



6th Edition

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Of Special Interest:

- Enviro-friendly lawn care practices
- Who scoops the poop?

Remember . . .

POLLUTANTS THAT ENTER HERE:



END UP HERE:



A Stormwater Guide for Homeowners

June 2020

Please, Don't Feed the Wildlife!



Raccoons and other wild animals are cute, but their feces adds to the bacteria problem in urban storm drainage systems.

Folks are drawn to the cute little faces and beautiful fur of many wild animals, and because of this, they often make the mistake of putting food out for the critters. While this apparent “act of kindness” may be well-intended, feeding wild animals can often lead to unintended consequences, some of which are listed below:

- Encourages a wide variety of wild critters to visit your home, some of which you and your pets may not like to have around, such as skunks, foxes, and bears.
- May spread disease, such as rabies, which puts you and your pets at risk should you come into direct contact with the affected animal.
- May increase the aggressiveness of the critters, because they will lose their fear of humans.
- May cause health issues for the wild animals, because neither human nor pet foods have the necessary nutrients that wild animals need.
- May increase bacteria levels in the local storm drainage system, because their feces will be carried in stormwater runoff from lawn areas to the nearest drainage system, which discharges, untreated, into local receiving waters. (Note that wooded areas provide a conducive environment for feces to decompose in natural fashion, well away from any drainage system.)

PLEASE . . . feed your pets inside and make sure that your garbage cans have lids that are kept securely closed or locked. The critters will thank you, so will the fish. ■

Lawn Care for Clean Stormwater

Most homeowners like to have a beautiful lawn, and they are willing to go to great lengths to achieve one. Their “greening-up-the-lawn” activities may include tilling, aerating, seeding, liming, fertilizing, and watering. Unfortunately, lawn chemicals (like fertilizers) often wash off of the lawn area by way of stormwater runoff, and find their way to the nearest creek, stream, or river. Such chemicals are pollutants, and they not only contaminate the receiving waterways, they may kill the fish and other aquatic creatures that live there.

So, what is the conscientious homeowner to do? Follow these helpful tips to achieve a lush, green lawn while also keeping the stormwater runoff clear and pollutant-free:

LAWN ESTABLISHMENT

- ◊ Choose the right type of grass seed for this region’s climate and soil type.
- ◊ Cover all newly-seeded bare areas with straw mulch; this protects the seed from birds and holds the moisture in place, which speeds germination.
- ◊ Provide regular but light watering to irrigate the seed, 2 - 3 times per day. Do not over-water such that runoff is created.
- ◊ As seedlings start to emerge, gradually decrease watering to once or twice per week.
- ◊ STAY OFF the young grass.
- ◊ DO NOT mow the new grass until it is about 4-1/2 inches tall.
- ◊ If any bare areas remain, re-seed, apply fertilizer, cover with straw mulch, and repeat the watering process until grass is established.
- ◊ Depending on the time of year, you may have to wait until the next growing season to carry out the steps provided above.



LAWN MAINTENACE

- ◊ Once you start mowing, only remove about 1/3 of the leaf blade. Note that most homeowners cut their grass too short, which stresses the lawn.
- ◊ Leave your grass cuttings on the lawn, as they provide the soil with nitrogen as they decompose.
- ◊ Water deeply but less frequently.
- ◊ Have a soil analysis done before applying any fertilizers or soil amendments; this will ensure that your lawn gets the right amount of only those products that it needs, and it will prevent over-fertilization.

EROSION PREVENTION

- | | |
|---|--|
| ◊ Encourages infiltration of stormwater runoff. | ◊ Reduces the velocity of stormwater runoff, which minimizes erosion. |
| ◊ Filters sediment from runoff. | |
| ◊ Holds the soil in place during rain storms. | ◊ Protects downstream properties from sedimentation, which helps to improve water quality in nearby creeks and streams. This makes for happy fish. ■ |
| ◊ Absorbs raindrop energy, which minimizes erosion. | |

~ MAINTAINING A THICK LAWN = PREVENTING EROSION = KEEPING STORMWATER CLEAR = HEALTHY CREEKS = HAPPY FISH ~

What’s the Buzz?



It’s finally summer! After the long months of being cooped up due to the COVID-19 pandemic, most folks are ready to be outside. And with the warmer weather comes many fun outdoor activities like backyard cookouts, scenic hikes, pool parties, boating and kayaking, fishing, camping, mountain biking, walking along the greenway, sightseeing, and more.

