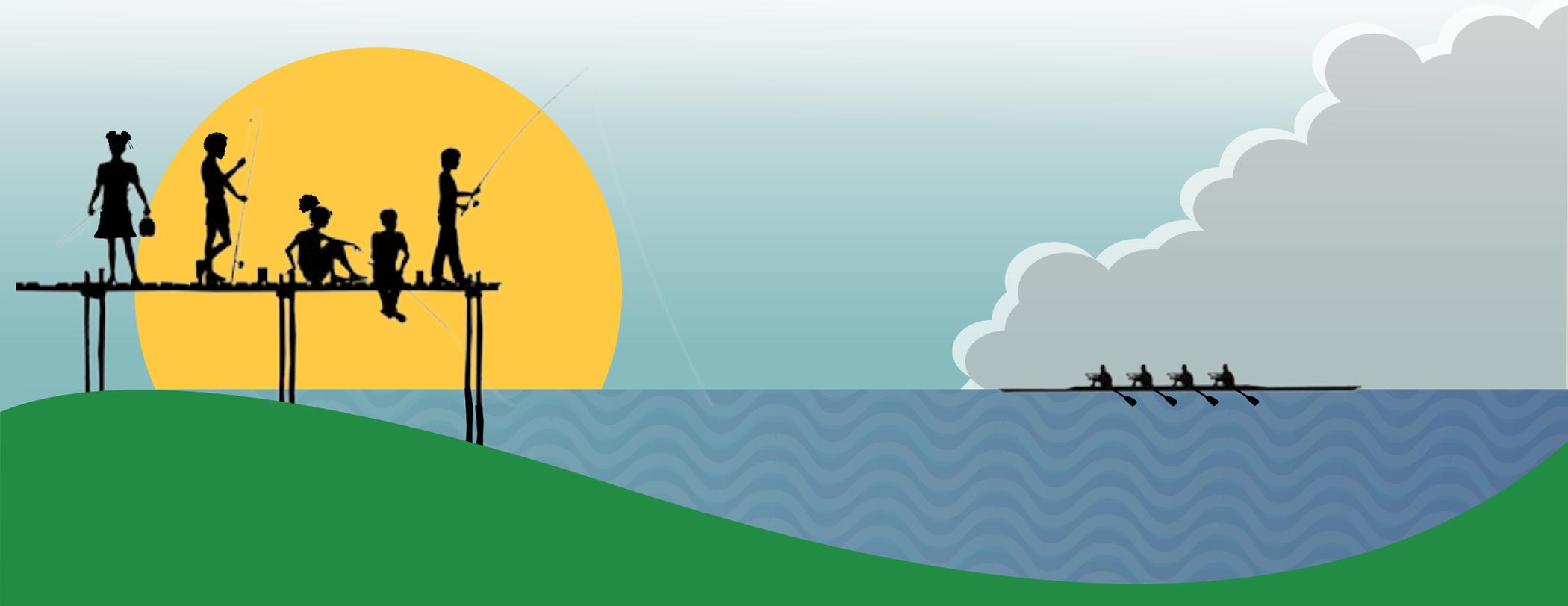
