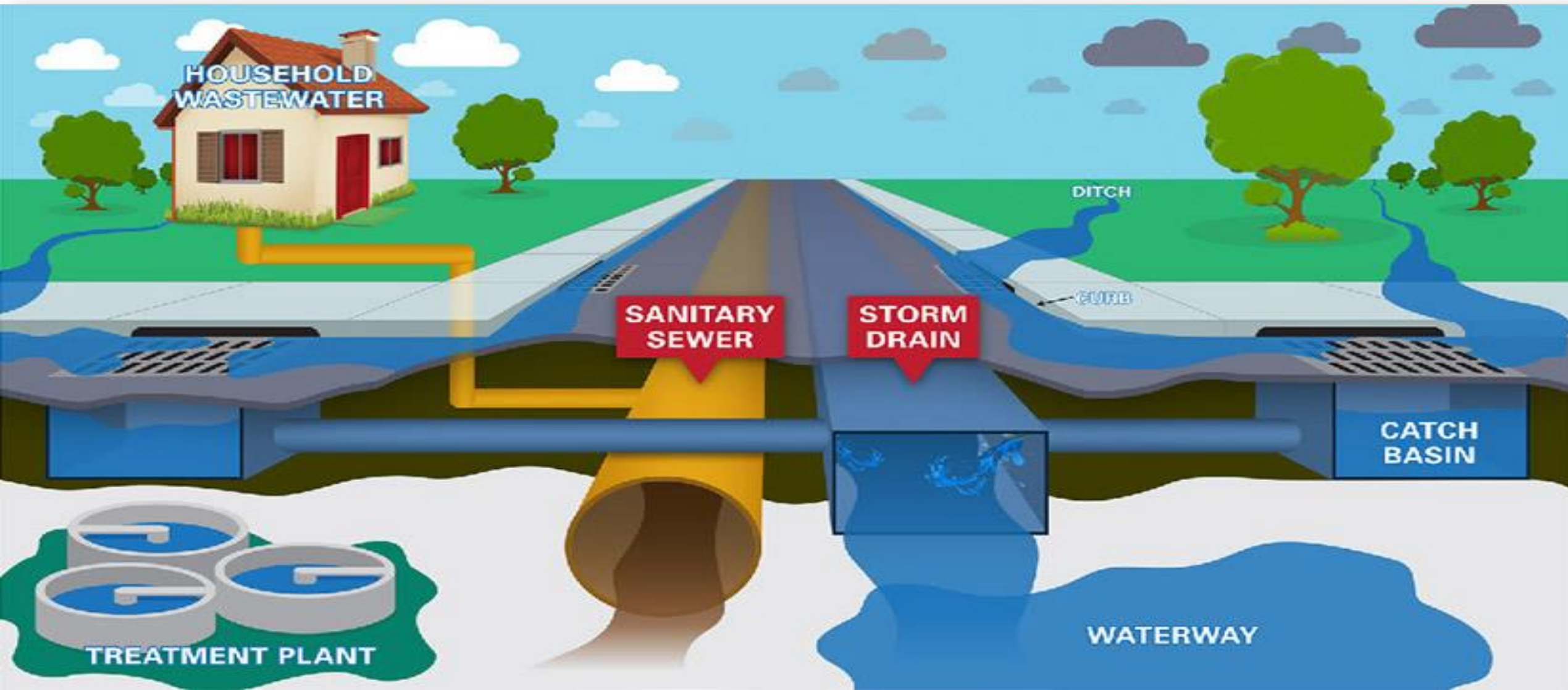




# Municipal Separate Storm Sewer System



# What's the Difference?





# Why does it matter?

- **Legally**

- ❖ Federal: Clean Water Act
- ❖ State: MS4 Permit
- ❖ Local: County Ordinance

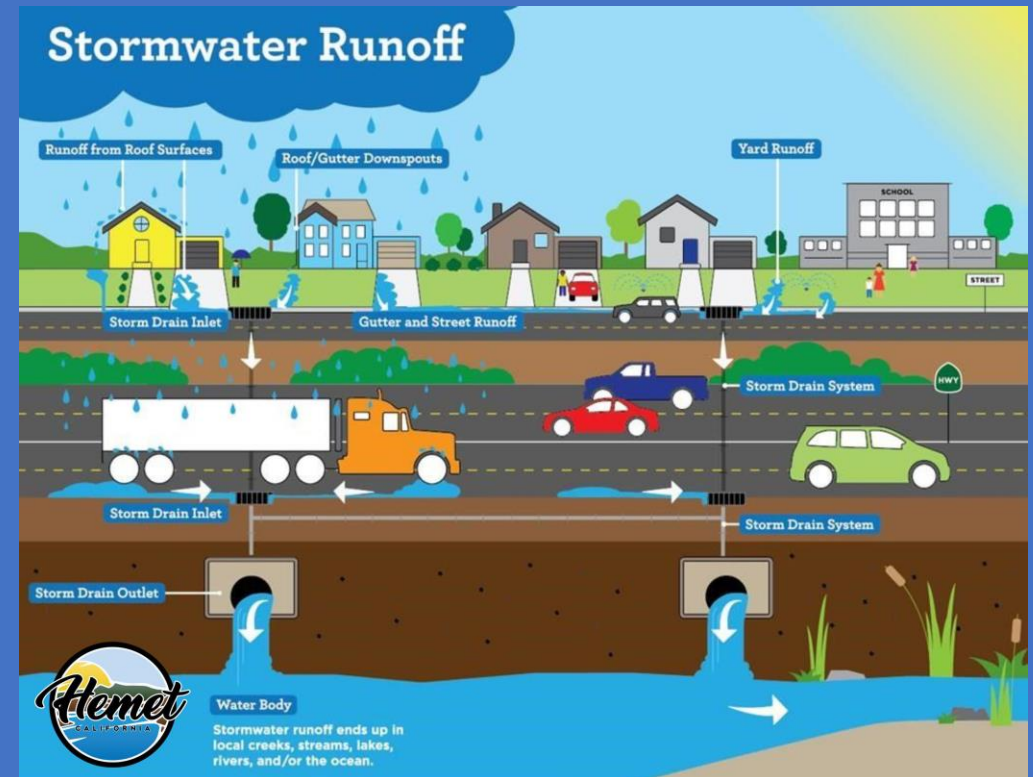
- **Environmentally**

- Health risks can shutdown public recreational facilities
- Expensive to treat drinking water
- Kills/contaminates aquatic life



