



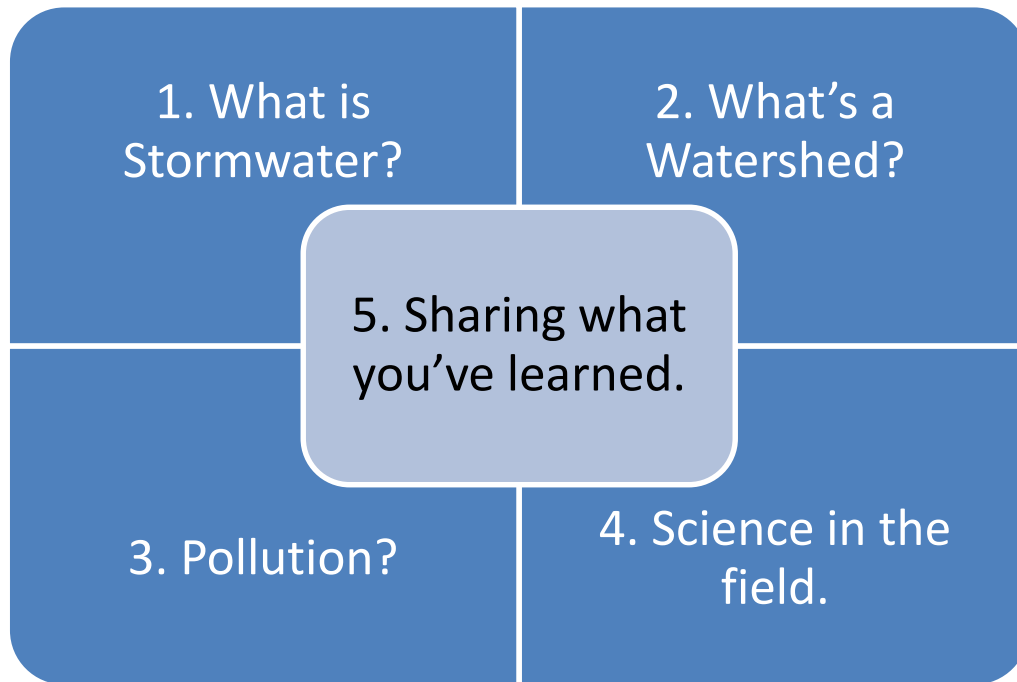
Girl Scouts are Storm Water Smart Girl Guide

Girl Scout Brownie and Junior Edition

Created for the *Girl Scouts of Greater Atlanta*
By the DeKalb County Department of Roads and Drainage

The Girl Scouts are Storm Water Smart patch is here to help you learn about storm water in your community and the role you play in keeping your streams and rivers healthy and clean.

There are five steps to completing this patch:



*"I will do my best to
... use resources wisely
...make the world a better
place."*

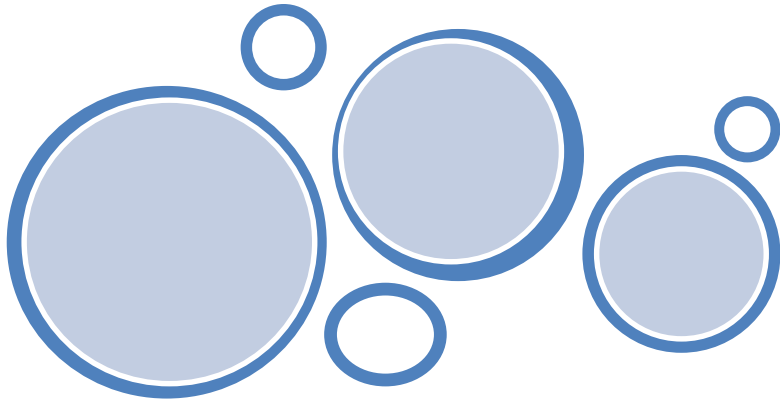
You can do steps 1-3 in any order, but should finish with steps 4 and 5.

It might be helpful to make a **Storm Water Friendly Glossary and Guidebook** to use during this patch. We've included the following words to help you get started, and lots of space for notes and sketches.

