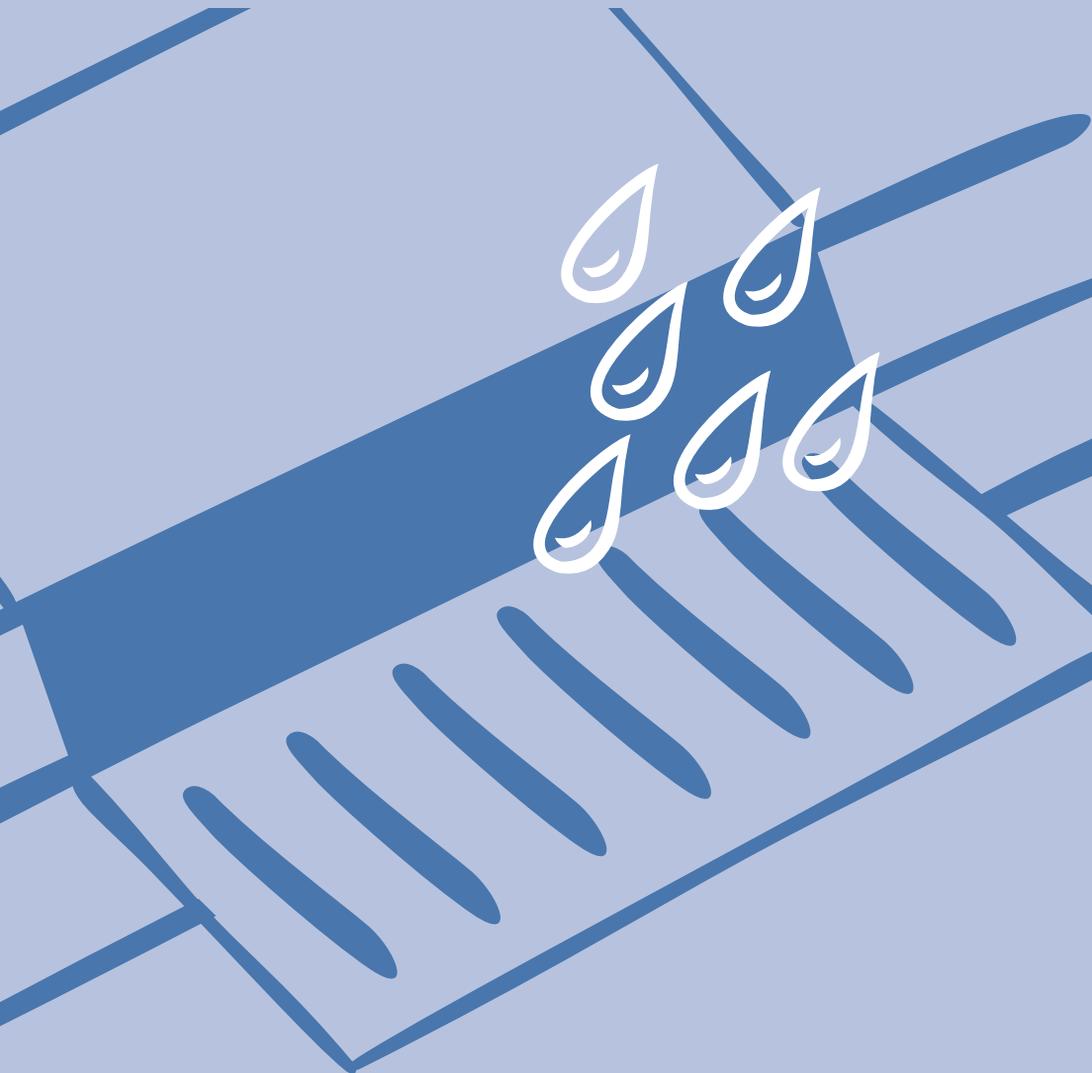


Only Rain Goes Down The Storm Drain:



*The Citizen's
Guide to Pollution Prevention*

Introduction

Ever wonder where
the rain goes
when it storms?



