

# Stormwater in Dover, DE

## The 2008 Dover Comprehensive Plan: **“From the People-For the People”**



.... signifies that the people of Dover play the most important role in shaping the City's future... & health.

# What is Stormwater?

- Stormwater is the flow of water, during and after rain or snow events, that runs off property and flows into streets, storm sewers, and ditches.
- The volume and velocity of runoff increases as the amount of impervious area increases.
  - Impervious area is any hard surface that does not readily absorb water. Increased velocity of runoff erodes soils, adding pollution to the runoff.
  - Examples Include: Driveways, rooftops, parking lots, and streets.

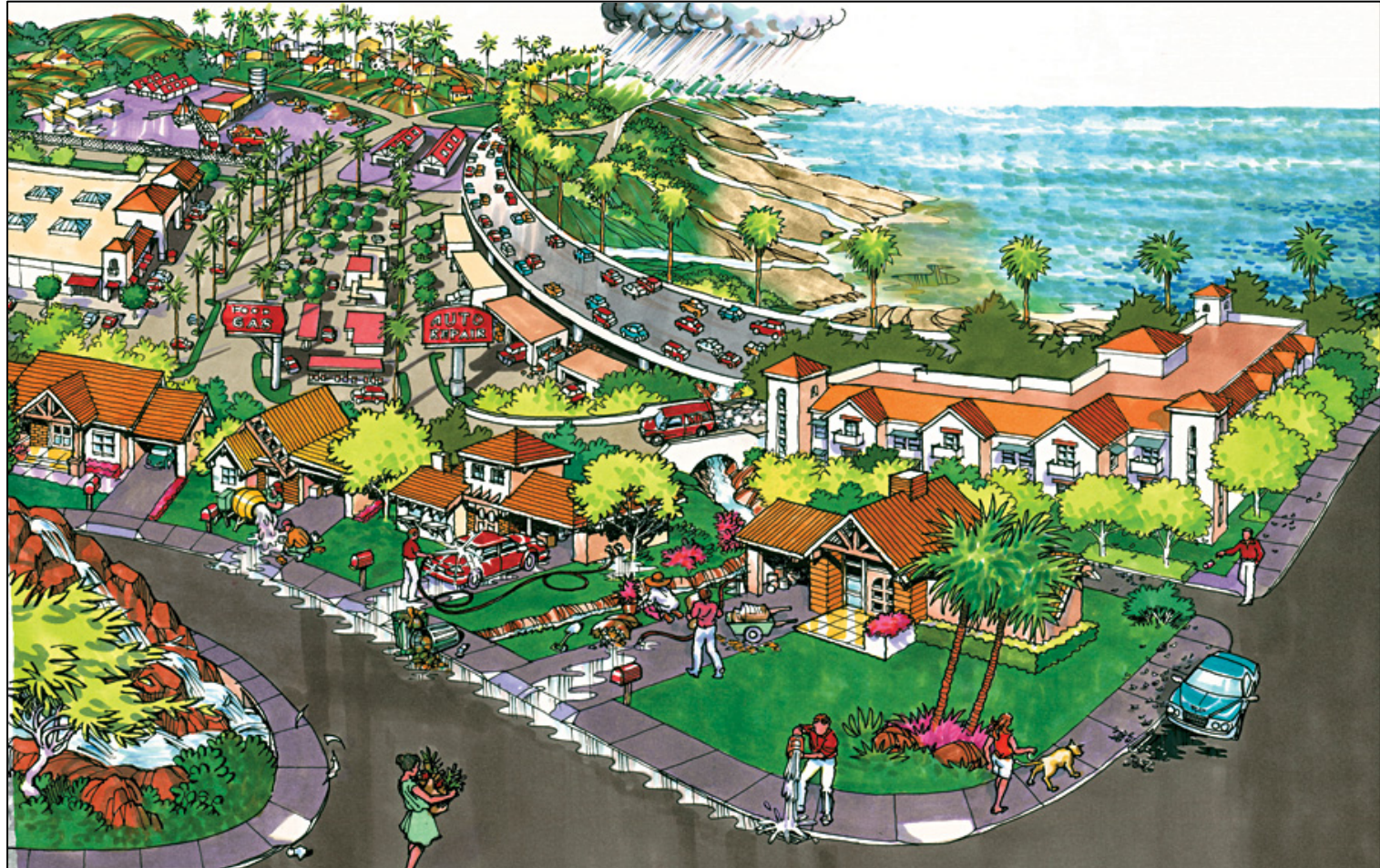


# What is in stormwater?

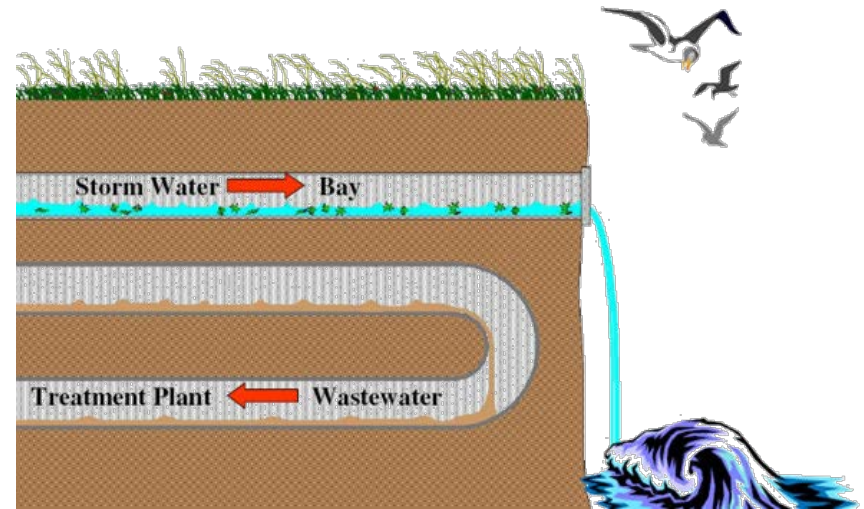
- Runoff picks up pollutants such as:
  - grit and sediment
  - oil
  - heavy metals from car emissions
  - pesticides and fertilizers from lawns
  - trash
  - pet waste
- The pollutant load is dumped wherever the storm sewer has an exit pipe – into the St. Jones River, Silver Lake, or Delaware Bay



# The stormwater we can see...



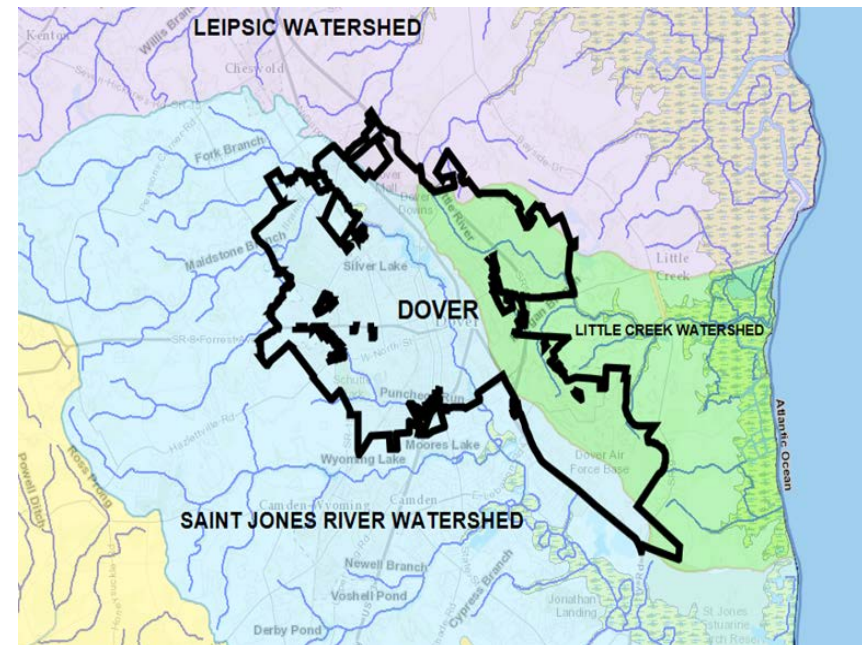
# The stormwater we can't see...