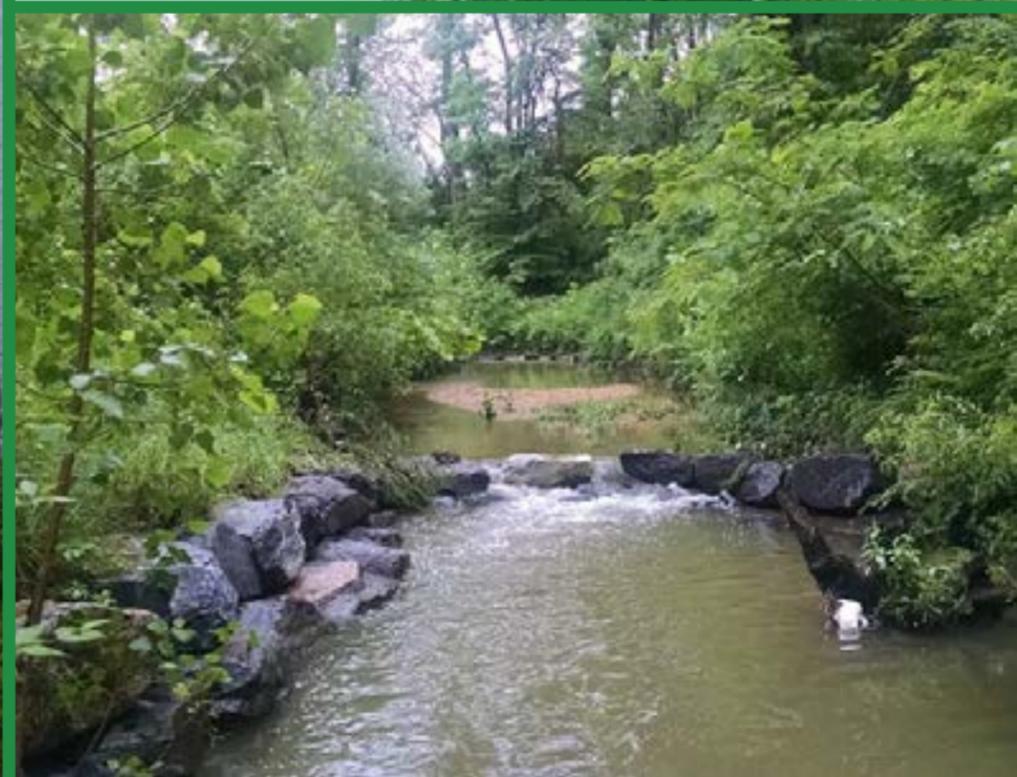