Rain that washes over the streets, lawns and parking lots flows directly into our rivers, lakes and streams.

This water is never cleaned and can pollute our surface waters with things like animal waste, litter, used oil, fertilizers and soil.



So, who's responsible
for making sure
the water we drink
is clean?

We *all* are.

And here's the best part,
it doesn't require a lot of effort –
just common sense.

Water 101

To understand how easily we can affect our water, it is helpful to understand how water collects.

Water runs downhill and drains into streams, lakes, and rivers. This is known as a watershed. We all live in one.

What does that have to do with you?

It means stopping pollution before it begins in your own backyard.

How could what you do in your yard affect water quality?

At any point along its journey, rain or runoff can be tainted by things like illegal dumping, or the overuse of pesticides.

That is why it is important to know what you can do to help prevent pollution.



MAP OF TWO RIVER BASINS

Water 101

A watershed is an area of land that all drains to a single body of water. Smaller watersheds are part of bigger watersheds. Watersheds are made up of headwaters; also know as the beginning or top of a watershed, and tributaries, or smaller “fingers”, flowing into the main channel.

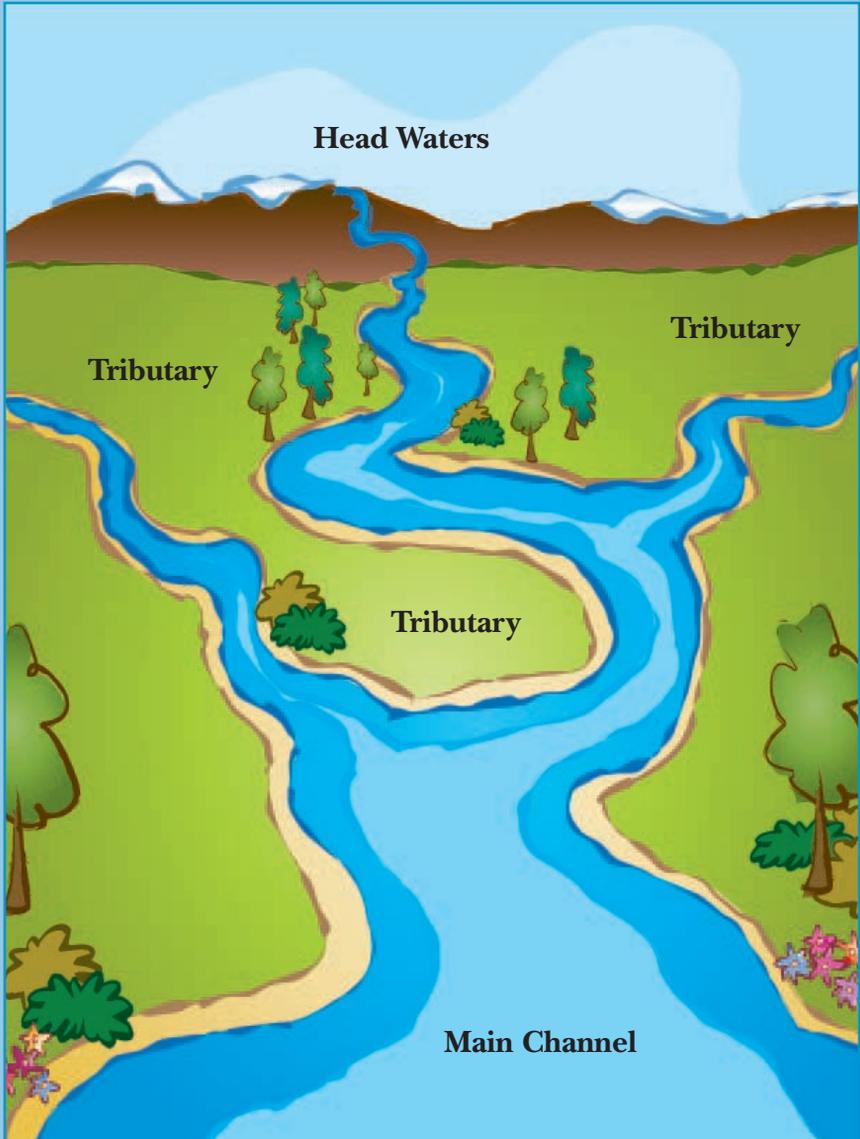
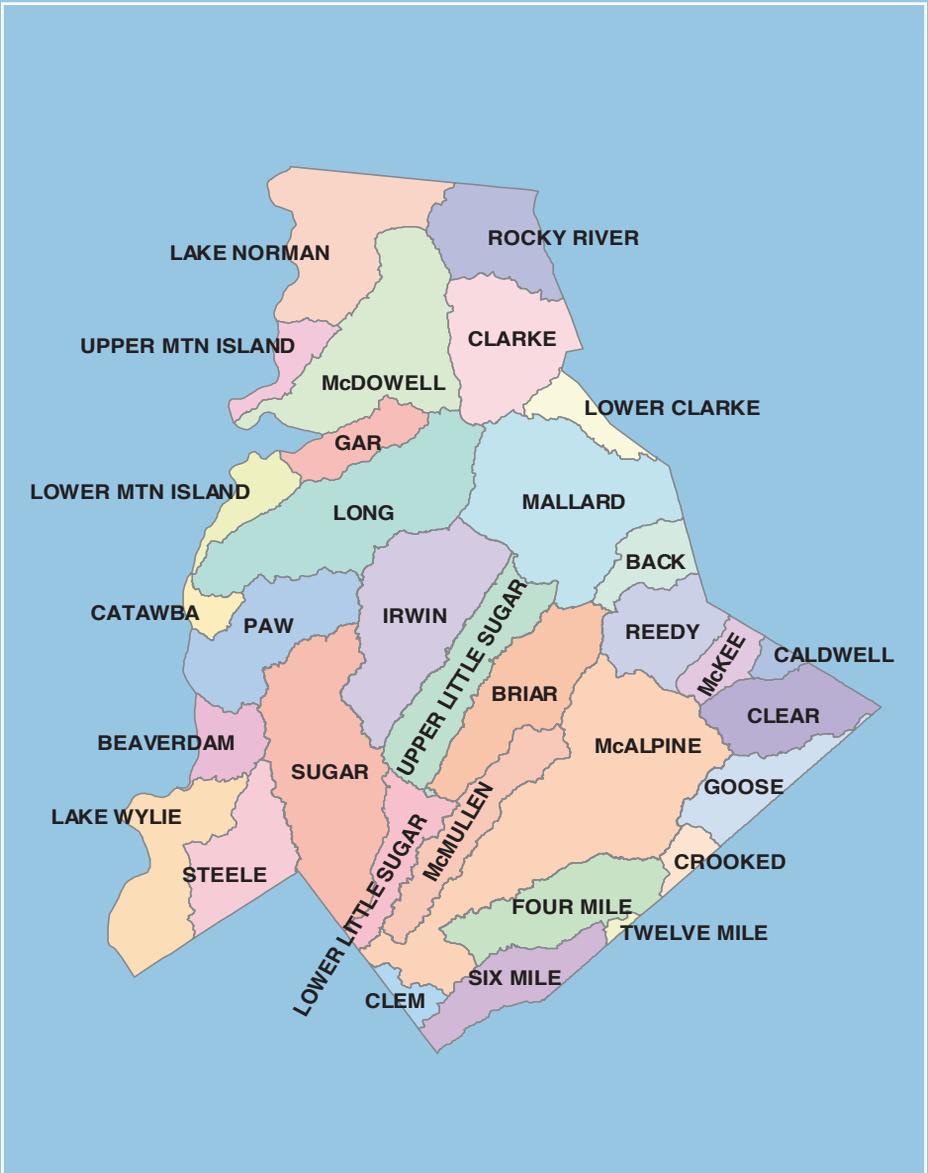


