

Stormwater 101:

Preserving the Quality of our Water





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Preserving the Quality of Our Water

Topics:

- **What** is Stormwater?
- **Where** Does Stormwater Come From?
- **How** Does Stormwater Become Polluted?
- **Why** Should We Care?
- Stormwater Pollution Prevention
 - **At Work**
 - **At Home**
 - **On Roads**
- GDOT's Stormwater Management Program

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- ✓ What?
 - ✓ Where?
 - ✓ How?
 - ✓ Why?



What is Stormwater?

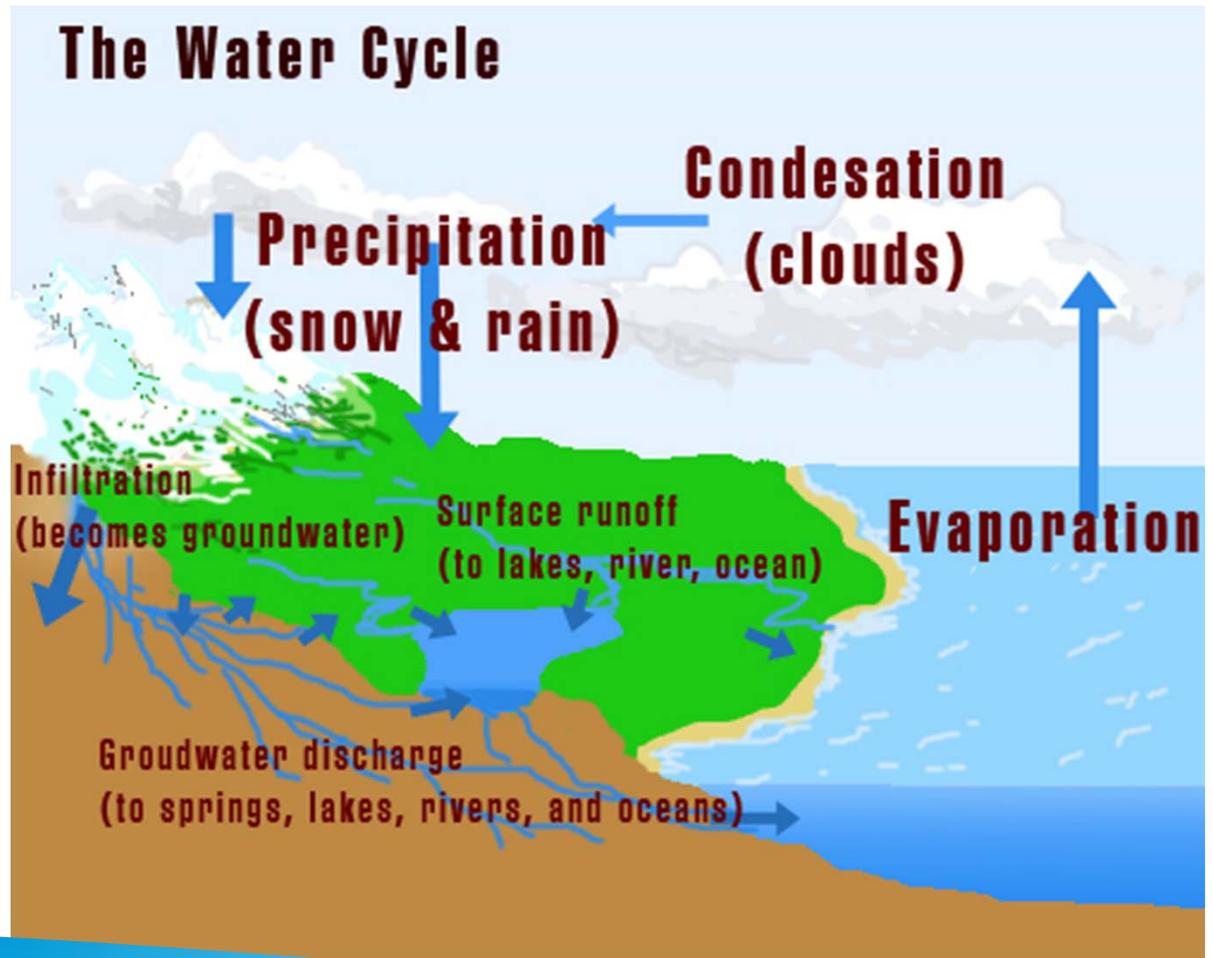
- Water from rain, melting snow or ice
- Soaks into the ground or “runs off” towards lower areas





Where Does Stormwater Come From?