## PRINCE WILLIAM

Environmental Management



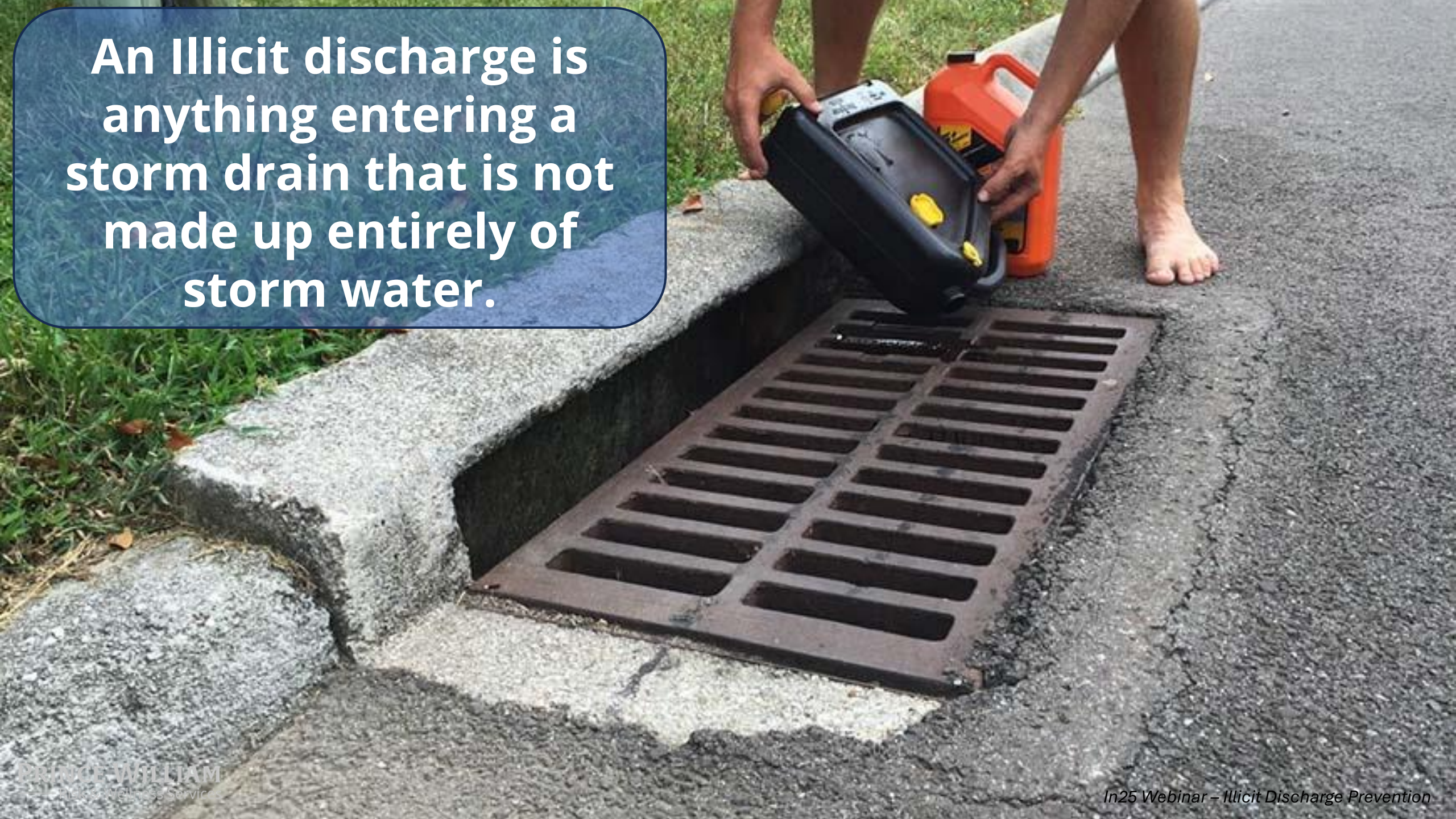
# MS-4 Program

- Prince William County operates under a very strict permit issued by the Virginia Department of Environmental Quality
- The County oversees a comprehensive program to control the stormwater pollutants that can wash directly into local waterways from the community's Municipal Separate Storm Sewer Systems (MS4).
- Environmental Management team must implement a collective series of programs aimed to reduce the discharge of pollutants.
- Our goal is to protect the water quality of nearby streams, rivers, wetlands and bays.

# **Illicit Discharge**



**An Illicit discharge is anything entering a storm drain that is not made up entirely of storm water.**







**Storm water runoff is generated from rain and snowmelt events that flow over land or impervious surfaces.**



# Visual Indicators of Illicit Discharge

- Color



- Odor



- Ecology



- Algae



- Stains

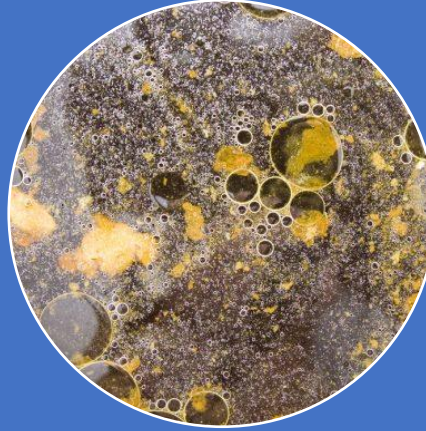


# Common Illicit Discharges

**Oil/Fuel**



**Grease**



**Sediment**



**Detergent**



**Trash**



**Salt**





# **Regulated Pollutants**

# Polychlorinated Biphenyls (PCB's)

- Man-made chemicals that were used in things like electrical equipment, paints, and plastics.
- Banned in many countries, including the United States, because they are toxic, don't break down in the environment, and can harm wildlife and humans.
- Build up in animals and humans over time, especially through contaminated food or water.
- The County is required by our MS4 Permit to create and follow an action plan aimed at reducing PCB's in our stormwater system.



Power Line Transformers | Namerifrats29 | Flickr



# Bacteria

- **E. Coli**

- Major bacteria found in most waste
- Impaired Streams

- **Major Sources**

- Pet Waste
- Illegal Connections