DIAGRAM OF WATERSHED

MAP OF THE SUBWATERSHEDS



You Are What You Drink

Mecklenburg County is bordered on the west by the Catawba River and three lakes, Lake Norman, Mountain Island Lake and Lake Wylie. Nearly 258,000 acres (or 74%) of land in Mecklenburg County drains through the sub-basin watersheds (like Little Sugar Creek) to the Catawba River and the three lakes. Besides providing countless recreational opportunities, the Catawba River and the three lakes are sources of water for millions of people in the region.

Lake Norman

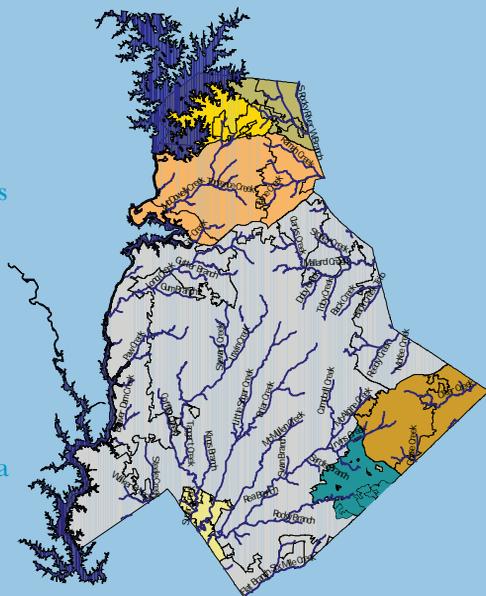
- Located along the northwestern border of Mecklenburg County
- Largest man-made lake in North Carolina
- Drinking water source for Mooresville, Lincoln County and Mecklenburg County
- Approximately 20 million gallons of water are withdrawn daily to serve Mecklenburg County
- Supports a wide variety of aquatic life, including large fish populations
- Total surface area is 32,510 acres

Mountain Island Lake

- Smallest of the three lakes bordering Mecklenburg County
- Drinking water source for Gastonia, Mount Holly and Mecklenburg County
- Approximately 80 million gallons of water are withdrawn daily to serve Mecklenburg County
- Total surface area is 2,788 acres

Lake Wylie

- Located along the southwestern border of Mecklenburg County
- Very long lake with a surface area of 12,139 acres
- Drinking water source for Belmont and Rock Hill



What's The Difference?

Sanitary Sewer System

- Water in this system is treated at wastewater treatment plants.
- Water in this system comes from sinks, toilets, showers, washing machines, etc
- This system is made up of a complicated system of pipes that all lead to a wastewater treatment plant.
- Water is treated through an intricate process before being released into our local creeks.



Storm Drainage System

- Water in this system is never treated.
- Water here should only come from the clouds as rain.
- This system is made up of man-made storm drains, pipes, ditches, and natural streams, creeks and lakes.



Did you know?

- Heavy rains cause storm water runoff which picks up toxins on the ground.
- Toxins include excess fertilizers, herbicides and insecticides, motor oil, car battery acid and other harmful chemicals.

Going Grease Free

Liquefied animal fats, greases and vegetable oils are often poured into drains, but they eventually solidify and clog pipes. That causes sewer lines to back up and leads to manhole overflows and other sewer spills that threaten the environment. Most of the sewer lines in Mecklenburg County are located next to creeks and streams. Any sewer overflow impacts the habitat, wildlife, and water quality of the local streams.

You can help!

Please do not dispose of cooking grease or other oils and greases down drains. Instead:

- Freeze animal fats in a can and dispose of in a trash receptacle
- Mix liquid vegetable fats with an absorbent material, such as cat litter or coffee grounds, and place in a lidded container and dispose of in a trash receptacle

Often one of the biggest challenges is finding the sewer overflows and getting them repaired quickly to minimize environmental damage.