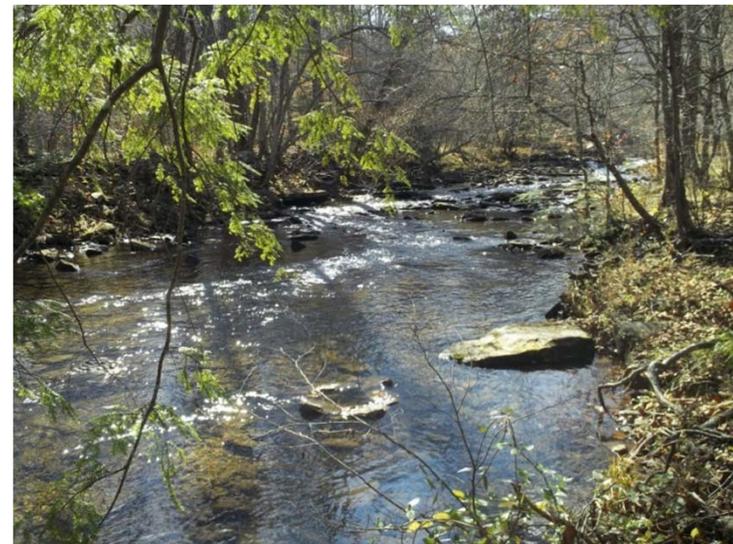
- The continuous cycle of water movement on the Earth





Where Does Stormwater Come From?

- Soaks into the ground if it lands on natural areas with trees and dense grasses
- Water that does not seep into the ground becomes surface runoff. It travels downhill towards lower areas like streams and lakes





How Does Stormwater Become Polluted?

- Cannot seep into the ground if it falls on roadways, sidewalks and buildings
- These are called “Impervious Surfaces.”





How Does Stormwater Become Polluted?

- Runoff from parking lots, driveways and roads drains directly to nearby streams and lakes
- **Stormwater collection system** may be a combination of **curbs, gutters, storm inlets, pipes and ditches**





How Does Stormwater Become Polluted?

- Carries common pollutants into our streams, rivers, lakes, and oceans



Sediment



Industrial chemicals



Oil and grease



How Does Stormwater Become Polluted?

- Picks up dirt from construction sites





How Does Stormwater Become Polluted?

- Litter causes stormwater pollution
- Litter and debris that is illegally dumped often contain harmful chemicals, which are picked up by stormwater runoff



Litter along roads and trails



Items like mattresses or appliances

How Does Stormwater Become Polluted?

- Broken sewer pipes and overloaded septic systems can pollute nearby waterways



Sewage in drainage ditch



Broken sewer pipe



How Does Stormwater Become Polluted?

- Leaking oil from vehicles is a common source of stormwater pollution





How Does Stormwater Become Polluted?

- When cars are washed on driveways, detergents go directly into the storm drain





How Does Stormwater Become Polluted?

- Harmful bacteria from pet waste will end up in our surface waters if it is not properly cleaned up!





How Does Stormwater Become Polluted?