- Failing Septic Systems
- Wildlife/Livestock

- **Effects**

- Closure of recreational waters
- Degradation of drinking water



[Illegal sewer connection to stormwater drainage | Flickr](#)

# Sediment

- **Water Quality Degradation**
  - Carries Nutrients into Waterways
  - Drinking & Recreational Water Degradation
- **Habitat Disruption in Waterways**
  - Benthic Macroinvertebrate Testing
- **DEQ Requirement**
  - MS4 Permit requires County E&S Program to prevent sediment pollution





# Nitrogen and Phosphorus

- **Nitrogen**
  - Present in fertilizers
  - Major contributor to nutrient pollution
- **Phosphorous**
  - Present in fertilizers and detergents
  - Major contributor to nutrient pollution
- Required: 100% reduction of both by 2028
- Nutrients can create conditions that are detrimental to both humans and the environment.
  - Algae – Eutrophication & Hypoxia
  - Removal is costly



## Exceptions:

- Fire fighting activities
- Landscape irrigation
- Potable water discharges
- Street sweeping







**Where does  
it go?**

























**Prevention**





**We all contribute to the  
problem,  
so it's all our  
RESPONSIBILITY.**



# Protecting Our Streams



Booms



Bandalong



Silt Fence







# Good Housekeeping: Cars, Tanks, & Equipment



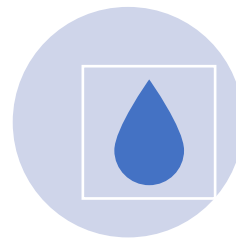
USE COMMERCIAL  
CAR WASHES



DIRECT WASH WATER  
TO GRASS OR GRAVEL  
AREA



MONITOR FUELING  
ACTIVITIES AND USE  
SPILL RESPONSE KITS



CLEAN UP ANY FUEL  
DRIPS OR SPILLS



KEEP TANKS IN GOOD  
REPAIR



# REPORT ILLICIT DISCHARGES

**911**

Any spill with immediate hazard to people or property, such as fuel

**Environmental  
Management**

All other discharges:

(703) 792-7070 or

[illicitdischarge@pwcgov.org](mailto:illicitdischarge@pwcgov.org)

**Report any discharge observed entering and/or exiting the stormsewer system**