This is where you can help.

If you see sewage overflowing from a manhole or broken pipe or if you detect foul sewer odors coming from a creek, unusual discoloration of surface waters or stressed aquatic life, contact the Mecklenburg County Water Quality Program at (704) 336-5500.

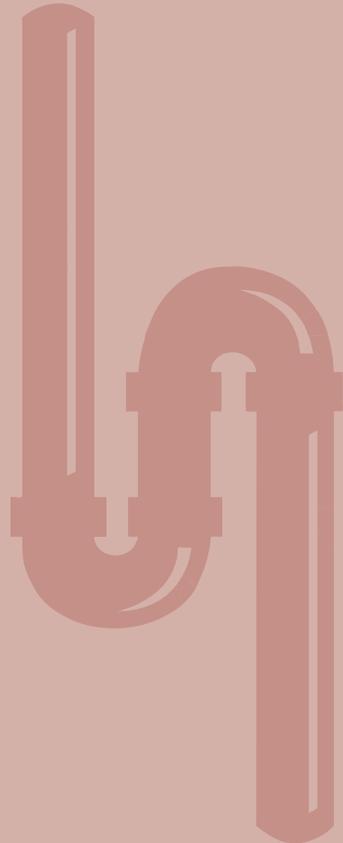


Household Hazardous Waste

What is household hazardous waste (HHW)?

Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be “household hazardous waste” or “HHW.” Products, such as paints, cleaners, oils, batteries, and pesticides that contain potentially hazardous ingredients require special care when you dispose of them.

Improper disposal of household hazardous wastes can include pouring them down the drain, on the ground, into storm sewers, or in some cases putting them out with the trash. The dangers of such disposal methods might not be immediately obvious, but improper disposal of these wastes can pollute the environment and pose a threat to human health.



Did you know?

- Americans generate 1.6 million tons of HHW per year.
- The average home can accumulate as much as 100 pounds of HHW in the basement and garage and in storage closets.
- One quart of used oil can pollute an acre of surface water.

To find a recycling center near you, visit www.wipeoutwaste.com.

Household Hazardous Waste

Household Hazardous Wastes Chart

Household Hazardous Wastes	Alternative
Air Fresheners	Simmer whole cinnamon sticks, cloves, and allspice; Leave out a shallow bowl of vinegar; Odors can be absorbed by placing baking soda at the source of the problem
Batteries	Use nickel-cadmium rechargeable batteries whenever possible
Flea Collar	Talk with your veterinarian about natural flea control methods
Bleach	Natural oxygen safe bleaches are commercially available (found primarily in the health food store marketplace), and are based on hydrogen peroxide.
Rug & upholstery cleaner	Mix 3 tbsps. of borax with half of quart of warm water in a spray bottle; spray on stained area and wipe with a damp sponge
Glass & window cleaners	Make a great all-purpose window cleaner by combining 1/4 cup vinegar, 1/2 teaspoon liquid soap or detergent, and 2 cups of water in a spray bottle. Shake to blend.
Oven cleaners	Wash after each use with a mix of baking soda and warm water; for tough stains leave baking soda on dampened oven overnight and scrub the next day; Do not use on self-cleaning ovens
Drain cleaners	Prevent clogs; Pour boiling water down the drains twice a week; Always use the drain strainer; Slow drain pour 1 cup baking soda followed by 3 cups boiling water; repeat until clear.
Furniture polish	1/4 cup vinegar plus a few drops oil (olive or liquid jojoba wax)