To get the most out of these fun things to do, remember to put on your bug repellent! Pesky mosquitoes love the summer time, too, and they are out in force. While it might seem like “no big deal” to get a mosquito bite or two, these insects can transmit a variety of dangerous diseases, including West Nile virus, Dengue fever, Eastern and Western equine encephalitis, malaria, Chikungunya virus, and Zika virus, among others, and they can infect dogs with heartworms. Note that the West Nile virus has been detected in all of the lower 48 states; most of the other listed diseases are not prevalent in the United States but can be contracted when travelling overseas.

For specific information on these and other mosquito-borne diseases, refer to the Center for Disease Control and Prevention website: <http://www.cdc.gov/Features/stopmosquitoes/index.html>

Protect Yourself! Cover up, and wear insect repellent when spending time outdoors. ■

Top 10 Ways to Keep Stormwater Clean and Clear

Stormwater does NOT go to a treatment plant, it runs straight off of the land surface and travels via roadways, ditches, underground pipes, and sheet flow directly to the nearest waterway, carrying with it all of the pollutants that it picks up along the way; things like lawn fertilizers, loose sediment, pet waste, grass clippings, and trash. For this reason, it is vitally important to take care in what we dump, spill, pour on the ground, or throw ‘overboard.’

Here are 10 easy ways for homeowners to do their part in keeping stormwater runoff **CLEAN** and **CLEAR**.

1. Direct gutters to lawns and away from paved surfaces to prevent runoff.
2. Compost yard wastes like leaves and grass, or bag them and put them out with your trash. Never dump them in drainage ditches or waterways.
3. Use a mulch mower to finely chop grass clippings. This promotes a healthier lawn, requiring less fertilizer.
4. Pick up after your pet; don’t let pet waste wash into storm drains.
5. Never pour anything into the storm drain, as it goes untreated to the nearest waterway.
6. Follow fertilizer directions and sweep excess off of driveways and sidewalks to keep it out of storm drains.
7. Do not dump wastes containing PCBs (polychlorinated biphenyls), as these chemicals tend to attach to sediment, which gets carried by stormwater to nearby waterways. For more information about PCBs, see <https://roanokecountyva.gov/1648/Stormwater-Public-Education-Documents>
8. Have your septic tank pumped and septic system regularly maintained. This will help extend the life of your system and prevent groundwater contamination.
9. Use a drip pan when changing your vehicle’s oil, and use kitty litter or a similar absorbent to clean up any spills. Sweep it up, put it in the trash.
10. Do not litter, at home or elsewhere. ■

- Limit Mosquito Breeding by:
- Cleaning gutters
 - Dumping bird baths, trash can lids, wading pools, and pottery twice per week
 - Emptying saucers under flower pots every two days
 - Replacing water in outdoor pet bowls every two days

- DID YOU KNOW?
- A spill of just one gallon of oil can contaminate a million gallons of water!
 - A single pint of oil released into a creek or stream can cover one acre of surface water and seriously damage aquatic habitat.



STORMWATER

Do Your Part: *Keep it Clear*

Only Rain Down the Storm Drain

IT IS ILLEGAL TO DISCHARGE ANYTHING INTO THE STORM DRAINAGE SYSTEM EXCEPT STORMWATER AND THE APPROVED DISCHARGES LISTED BELOW . . .

Roanoke County, like other localities across Virginia, is required by state law to have a program in place to reduce the discharge of pollutants to Virginia's receiving waters, which includes streams, rivers, bays, and even the Atlantic Ocean.

Because of these requirements, the County adopted an Illicit Discharge Ordinance that makes it illegal to discharge anything into a storm drainage inlet or onto the ground where the discharge may enter a storm drainage inlet, **except for the following:**

1. Discharges or flows covered by a separate individual or general VPDES or state permit for non-stormwater discharges, issued by the Virginia Department of Environmental Quality (DEQ); or
2. Non-stormwater discharges or flows, as listed below:
 - a) Water line flushing, managed in a way to avoid an in-stream impact;
 - b) Landscape irrigation;
 - c) Diverted stream flows;
 - d) Rising groundwater;
 - e) Uncontaminated groundwater infiltration;
 - f) Uncontaminated pumped groundwater;
 - g) Discharges from potable water sources;
 - h) Foundation drains;
 - i) Air conditioning condensation;
 - j) Irrigation water;
 - k) Springs;
 - l) Water from crawl space pumps;
 - m) Footing drains;
 - n) Lawn watering;
 - o) Individual residential car washing (this exemption does not include commercial or business car washing activities);
 - p) Flows from riparian habitats and wetlands;
 - q) De-chlorinated swimming pool discharges;
 - r) Street wash water;
 - s) Discharges or flows from firefighting activities;
 - t) Discharges from non-commercial fundraising car washes IF the washing uses only biodegradable, phosphate-free, water-based cleaners; or
 - u) Other activities generating discharges identified by DEQ as not requiring VPDES authorization.