DC STORMWATER PLAN

CONSOLIDATED TOTAL MAXIMUM DAILY LOAD (TDML) IMPLEMENTATION PLAN





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INTRODUCTION

The DC Stormwater Plan provides a guide to achieve the **District's goal of improving the quality of its urban waterways** by reducing pollution from the District's Municipal Separate Storm Sewer System (MS4).

This Consolidated Total Maximum Daily Load Implementation Plan (TMDL IP) has been developed by the District Department of the Environment (DDOE) to fulfill one of the Environmental Protection Agency's (EPA's) MS4 permit requirements.



Source: DCGISopendata, Census 2014, and MD iMap

DISTRICT WATERWAYS

The District of Columbia is built on three major waterways. The Potomac River, the Anacostia River, and Rock Creek all meet in the District, and water from them flows further down into the Chesapeake Bay.

Groundwater and stormwater from the District and surrounding states flow into each of these waterways. These land areas are called watersheds.

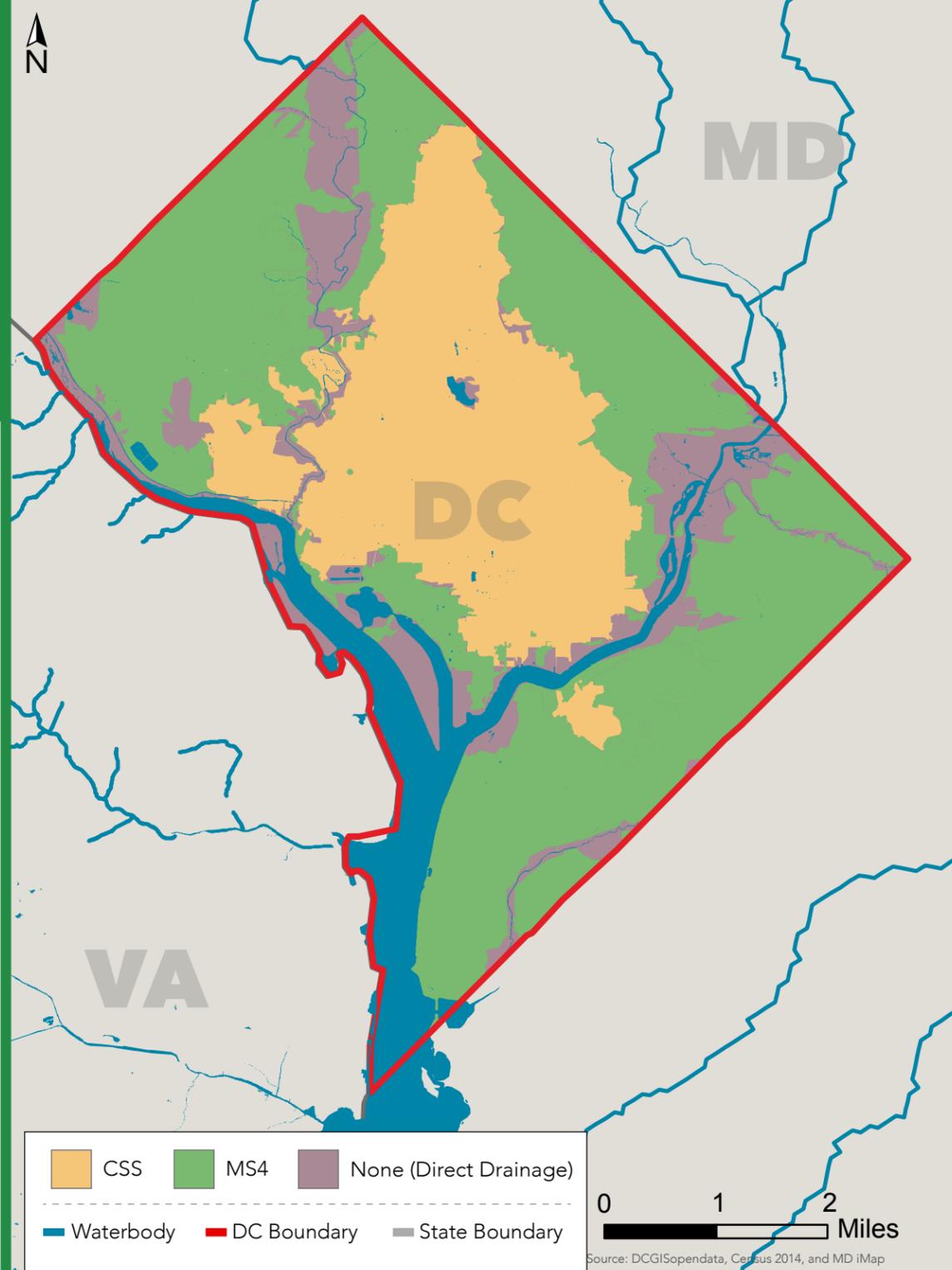
Whether or not we live directly on the water, **the way we manage stormwater across our watersheds directly impacts the health of our rivers and streams.** Anything that goes down a storm drain in the District will eventually end up in one of our rivers.

DISTRICT SEWER SYSTEMS

In the District, we have two kinds of sewer systems: the Municipal Separate Storm Sewer System (MS4) and the Combined Sewer System (CSS).

Stormwater runoff that travels through the MS4 system flows directly into our waterways without mixing with wastewater from our homes and office buildings.

Runoff in the CSS area mixes with wastewater and is treated at Blue Plains, our regional wastewater treatment plant. During very heavy rainfall events, some of this mixed sewage may overflow directly into our waterways. The CSS is regulated by a different permit managed by DC Water.