Household

	Household Hazardous Wastes	Alternative
Auto	Gasoline	Do not store in areas that allow this material to mix with rain. Properly dispose of excess by taking it to a full-service recycling center.
	Batteries	
	Used motor oil	
	Antifreeze	
	Automotive fluids (transmission, brake, etc.)	
Workshop	Paint	Water-based paints instead of oil-based; Non-aerosol paints
	Turpentine and paint thinners	Use water-based paints and avoid unnecessary brush and roller cleanup
	Wood stains	Water-based stains instead of oil based
Yard	Pesticides	Introduce predator insects in your yard; apply soapy water to leaves and rinse well
	Fertilizers	Compost and Grasscycling
	Bug sprays/killers	Ants: Red chili powder at point of entry; Mosquitoes: remove any standing water outside; Burn citronella candles/oil;

Whenever you have leftover products, carefully transport household hazardous wastes to collection centers.

Car Talk

Most of us don't think of our car as a source of water pollution– but it is. The reality is vehicles are a necessity today, and we don't have a lot of choice about that. However, we can be more environmentally responsible and choose to care for and repair our vehicles in a water friendly way.

Car washing is a pollution problem because many metals and automotive fluids are washed off along with the soapy water. All of these pollutants travel down the gutter then enter the storm drains and flow directly into our waterways.

- Take your car to a professional car washing center
- If you wash at home, wash on the lawn or other natural area.
- Limit runoff by using a bucket, rag and control nozzle on your hose.



- Drain motor oil in a reusable, re-sealable container like a milk jug.
- Never mix used oil with other used automotive fluids.
- Don't even think about dumping used oil in the trash or down a storm drain.
- Take used oil & filters to a recycling center.
- Visit www.wipeoutwaste.com for a location near you.



Many automotive fluids such as, motor oil, anti-freeze, transmission fluids, de-greasers and solvents are hazardous wastes. They are harmful to you and me and toxic to our environment. No one wants to swim in them. So, make sure to prevent them from entering our storm water drainage system.

Scoop The Poop!

Pet waste left on sidewalks, streets, yards or other open areas can be washed away and carried by rainwater into storm drains to nearby rivers, lakes and streams and cause many problems.

Pet waste contributes to bacterial contamination of our rivers, lakes and streams.

Pet waste contains harmful bacteria such as E. Coli and fecal coliform. Waters that contain a high amount of bacteria such as E. Coli are unfit for human contact.

A single gram of pet waste contains an average of 23 million fecal coliform bacteria, some of which can cause disease in humans.

What Can You Do?

- Pick up after your pet every single time.
- Check with your pet store for products that make picking up easy.
- Throw away pet waste in the garbage; never wash it into the gutter or storm drain.
- Carry extra bags in your car, so you are prepared when you travel with your pet.
- Get involved in a pet group and remind others to pick up after their pets.



Did You Know?

- In 2001, there are an estimated 61.5 million dogs in the United States.
- That's 6.3 billion pounds of poop per year!
- It would take a scoop 300 feet wide and 800 feet deep to dispose of all that poop!

Clean Streams, Green Lawns

Lawn maintenance can make your house and yard more beautiful. But, what we do to maintain our lawns can effect the environment around us.

When fertilizers and pesticides are over-used or sprayed on driveways, sidewalks, etc. they are no longer doing the job they were intended for. Since the plants aren't using them, they end up running off into the storm drain system.

Pesticides and fertilizers can destroy aquatic habitats with algae blooms, vegetation degradation and fish kills.



- Do not apply fertilizers before a heavy rain.
- Use slow-release fertilizers. They are less likely to wash off of lawns or down the storm drain because they are not water-soluble.
- Maintain a vegetated buffer between your lawn and the street or driveway. Consider native plants in your buffer for long-term lower maintenance.



Sediment is a major contributor to storm water pollution. Re-plant bare areas to avoid soil erosion.



Adjust sprinklers so that you're not watering the street or sidewalk. It will conserve water and reduce runoff.