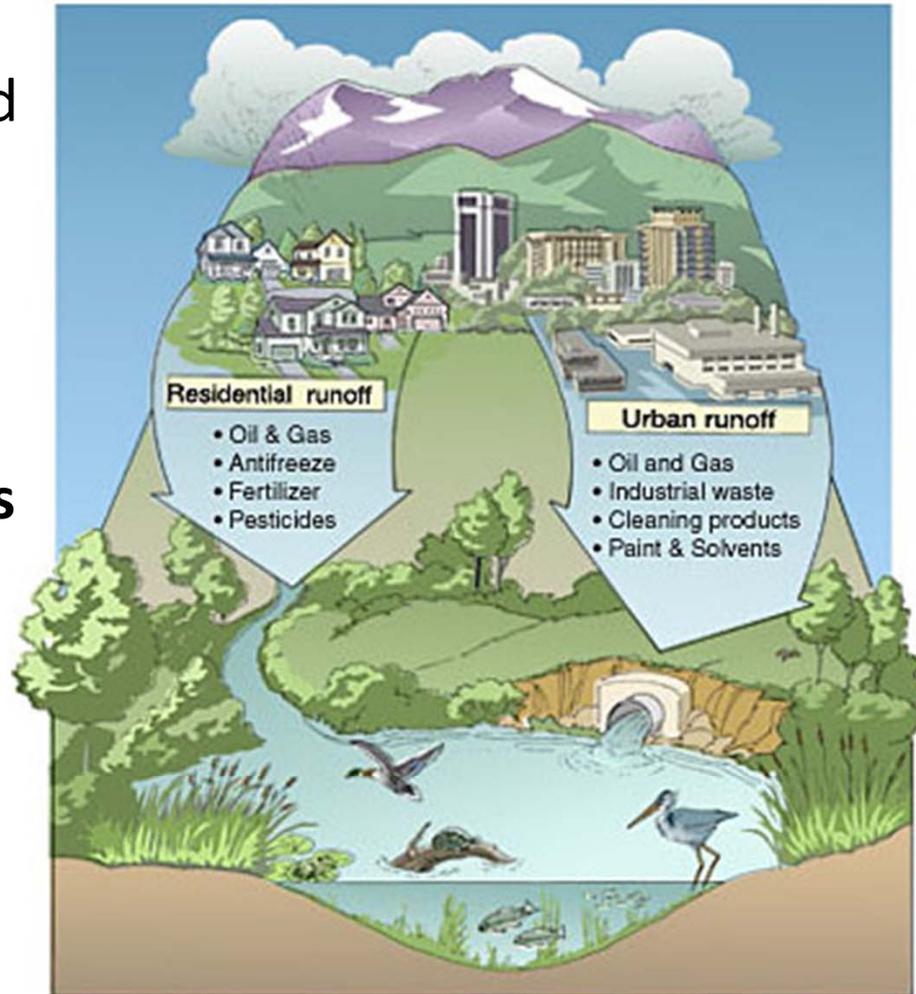
- Activities on forest, farm and agricultural lands can also cause stormwater pollution if not properly managed





How Does Stormwater Become Polluted?

- Eventually our streams and rivers become polluted!
- Stormwater is **NOT TREATED** before it flows to nearby waterways; therefore, **pollution occurs in our streams, rivers and oceans!**





Why Should We Care?

- Stormwater pollution is harmful to humans, wildlife and our natural environment

Here are some interesting statistics:

- **Only 3%** of the Earth's water is freshwater
- **Less than 1%** the Earth's freshwater is potable, which means that it is safe to drink
- **40%** of **rivers, lakes and estuaries** are not clean enough for **fishing or swimming**

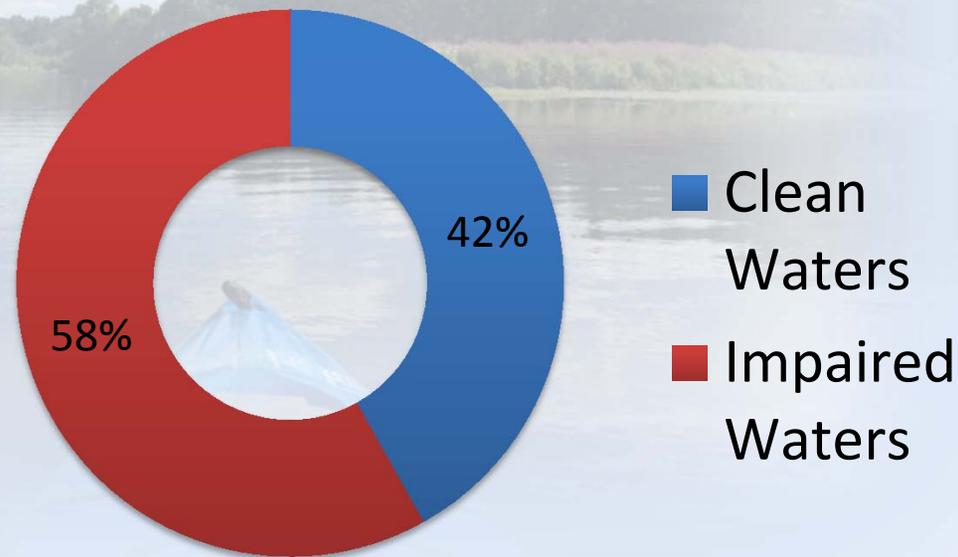




Why Should We Care?

- Many streams in Georgia are polluted or “impaired”

A stream is considered to be impaired if it cannot be used for its designated use like swimming, fishing or drinking. The pie chart below shows the percentage of Georgia’s streams with water quality impairments.





Why Should We Care?

- Fish, wildlife, and humans can become sick or die from polluted water
- Beaches and other recreational areas must sometimes be closed to avoid harming the public.