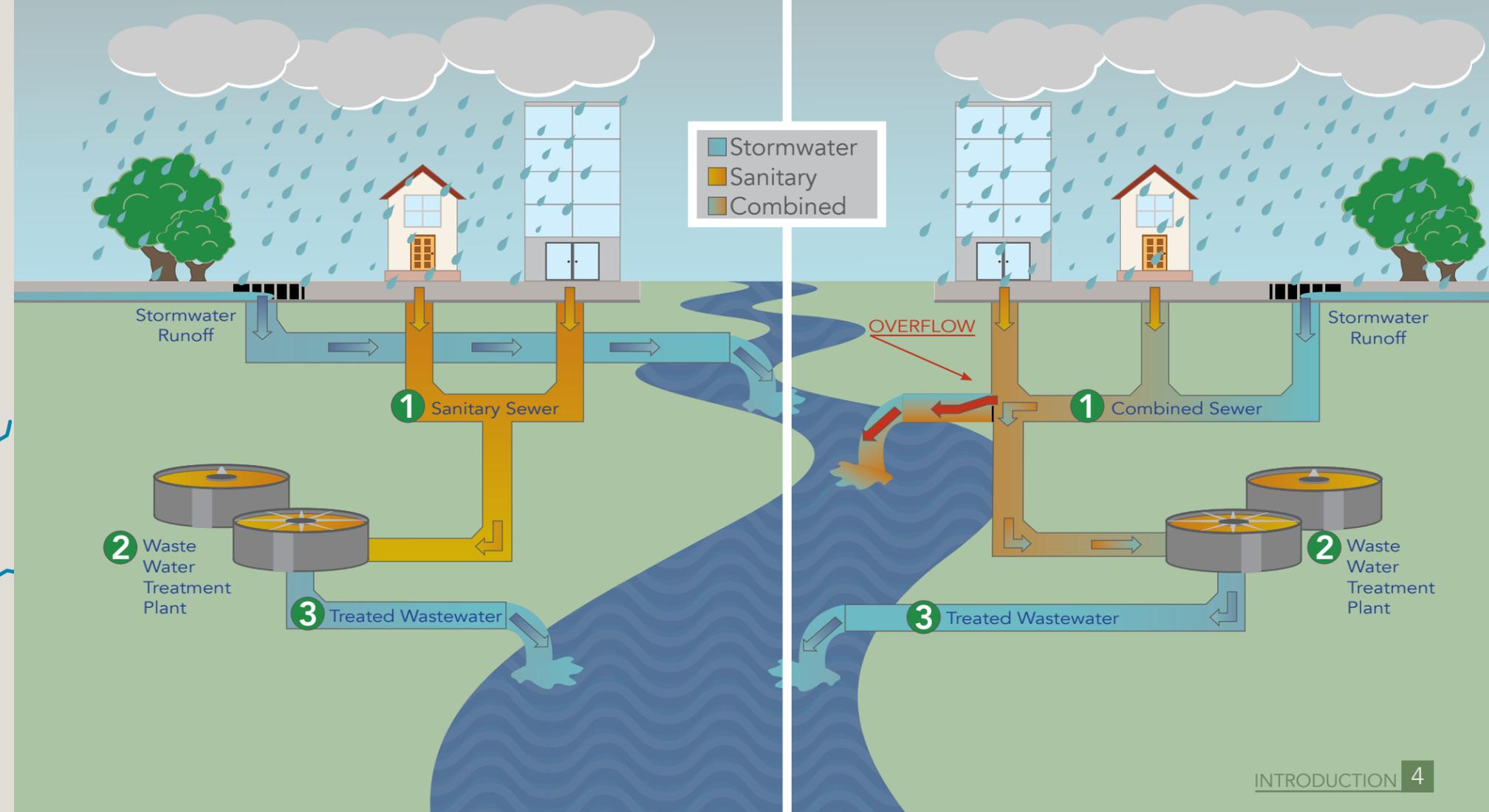


MS4 MUNICIPAL SEPARATE STORM SEWER SYSTEM

CSS COMBINED SEWER SYSTEM

This system uses **separate pipes** for sanitary sewage and stormwater flow.

This system uses the **same pipes** for sanitary sewage and stormwater flow.





THE CHALLENGE

In crowded urban areas, like the District, **rainfall is unable to drain from impervious surfaces naturally. Instead, it runs off of paved surfaces and rooftops**, picking up and carrying pollutants—such as toxic chemicals, bacteria, dirt, and trash—into our rivers and streams. These pollutants impact the health of our waterways and surrounding ecosystems.

The DC Stormwater Plan identifies strategies to reduce over 200 cases of excess pollution in impaired waterways within the District.