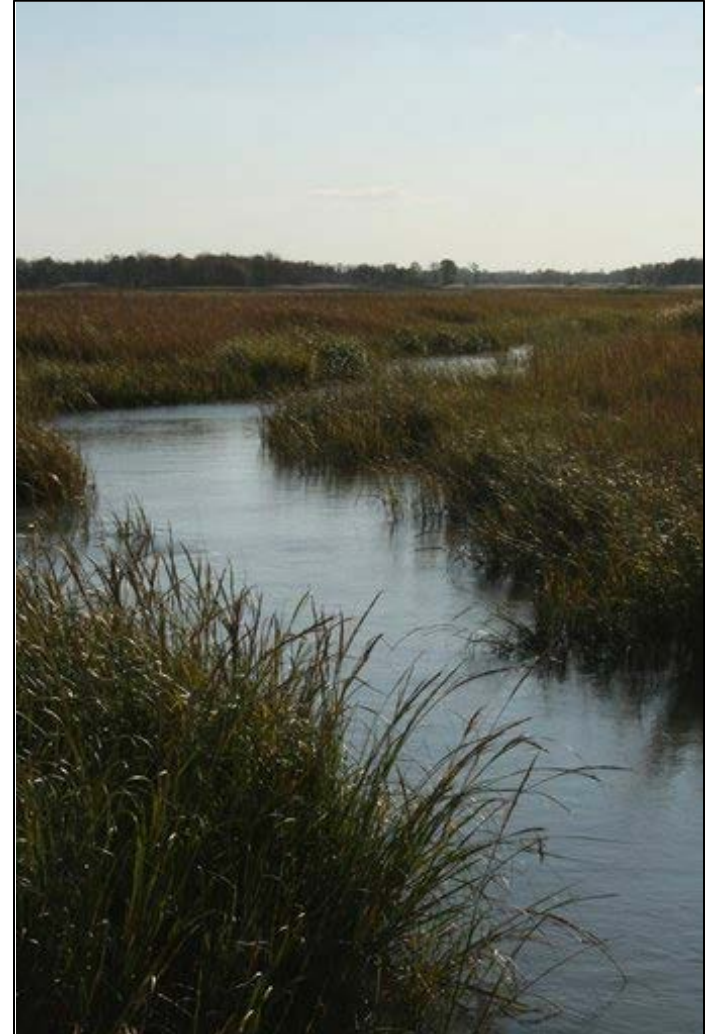
# Hydrology in the City of Dover

- All of Dover drains into one of three watersheds (St. Jones River Watershed, Leipsic River Watershed, Little Creek Watershed) then into the Delaware Bay and the Atlantic Ocean.
- The Delaware Bay is a fragile ecosystem brimming with vegetation and wildlife sensitive to runoff.
- Dover's average annual rainfall is  $>46''/\text{year}$ .
- Dover is only a few feet above sea level and extremely flat so is prone to flooding.
- Dover is a combination of urban and natural landscape.



# Hydrology in Dover (cont.)

- Storm sewer inlets connect to a system of underground pipes. The pipes rely on gravity flow to discharge into rivers and streams.
- Stormwater is not treated before it is discharged to these surface waters.



# How does it impact Dover and receiving waterways?

- Flooding
- Water quality issues
- Impacts on business & tourism





# Top 3 Challenges to Stormwater Management in Dover



- Population growth and urbanization
- Aging conveyance system
  - Pipes and catch basins need repair, replacement, and upgrades
- Increasing flooding and intensity of storms = increased velocity and scouring with runoff

# What is the City doing about it?

- Developing an outreach campaign (FAQ Sheets, flyers, website updates)
- Evaluating costs to meet MS4 permit obligations
- Seeking experts for financing and outreach advice
- Planning to host a public meeting for citizen input
- Identifying next steps to build a stormwater program:
  - System inventory and database
  - Improved maintenance program
  - Upgrades to aging infrastructure

# What could the City do with dedicated funding?

- Repair and Replace Stormwater Infrastructure
- Eliminate Illicit Discharges
- Fulfill Permit Requirements
- Develop a Robust Stormwater Program
- Be consistent with Dover's Comprehensive Plan to improve watershed quality (Chp 5)
- Offer multiple outreach events with residents
- Train employees to maintain stormwater practices to help reduce runoff
- Enjoy Cleaner Waters!





# For more information about the Stormwater Program in Dover:

Contact: Joshua Barth  
Department of Public Works  
15 Loockerman Plaza  
Dover, DE 19901  
(302) 736-7025 or  
[jbarth@dover.de.us](mailto:jbarth@dover.de.us)

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