Prevent Stormwater Pollution?

- **We can all take part in preventing stormwater pollution!**
- Now that we've covered where stormwater goes and how it can become polluted, let's take a look at what **we can all do** to help reduce stormwater pollution
- Let's conduct a "Rain Check" to make sure we are utilizing the right solutions!



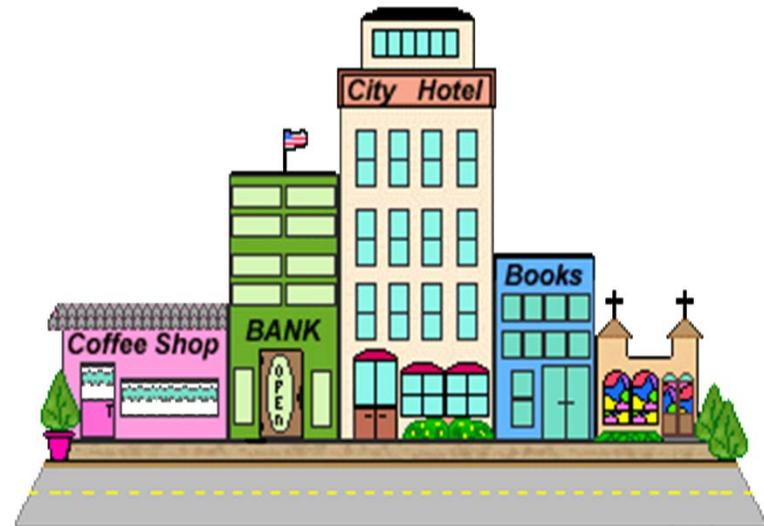


Prevent Stormwater Pollution at School and Work

There are lots of things you can do to prevent stormwater pollution



Around your school...



...or where you work!



How to Prevent Stormwater Pollution at School and Work

- Keep facilities clean – encourage proper waste disposal and help clean up as needed



- Contact your property manager if you see overflowing dumpsters or debris in the parking lot.



How to Prevent Stormwater Pollution at School and Work



- Look around your school or workplace – do you see any debris near a storm drain?



- If so, contact your property manager, so the debris does not end up in the creek!



How to Prevent Stormwater Pollution at School and Work



- Help us by reporting possible pollution



- If you see or smell anything suspicious in the storm drainage system, please report it! You can file a report online at the **GDOT Stormwater website**:
<http://www.dot.ga.gov/BS/Programs/Stormwater>



How to Prevent Stormwater Pollution at School and Work

- Share what you have learned with your friends and co-workers!

Stormwater Pollution Prevention

Keeping our Streams, Rivers and Lakes Healthy and Clean

What is a "Rain Check"? Did you know that our daily activities can have an impact on water quality, especially when it rains? This site provides information about stormwater pollution and tips on how we can work together to ensure the health of our natural waters. Check out our video, brochures, and other resources below for more information!

Read More

Post-Construction Stormwater Training

Description: This two-day course will describe the new GDOT post construction stormwater design policy and provide designers with hands on design exercises on detailing the implementation of these requirements on projects in MS4 areas. This training will include information on policy, design and documentation for all GDOT projects for each milestone submittal. The stormwater planning process will be discussed in detail from the pre-concept phase through final design. The new post-construction stormwater BMPs that are included in the Manual and their design requirements will be covered, along with design examples for each BMP. Participants should bring a calculator for use with in-class design examples.

- Target Audience
- Dates and Locations
- Registration
- Payment
- Contacts

Stormwater Program

Fact Sheet

MS4 Areas

FAQs

- The Georgia Department of Transportation has created an informative video that explains stormwater pollution and how it can be prevented. It is a great resource to share!

<http://www.dot.ga.gov/BS/Programs/Stormwater>



How to Prevent Stormwater Pollution at Home

- There are lots of things you can do to protect the stormwater around your home as well



Household chemicals



Yard waste



Pools and spas



Septic systems



Lawn fertilizers and pesticides



Car fluid checks and maintenance



Washing cars



How to Prevent Stormwater Pollution at Home

- Never dump chemicals, paint or other household materials down the storm drain!



- **Check with your local government** on how to properly dispose of unwanted household chemicals.



How to Prevent Stormwater Pollution at Home

- Keep household chemicals, cleaners and paint in the original containers with labels



Store these materials in a **safe, dry** location



How to Prevent Stormwater Pollution at Home

- Secure trash and recycling containers so that nothing can blow away, spill or leak!