IMPAIRED WATERBODIES

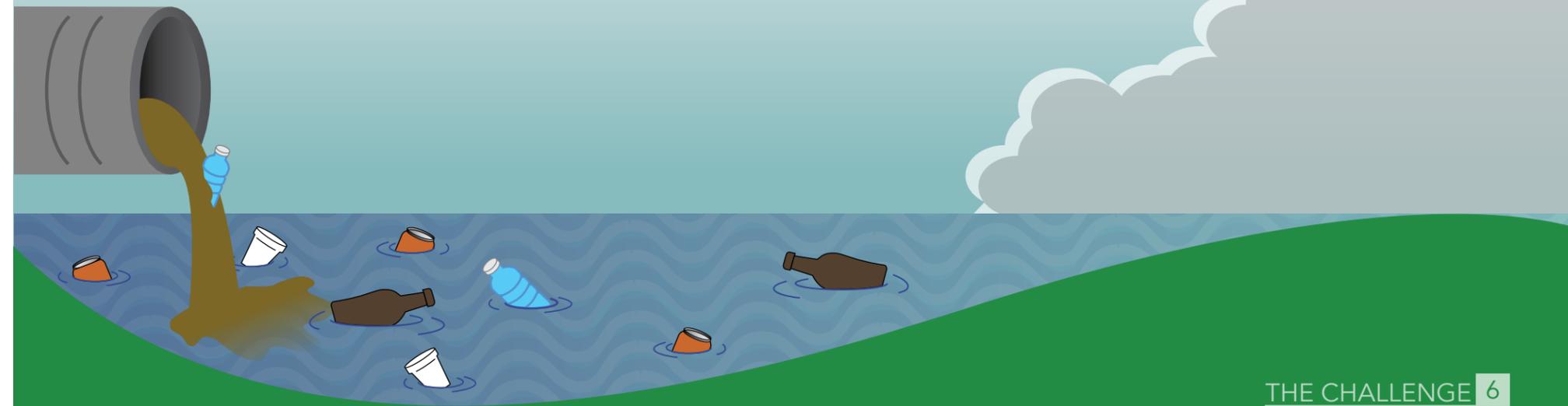
According to the Environmental Protection Agency, impaired waterways are waters that are **too polluted or degraded to meet water quality standards**. Our water quality standards are requirements developed by the District to ensure waters are healthy.

DDOE assesses each waterbody in the District to determine whether it is impaired, using a variety of methods, and looking at different uses for water, such as swimming and fishing.

TOTAL MAXIMUM DAILY LOADS (TMDLs)

TMDLs specify the **maximum amount of pollutant loads waterbodies can receive and still meet water quality standards**.

Those pollutants can come from “point sources” that can be regulated or managed—like pipes, storm drains, culverts, industrial sources, and ditches. They can also come from “non-point sources” that are spread across a watershed.



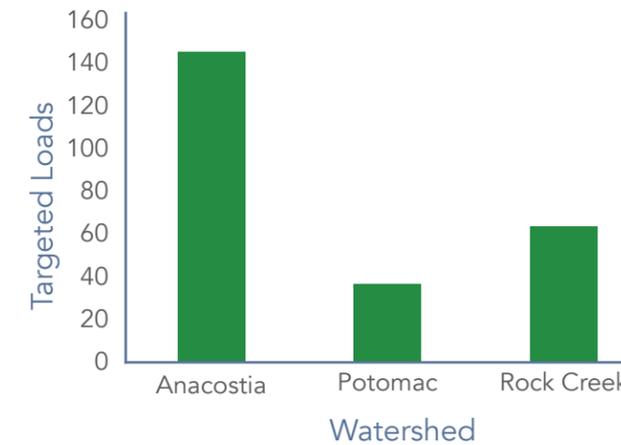


SOLUTIONS

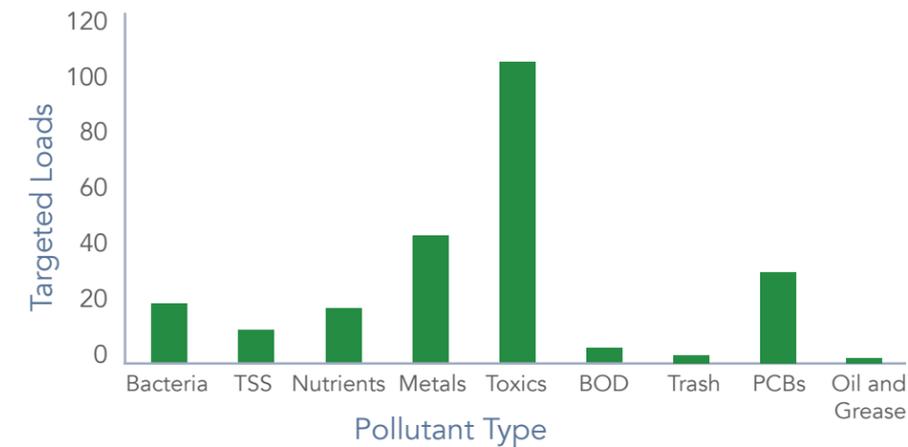
The District has had stormwater management regulations in place since 1988. These regulations established requirements to manage both stormwater quality and quantity. They were updated in 2013 to set more stringent standards for how much stormwater must be held on a site or absorbed into the ground, making them one of the **most advanced and progressive stormwater management regulations nationwide**.