- Best Management Practice (BMP)
- Catch Basin
- Combined Sewer System
- Detention Pond
- Erosion
- Fecal Coliform Bacteria
- Hazardous Waste
- Impervious Surface
- Land Use
- Municipal Separate Storm Sewer System (MS4)
- Non-point Source Pollution



- Pervious Surface
- Point Source Pollution
- Retention Pond
- Runoff
- Storm Drain
- Storm Water
- Waste Water
- Waste Water Treatment Facility
- Water
- Water Treatment Facility
- Watershed



1. Water is everywhere, but what is Stormwater?

Choose one of the following:

Learn about Storm Water features in your community.



Learn the differences between a retention pond and a detention pond. Try to find examples of both in your community. Find a storm drain where it is safe to walk around and view from all angles. Talk about how it works and sketch the drain in your guidebook; remember to include parts that might be hard to see, like the catch basin underground.

Learn the difference in Water, Waste Water, and Storm Water.

Visit a Water Treatment and or a Wastewater Treatment facility. Create a list of questions to ask before the visit, some examples are:

- How does water come out of our faucets and where does this water come from?
- How is this water cleaned so it is safe for drinking purposes?
- Where does this water go when it goes down the drain?
- How does this differ from the stormwater in the streets?
- What type of water is treated at a wastewater treatment facility?
- Where does this water come from and where does it go after it is treated?
- Name some things not removed from the wastewater during the treatment process?
- What are combined sewers? Does my area have combined sewers?
- Where does stormwater come from and where does it go after it enters the street drains? Is stormwater treated?



2. What is a Watershed?

Map your watershed. Find a simple topographic map of your community and discuss how the lines show elevation and which areas are higher or lower than others. Use highlighters or light colored markers to mark the boundaries of your watershed, and where the water exits your area. Try to also mark the location of your home or school on the map; is there anywhere else you visit often that you can find?

Discuss with others who lives upstream or downstream of various locations, does everyone live in the same watershed?

Learn about the different types of land use in your watershed. What land uses are the most common? What types of pollution might come from those land uses? Then do one of the following.

Local History. Discuss how your watershed has changed in the last 10 years, 50 years, 100 years, etc. How did the waterways near you affect the beginnings of your community? How has the stormwater been affected by the changes in your community?

Interview community members or older family members who might have seen some of these changes.

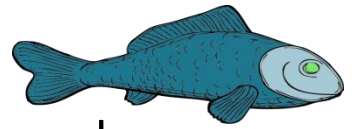
You should start the interview by teaching their interviewee about the idea of a watershed and what you know of the storm water system in your area.

Current Issues. Attend a local meeting, lecture or educational program about a local waterway, or keep track of any newspaper articles or stories they hear on the news, that are related to water quality, storm water, or water infrastructure in your area for a month.





3. There's more than one type of pollution?



Make friends with Fred the Fish and then choose one type of pollution to learn more about.

Erosion and Sedimentation. Define erosion and sedimentation, and compare and contrast pervious surfaces with impervious surfaces. Which were there more of in your community 50 years ago? Which are there more of now? How does the amount of pervious and impervious surfaces affect erosion in your watershed? How might erosion affect the storm water system in your community?

Try to find examples of impervious surfaces, pervious surfaces and erosion in your community. What was causing the erosion, is there a way to stop the erosion? Remember that erosion is a natural part of the weathering process and not always a bad thing!

Hazardous Wastes. Contact your local hazardous waste recycling center and ask if you can visit for a guided tour. Keep in mind different facilities will accept different types of hazardous wastes. Before you visit, create a list of questions to ask at the facility, examples include:

- What are the hazards caused by hazardous wastes entering our waterways?
- Is there a charge to drop off hazardous wastes?
- How much is it?
- List five common hazardous wastes around your house and yard.
- What do you do with them?
- How is a hazardous waste landfill different from a regular landfill?



Be a Pooper Scooper. Pet owners who walk their dogs are responsible for any droppings their pet leaves behind. When pet waste is not picked up, it can be washed into the sewer system by rainfall or melting snow, and travel through the stormwater system into a stream. The pet waste becomes run-off and the bacteria pollute our waterways. In some cities and counties, it is illegal for dogs to run loose without a leash. If no one is walking with a dog, who will pick up after the dog?