Good Lawn Housekeeping Tips

- Sweep up yard debris instead of washing it away.
- Increased runoff leads to increased storm water pollution. Avoid over-watering your yard and keep the water off the streets and sidewalks.
- Consider alternatives to pesticides and fertilizers. There are many natural ways to get rid of pesky pests.
- Blow leaves and grass clippings back into your yard instead of leaving them in the street to wash down the storm drain. Insist that your landscaper do the same.
- Soil testing kits are free. A soil test report gives you precise nutrient requirements for the soil type and plant type in your situation. Think of the money you'll save by only adding the fertilizer you really need! Visit www.mecklenburgconservation.com to receive a kit.
- Turn off your sprinkler system when it's raining. Your lawn only needs an inch of water a week including any rain.
- Keep pesticides and fertilizers stored in areas that are covered to avoid mixing them with rain.

Yard Waste

In the autumn, the leaves fall from the trees. In the summer, there are grass clippings from mowing the lawn. In the spring, weeding the garden produces a lot of waste. In the winter, ice storms bring down tree limbs.

Do you know what to do with this yard waste?

There are many ways to dispose of yard waste but dumping it down storm drains or in creeks is *never an option*.



- Use a compost bin to turn yard waste into a practical gardening product
- Chop limbs into fire wood for the winter
- Take yard waste to the curb for collection

For more info visit www.wipeoutwaste.com

Limbs

Limbs must be no longer than 5 feet in length and no larger than 4 inches in diameter. Limbs should be separated in piles small enough for one individual to handle and weigh no more than 75 pounds. Limbs should not be tied. Limbs may also be placed in containers for collection. Limbs placed at curbside for collection resulting from a commercial landscaping service will not be collected.

Brush

Brush should be no longer than 5 feet in length. Separate brush into piles that are small enough for one individual to handle. Brush and limbs may be combined as long as they meet size requirements.

Logs

Logs fewer than 4 inches in diameter will be collected. Stumps will not be collected.

Leaves

Leaves must be placed in untied plastic bags for collection or placed in uncovered trash cans. Cans or plastic bags should not weigh more than 75 pounds each.

Grass clippings

Grass clippings must be placed in tied or untied clear plastic bags for collected or placed in uncovered trash cans. Cans or plastic bags should not weigh more than 75 pounds each. Grass clippings can be mixed with other yard waste such as leaves and trimmings.



Excessive amounts of yard waste (requiring more than 20 minutes to collect) will require more than one collection day. Any bags remaining will be collected on your next collection day.

Education ~ Get With The

Stormy says...

Stormy is the Storm Water Services turtle.

He helps the folks at Storm Water Services teach the local citizens about storm water pollution.

Visit his website to play games and learn more about storm water at <http://stormy.charmeck.org>.



Big Sweep

An event for the whole community to get involved by cleaning our streams takes place the first Saturday in October.



Water Watchers

Report water pollution problems by calling 704-336-5500.

Program

Adopt-A-Stream

A program for individuals, families, schools, organizations and businesses to “adopt” sections of our local streams.

Volunteers remove trash and debris from the stream a minimum of twice a year and report stream and pollution conditions.



Rain Barrel Sales

Quarterly rain barrel sales are held so that citizens can take advantage of saving rain to use on plants and gardens.

Storm Drain Marking



Volunteers are asked to mark storm drains in neighborhoods, around schools and near businesses with the message “This Drain is Only for Rain.”

Who To Call

If you have a question or water quality tip that you'd like to share, give us a call at [704-336-5500](tel:704-336-5500).

We've included some other numbers you might find useful as well.

Storm Water Pollution Information

[704-336-5500](tel:704-336-5500)

Illegal Storm Drain Dumping

[704-336-5500](tel:704-336-5500)

Storm Water Drainage Problems

311

Sewage Overflow

311

Composting Info

[704-336-5359](tel:704-336-5359)

Websites of Interest

stormwater.charmeck.org

www.wipeoutwaste.com

www.mecklenburgconservation.com

curbit.charmeck.org

greasefree.charmeck.org

cleanstreams.charmeck.org

stormy.charmeck.org



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