These regulations are the centerpiece of the District's approach for reducing stormwater pollution. Through these regulations and other initiatives, the DC Stormwater Plan will address over 200 pollutant loads across District waterbodies. Of these, **149 loads need to be reduced by over 50%** and **73 need to be reduced by over 90%** to meet current water quality standards.

OF POLLUTION TARGETS BY WATERSHED



OF POLLUTION TARGETS BY TYPE



OUR TARGETS

We have a lot of work to do.

- 1 To reduce stormwater quantity, we need to implement controls that help **reduce stormwater runoff**.
- 2 To improve stormwater quality, we need to **reduce pollutants** at their source.

1 REDUCE STORMWATER RUNOFF

The District uses Best Management Practices (BMP) to reduce and control stormwater runoff. BMPs have the capability of absorbing, retaining, and channeling stormwater, which can be used for other purposes such as gardening. Many of these practices also help reduce pollutants that are spread across larger areas, as they ensure that more stormwater is filtered through the ground.

Future development and redevelopment projects across the **MS4 area are required to incorporate these best management practices to comply with stormwater regulations.**

In addition, the District government programs, like **RiverSmart Homes**, provide incentives to homeowners that can help individuals implement some of these practices on their own property.

BEST MANAGEMENT PRACTICES

- Green Roofs
- Rain Gardens and Rain Barrels
- Impervious Surface Disconnect
- Permeable Pavement Systems
- Bioretention
- Filtering Systems
- Infiltration
- Open Channel Systems
- Ponds
- Wetland
- Storage Practices
- Proprietary Practices
- Tree Planting

2 REDUCE POLLUTANTS

Some pollutants, like DDT (an insecticide) and PCBs (found in old coolants), are no longer in use, so there are not active sources to limit or control. Others, such as pet waste, trash, fertilizers, or oil, can be controlled through regulation or education. **We can all do our part to keep these pollutants out of our waters.**

Many District government programs, like street sweeping and yard waste collection, help reduce pollutants. Erosion control efforts and stream restoration can help control pollution from old contaminants already in the soil.

Legislation banning certain pesticides, coal tar, PCBs, and foam food service products, as well as incentives like the bag law, also help to reduce pollutants at their source.

POLLUTANTS

Bacteria

E. coli from human, pet, and wildlife fecal waste

Nutrients

Nitrogen and Phosphorus from fertilizers, leaf and yard waste, pet waste

Sediments (TSS)

Suspended Solids from erosion, soil disturbance, and construction sites

Metals

Arsenic, Copper, Lead, Mercury, Zinc from sediment, building materials, vehicles, and fungicides or insecticides

Organic Chemicals

PAHs, PCBs and toxics from petroleum emissions, pesticides and insecticides, vehicles, and industrial activities

Trash

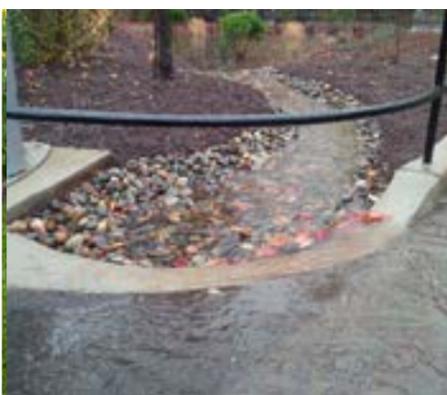
Plastic bags, foam, plastic bottles, and other items from street litter, improper trash disposal, and illegal dumping

Oil and Grease

From improper disposal, spills, leaks, and use of vehicles and gas-powered equipment

Biological Oxygen Demand (BOD)