How to Prevent Stormwater Pollution at Home



- Maintain your yard to prevent pollution from entering our waterways!



Never dump leaves or grass clippings into the storm drain!



Apply the correct amount of fertilizers and/or pesticides for your lawn. Check the label on the container for guidance.



How to Prevent Stormwater Pollution at Home

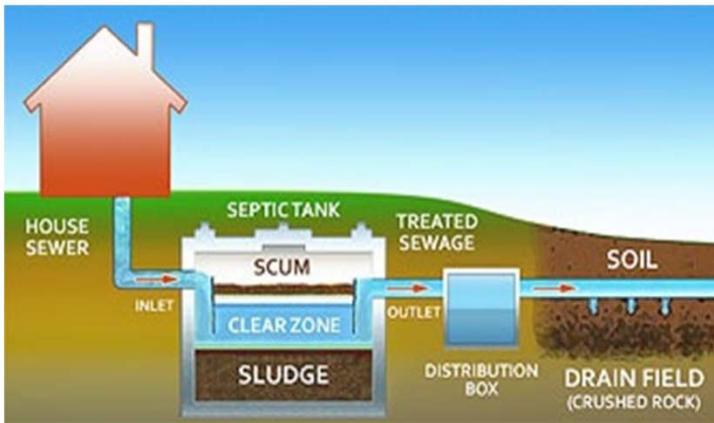


- Make sure pools and hot tubs drain into the sanitary sewer **NOT** in storm drains!





How to Prevent Stormwater Pollution at Home



- Properly maintain your septic system to avoid possible overflow
- Understand how it works, and have it inspected and cleaned out on a regular basis
- Visit this link for guidance:

<https://dph.georgia.gov/wastewater-management>





How to Prevent Stormwater Pollution at Home



- Maintain your vehicle for safety and pollution prevention!
- Check regularly for signs of leaks and make repairs immediately.
- Capture oil and fluids in containers when doing at-home maintenance and repairs.
- Dispose of used oil appropriately at a recycling center.
- Wash vehicles on the lawn, rather than in the driveway or street.





How to Prevent Stormwater Pollution on Roads



- Pick up litter when you see it or set aside time to clean up around your home or office
- Join the Adopt-A-Highway program with your co-workers or another group
- Businesses can also join the Sponsor-A-Highway Program





GDOT's Stormwater Management Program

- Just as you can help to prevent stormwater pollution at home, school or work, the Georgia Department of Transportation is dedicated to protecting stormwater along roadways and at their facilities.





GDOT's Stormwater Management Program

- GDOT has updated their policies and created new training programs to educate their employees and contractors on new guidelines for stormwater pollution prevention



MANUAL ON
**DRAINAGE
DESIGN
FOR
HIGHWAYS**



Rain Check – Before it rains on your project, have you checked the following:

- ✓ Have all of my BMPs been installed correctly per the plans?
- ✓ Has all required maintenance been performed on all of my BMPs?
- ✓ Have sensitive areas been covered with a temporary ground cover to minimize erosion?

Rain Check – After it rains on your project, have you checked the following:

- ✓ Have I recorded my daily rainfall amounts?
- ✓ Have I performed all of the required inspections?
- ✓ Have I performed any required water quality monitoring?
- ✓ Have my BMPs weathered the storm?
- ✓ Do I have any BMPs that require maintenance?
- ✓ Do I have any areas of excessive erosion or sedimentation?
- ✓ Has any sediment left my project site?



For more information on Georgia DOT's Stormwater Management Program, visit:
www.dof.ga.gov
and for concerns or comments on erosion control contact:
espccp@dof.ga.gov

**GEORGIA DOT STORMWATER
MANAGEMENT PROGRAM**

Keeping Georgia's Streams,
Rivers and Lakes Healthy
and Clean



GDOT's Stormwater Management Program

- GDOT is committed to preserving Georgia's natural environment



- The Department is committed to preserving the quality of Georgia's natural environment by minimizing stormwater pollution from our roads and other facilities. Please help us in this effort by practicing what you have learned today at work, at home, and on the road

We can ALL do our part to prevent stormwater pollution!



Stormwater 101:

Preserving the Quality of Our Water



Thank you for your help in keeping our streams, lakes, rivers and oceans free from stormwater pollution!

For more information, please visit the GDOT stormwater website or contact your supervisor about additional resources and training opportunities.



<http://www.dot.ga.gov/BS/Programs/Stormwater>