Pollutants that enter the storm drainage system end up in the nearest waterway.

Report Illicit Discharges on the County's website at <http://www.roanokecountyva.gov/index.aspx?NID=306>. Click on "Report Illicit Stormwater Discharges" and provide a specific location (address of nearest residence) and any other appropriate information. The County will investigate such reports to determine if an illicit discharge does exist, and it will work with the violator to correct the issue.

To learn more about the harmful effects of illicit discharges on the area's receiving waters, see the County's various public education videos, including *Illicit Discharge, Detection and Elimination - A Grate Concern*, at the following web-page: <http://www.roanokecountyva.gov/index.aspx?NID=1598>. ■

Maintaining the Storm Drainage System - Who Does It?

The County often receives assistance requests from residents regarding the storm drainage system, especially when it appears to be malfunctioning. The question always comes down to "Who is Responsible for its Maintenance?" The answer is rarely simple! There are potentially several responsible parties, as described below:

- **Virginia Department of Transportation (VDOT)** - maintains all public roads throughout the County, which includes the stormwater infrastructure (pipes, drainage inlets, roadside ditches, etc.) in the road and within the road right-of-way.
- **Roanoke County, Division of Stormwater Operations** - maintains some of the stormwater infrastructure that is located in public easements, usually located along rear and side yard property lines.
- **Homeowner Associations** - maintain stormwater infrastructure in private roads and in common areas within their specific subdivision, including stormwater management facilities (like dry or wet ponds) that serve their subdivision.
- **Property Owners** - maintain some components of the stormwater infrastructure that are physically located on their property (such as driveway culverts or drop inlets). Note that property owners are responsible to provide for tree and bank maintenance alongside any natural streams or creeks that cross their property.

If there are any doubts about the responsible party for the particular issue about which you are concerned, please call the County. Important contact information is provided below:

For Drainage Issues, call:

Butch Workman
Stormwater Operations Manager
540-772-2037

For Illicit Discharge Concerns or MS4 Permit Questions, call:

Cynthia S. Linkenhoker, MPA
Stormwater Program Manager
540-772-2036

For Engineering Questions, call:

David Henderson, P.E.
County Engineer
540-772-2083

DRAINAGE TIP

The Virginia Department of Transportation (VDOT) is responsible for maintaining all public roads throughout the County, including the stormwater infrastructure (pipes, roadside ditches, drainage inlets, etc.) in the road and within the road right-of-way.

FREQUENTLY ASKED QUESTIONS

Who do I call if I have a drainage problem at or near my home?

- ◊ For clogged roadside drainage pipes, ditches, or drainage inlets, call the Virginia Department of Transportation (VDOT) at 1-800-367-7623 or report the problem at <https://my.vdot.virginia.gov/>
- ◊ For clogged side or rear yard public drainage pipes, ditches, or drainage inlets, call Butch Workman with Roanoke County at 540-772-2037 or report the problem at <https://roanokecountyva.gov/FormCenter/Report-A-Concern-14/Report-A-Concern-71>

The creek is overflowing onto my property, what should I do?

- ◊ This is an act of nature, and it is not regulated. You may contact Roanoke County for clarification.

My neighbor's sump pump is discharging water onto my property.

- ◊ This is a civil matter between you and your neighbor.

A tree fell over on my creek bank.

- ◊ As the property owner, you are responsible to remove downed trees on your property. ■



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This publication is a public service message brought to you by Roanoke County, Department of Development Services. As regulated by federal and state laws, the County's Stormwater Management Program must include public information strategies to encourage the prevention of stormwater pollution. For more brochures or information on ways to prevent stormwater pollution, please contact the County's Department of Development Services, Division of Stormwater Management, at 540-772-2065.

**Cute?
You betcha. . .**

**But, did you know?
I need to poop outside, and my
peeps have to scoop it up.**

**So please, be a good peep, too!
Scoop up your pet's poop.
Throw it in the trash.
Give yourself a "high five!"**

THANKS

From me, and all my cuteness.

Süße