From high levels of nutrients and low levels of dissolved oxygen





TRACKING PROGRESS

PHOTO CREDIT TO DAN RAGAN

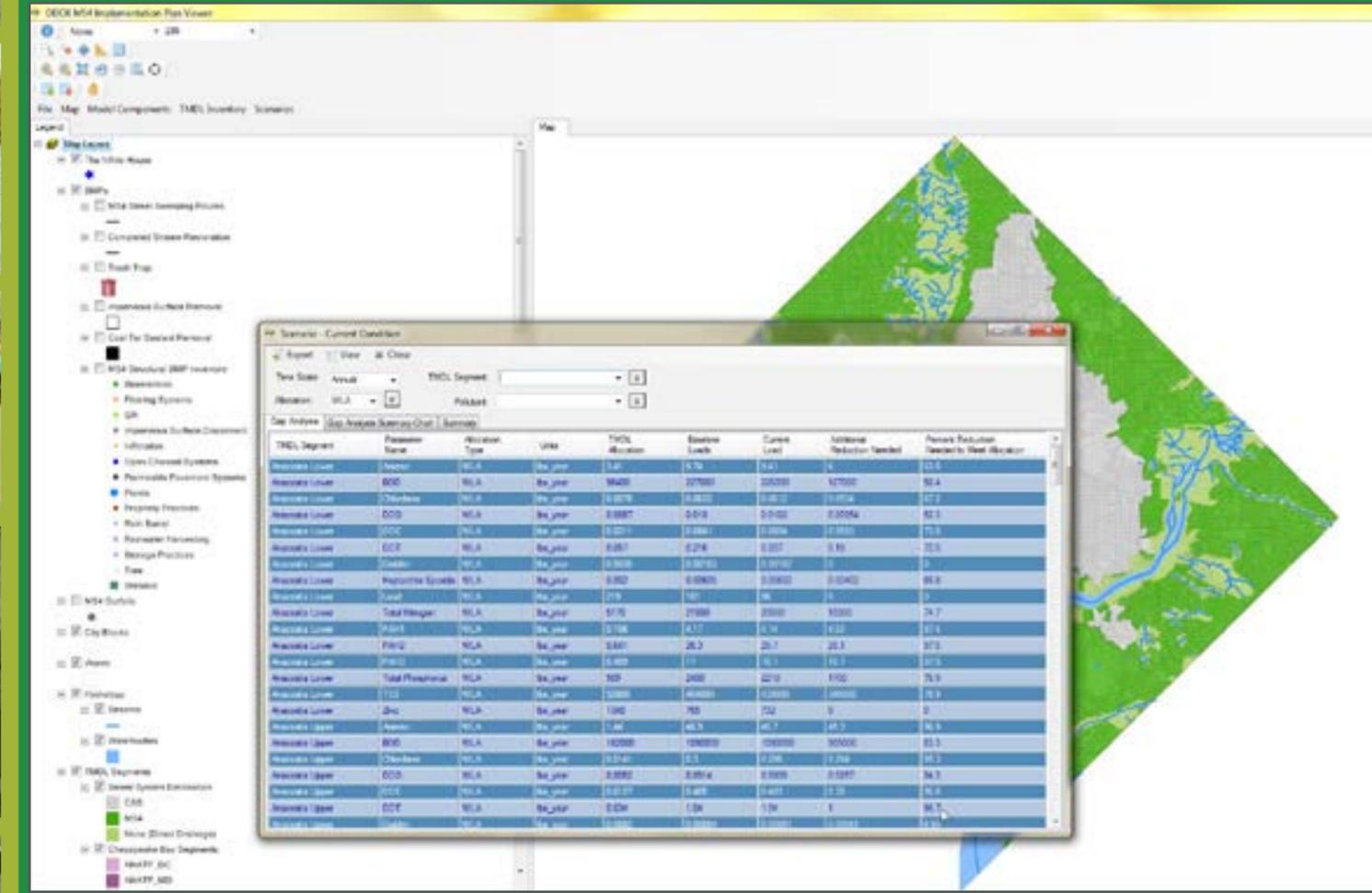
DDOE is revising its monitoring programs to **holistically monitor and evaluate the overall health of District waterbodies** by monitoring stormwater runoff, as well as stream water quality, biological indicators, and physical habitat.

The District will track and report progress toward our water quality goals by:

- evaluating these monitoring results;
- tracking program and BMP implementation; and
- modeling the impacts and results of that implementation.