Invent a pooper scooper a pet owner could carry along while walking their dog. Be sure it includes a place to hold the pet waste until the owner arrives home or passes by a trashcan. Draw a picture or make a model of your design and label the parts. What is the pooper scooper made of, where would you buy it, and how much would it cost? Where could you advertise your pooper scooper?

4. Girls Do Science!

Choose one of the following.

Arrange to “shadow” a water quality professional while they conduct a monitoring event in the field. Make sure you have some interview questions ready for them about what they are doing and why, as well as how they prepared for this job, and any special training they received in school.

Work with other Girl Scouts in your community to host a water quality monitoring event in conjunction with World Water Monitoring Day, (officially observed on September 18th each year).

If you're feeling Inspired, why not make some Stormwater Art?

Submit an entry to one of the following programs, some might have a fun prize.

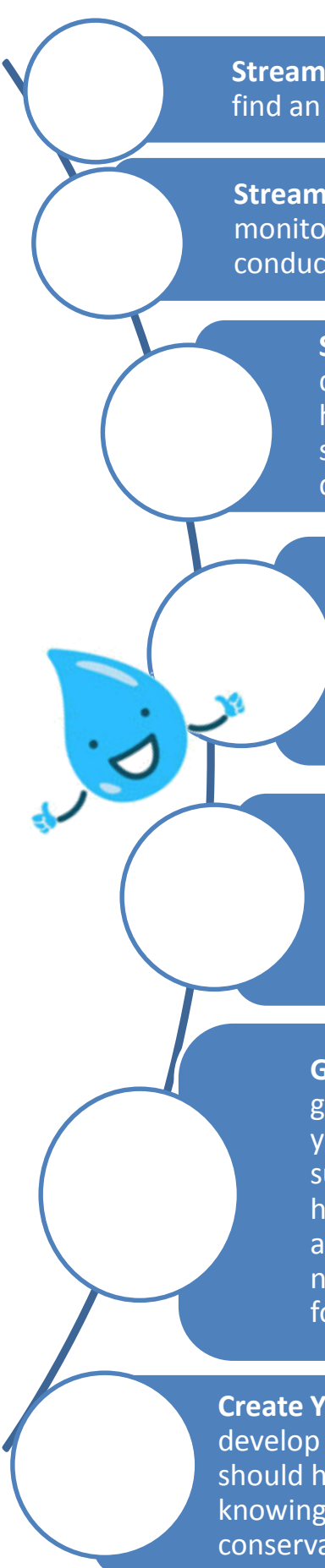
Georgia River of Words Poetry and Art contest, or submit one entry as a group.

A local contest like DeKalb County Department of Watershed's Art Calendar Contest.

One of the three contests held annually by the Metropolitan North Georgia Water Planning District.



5. Sharing your Stormwater! Choose one of the following.



Stream Clean-Up Event. Participate in a stream clean-up day, a good place to find an event is through Rivers Alive.

Stream Monitoring. Adopt a stream reach near you and conduct routine monitoring, share your findings in your community. Monitoring should be conducted 4-12 times a year, depending on the type of monitoring conducted.

Storm Drain Marking. Participate in a storm drain marking project, different communities use stencils, plaques or paint. Create door hangers or pamphlets to hand out to homes or businesses near your storm drain, sharing information you think is important about storm drains.

Planting Projects. After learning about erosion, find out if there are any stream bank restoration projects occurring in your area. Participate in an ongoing project, or find a community resource that can help you identify another space in your community that would benefit from the planting of native species.

Install a BMP. Contact your local stormwater managing group; this might be the city, county, or a third party. Try to find out if they have any upcoming projects you could assist with. For example, do they have any rain barrels that can be painted and or installed? Are they doing any rain garden planting soon?

Green Cleaning Event. Research "green cleaning" methods and or "green gardening" methods and create a "wheel of alternatives" to pass out in your community, to help people switch away from hazardous wastes. Be sure to include information about where to properly dispose of hazardous wastes and or how to properly store those you might have around your home. If you have a hazardous waste recycling center nearby, find out if they would be willing to let you host a drop off event for the community.

Create Your Own. Based on something you've learned from a previous activity, develop your own community service and education project. Your project should help the community learn about storm water, watersheds, and or why knowing about water quality is just as important as knowing about water conservation.

My Stormwater Glossary, Notes and Sketches

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