

Storm Water 101



Photo: Clean Water Campaign

Presented by

Georgia Department of Community Affairs
Georgia Environmental Protection Division

A Review of the Basics....

- What is storm water?
- Why are we concerned about it?
- Are there benefits to managing storm water?
- Where do we start?



What is storm water?



Photo: Clean Water Campaign

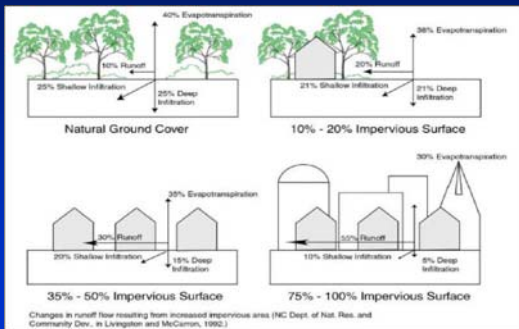
Runoff from natural precipitation, such as rain events and snow melt and other surface runoff and drainage

Why are we concerned about it?

- Developed and disturbed land contributes to problems related to both water quantity and quality
- Pollutants enter storm sewer systems and degrade the quality of the water



Storm Water and Land Use



Imperviousness and Water Quality

- Consequences of impervious surfaces:
 - Reduced infiltration of rain water
 - Increased runoff volumes and velocity
 - Collects and concentrates pollutants
 - Increases ambient air and water temperatures



Problems caused by excessive storm water runoff

- Destruction/degradation of aquatic habitat
- Accelerated loss of storage in lakes and reservoirs
- Diminished water recreation experiences
- Reduced aesthetic and preservation values
- Accelerated streambank erosion
- Increased flood damages
- Reduced infiltration/groundwater recharge

Problems come from....

- Sediment
- Nutrients
- Bacteria
- Oil and Grease
- Trace Metals
- Illicit Connections
- Toxic Chemicals
- Chlorides
- Thermal Impacts
- Oxygen Demand
- Litter



Photo: US EPA

Sediment can smother habitat and increase costs for drinking water purification.



Photo: US EPA

Nutrient overloading and decreased oxygen levels can result in fish kills.



Photo: US EPA

Litter is not only an eye sore, but can damage aquatic habitat and clog storm drains causing flooding.



Photo: US EPA

Oil and other runoff from parking lots can severely degrade water quality.



Photo: US EPA

Chemicals from leaking containers can be washed into nearby streams, polluting the water, damaging aquatic habitat, and killing aquatic species.



Photo: DeKalb County Dept. of Public Works

This homeowner decided to pump their wastewater into the storm sewer system, sending raw sewage into neighborhood streams.

Are there benefits to managing storm water?

- Enhanced commercial, recreational and subsistence fishing
- Enhanced opportunities for swimming and boating
- Reduced flood damage
- Drinking water benefits
- Navigational benefits
- Reduced incidents of illness from eating contaminated fish or swimming in contaminated water
- Enhanced aesthetic values