TMDL IMPLEMENTATION PLAN MODEL

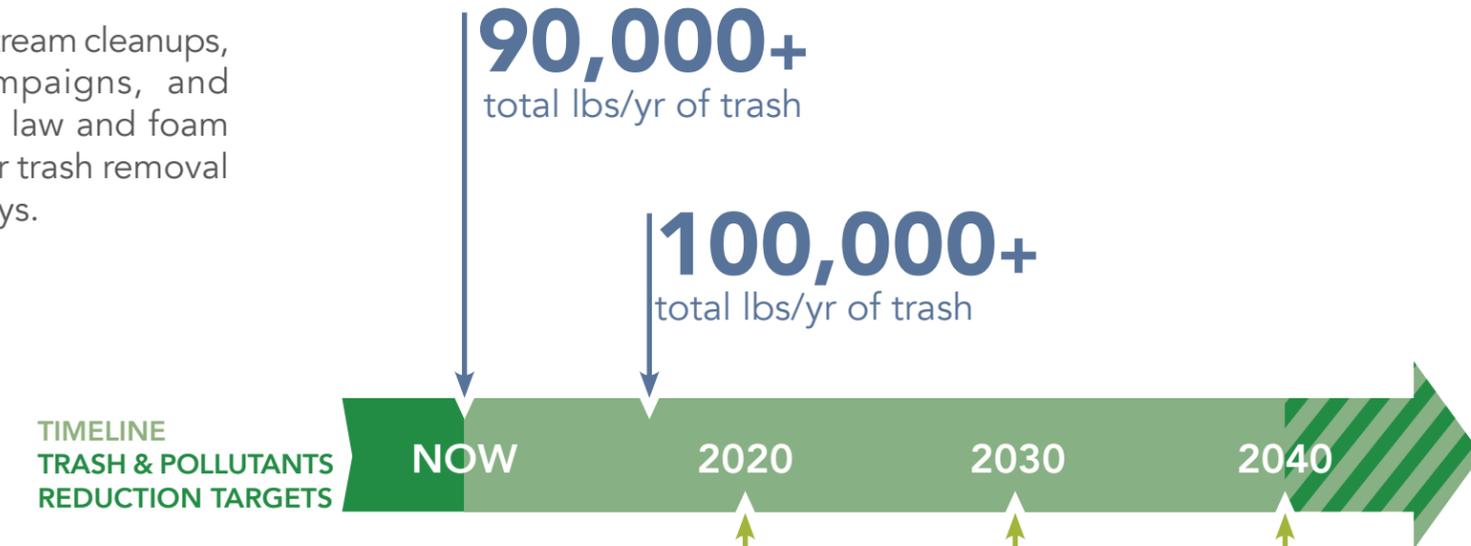




WHEN WILL WE MEET OUR TARGETS?

TRASH

Trash traps, sweeping, stream cleanups, public education campaigns, and legislation like the bag law and foam ban all help us meet our trash removal goals for local waterways.



OTHER POLLUTANTS

By 2040, the District will have retrofitted 1/3 of its MS4 area, which will still not be enough to achieve all of our pollution targets. Achieving them all will require additional work and time.



WHAT CAN YOU DO?

As a District resident, there are LOTS of things you can do to help improve the quality of our waterways, and things you can avoid doing to help cut down on pollution.

For more information visit:
ddoe.dc.gov/service/reduce-stormwater-runoff

DOs



Pick up pet waste.



Plant trees and ground cover to control erosion.



Properly maintain and operate your vehicle.



Limit car use and conserve energy. Take public transit, bike, or walk when possible.



Properly dispose of batteries, chemicals, yard waste, and hazardous waste.



Plant native plants that don't require fertilizers, extra watering, or pest control.



Use reusable water bottles.



Reduce, reuse, recycle.



Join DDOE's RiverSmart Homes program.

DON'Ts



Don't use plastic bags, foam take-out containers, or disposable plastic bottles.



Don't wash yard waste or chemicals down storm drains.



Don't dispose of trash in storm drains.



Don't use fertilizers, copper-containing fungicides, and synthetic pesticides.



Don't put oil and grease down the sink or storm drain.



Don't litter.

You can read the Consolidated TMDL Implementation Plan and the Revised Monitoring Framework in its entirety at DCStormwaterPlan.org

The public comment period
is now open.

Last day: August 14, 2015



FOR MORE INFORMATION:

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