



## Keep it on the Lawn

Fall is a good time to do some lawn maintenance and prepare for next spring's growing season. One of things you can do to improve your lawn and water quality this season is to keep the leaves on the lawn!



### Best Management Practice: Mulch-Mowing

The City of Roanoke encourages property owners to implement "Best Management Practices" to improve water quality and decrease runoff from lawns. One of these practices is known as "[Mulch-Mowing](https://pubs.ext.vt.edu/430/430-521/430-521_pdf.pdf) [https://pubs.ext.vt.edu/430/430-521/430-521\_pdf.pdf]."

Mulch-Mowing essentially acts like a "food processor" for lawns by chopping grass clippings and leaves many times before depositing the bits right back into the turfgrass. Mulch-Mowing not only helps to keep turfgrass lush, green, and healthy, but also saves time and energy while reducing the load on stormwater systems.



While dedicated mulching mowers may work best, virtually any rotary mower will do the job with the installation of a mulching blade or mulching kit. Just set the mower to 3" cutting height or greater and mow as usual every week. The mulched material decomposes and incorporates new organic matter into the topsoil, reducing water and fertilizer needs over time.

***Mulch-mowing helps Mother Nature keep your lawn lush, green and healthy and saves you time and labor.***

Fewer leaves in the street mean **better environmental stewardship:**

- Leaf piles may clog the storm drain system causing flooded streets & potentially flooded properties.
- Leaf pile storm water runoff dumps phosphorus leachate into the Roanoke's streams and rivers potentially decreasing oxygen availability for fish and other aquatic life.

Fewer leaves in the street mean **cleaner, safer, & more aesthetically pleasing streets:**

- Leaf piles may become dangerous unseen obstacles if workers have to plow an early season snow.
- Leaf piles may become slippery when wet, creating potential hazards for pedestrians.



### Healthy soils can soak up stormwater

Mulch-mowing adds needed nutrients to your soil. When soils are healthy, they soak up stormwater runoff. A technique called soil restoration, enhances compacted soils to improve their porosity and nutrient retention. Soil restoration improves soil structure by increasing porosity for root growth and microbial activity, and retain more water and nutrients for plant uptake.

You can enhance your soil's health by adding compost [[https://pubs.ext.vt.edu/426/426-703/426-703\\_pdf.pdf](https://pubs.ext.vt.edu/426/426-703/426-703_pdf.pdf)]. Composting leaves and grass clippings with other organic matter enhances soil structure, infiltration, root growth, and water-holding capacity and reduces soil compaction.

Increasing soil porosity can reduce runoff approximately 30% to 50% when used with other practices throughout a watershed, such as rooftop disconnections and grass channels. You can learn more about reducing stormwater runoff in the Roanoke Stormwater Ideabook [<http://www.roanokeva.gov/DocumentCenter/View/347>].

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### Only Rain Down the Storm Drain

The City of Roanoke is serious about improving the quality of stormwater entering our creeks, streams, and rivers. Citizens have a role in this effort by helping to ensure that only rainwater enters the City's stormwater drainage system. Curbs, gutters, ditchlines and other stormwater conveyances are all considered portions of the City's stormwater drainage system.

This system is designed for local flood control and moves stormwater during rain events into the nearest local waterway. The stormwater that enters this system is not filtered or treated in any way and flows through the pipe network before discharging into the nearest creek or stream. The mowing or blowing of grass clippings and leaves into the City's stormwater drainage system is not only an "illicit discharge" but also considered stormwater pollution because this practice can impair water quality as well as restrict water flow and/or create localized flooding.

### Report an illicit discharges!

Residents who observe illegal dumping or observe pollutants within waterways or storm drains should contact the City of Roanoke, Stormwater Division at [stormwater@roanokeva.gov](mailto:stormwater@roanokeva.gov) or by calling 540-853-5900.



### **Saving Water = Saving Energy**

The collection, distribution, and treatment of drinking water and wastewater nationwide consumes tremendous amounts of energy and releases approximately 116 billion pounds of carbon dioxide (CO<sub>2</sub>) per year--as much global warming pollution each year as 10 million cars. Providing household with safe drinking water and wastewater disposal is an energy-intensive process. Nationwide, about 4 percent of power generation is used for water supply and treatment. Reducing water consumption saves the energy. Reducing energy saves water.

### **Stay in stream**



Become a Citizen Water Quality Monitor with Roanoke Stormwater and Clean Valley Council [Contact us for more information!](#)

Keep informed with upcoming events on our [Facebook page!](#)



Be part of the solution, not the pollution.  
Together, we can leave a Clean Water Legacy!



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MODULES



HELP

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## Stormwater BMPs and the Thanksgiving Feast

Thanksgiving is a time for family and feasting, but when the meal is over are you properly disposing your FOG waste? Fats, oils, and grease (FOG) are often disposed of improperly. FOG comes from meats, butter, lard, food scraps, sauces dressings, dairy products, and cooking oil. Some methods of improper disposal may seem obvious as a bad choice, such as dumping used cooking oil down the storm drain, but even washing greasy residues down the kitchen drain can create problems.

Improper disposal of FOG can lead to property damage, health hazards, and environmental problems. Pipes may become blocked by FOG poured down the drain, even if diluted with hot, soapy water. Grease transforms back into a solid as it cools. As FOG builds up in the wastewater system, catching on items leading to "fatbergs" that create blockages. One famous example being the [15-ton London fatberg \[http://www.npr.org/sections/thetwo-way/2013/08/06/209487575/fatberg-15-ton-lump-of-lard-removed-from-london-sewer\]](http://www.npr.org/sections/thetwo-way/2013/08/06/209487575/fatberg-15-ton-lump-of-lard-removed-from-london-sewer), which damaged the sewer and took 6 weeks to repair.

FOG can run into a nearby stream or river, which affects our drinking water. Oils pollute streams and creeks by forming a film on the water surface, which prevents oxygenation for aquatic life. Polluted stormwater runoff can lead to excessive and costly maintenance and cleanup.



### What can you do?

#### Don't pour your Thanksgiving grease down the drain.

- Reuse your cooking oil. After your used oil has cooled, filter and freeze it.
- If you can't reuse your used cooking oil, pour it into a sturdy closed-lid container and dispose of it in the trash.
- Cover the kitchen sink with a catch basket and empty into the garbage can as-needed.
- Scrape plates over trash can or dry-wipe with paper towels.
- Prewash dishes and pans with cold water before putting them in dishwasher
- Remember: The drain is not a dump and garbage disposals don't fight FOG.

### Restaurants also beware the FOG

The City of Roanoke prohibits fats, oils, and grease from being poured down the storm drain because it is considered as an illicit discharge.

**Report illicit discharges to [Roanoke Stormwater](http://www.roanokeva.gov/500/Stormwater) [http://www.roanokeva.gov/500/Stormwater].**

Here are some guidelines to ensure that restaurants are meeting the stormwater management criteria set forth in local, state, and federal environmental regulations.

- Clean floor mats, filter, and garbage cans in sink that is connected to the sanitary sewer system. DO NOT clean in the parking lot, alley, or sidewalk/street.

cat litter to soak up spills. Make sure to pick up outside litter often, including cigarette butts.

- Keep dumpster lids closed and areas around them clean. DO NOT fill them with liquid waste or hose them out.
- Inform employees about these measures and include information in training programs.

For more information on restaurant FOG management visit [Clean Valley Council \[http://www.cleanvalley.org/stormwater-for-restaurants.html\]](http://www.cleanvalley.org/stormwater-for-restaurants.html).

### [Have a water efficient H2Ooliday!](#)

Preparing for and cleaning up after a holiday meals and parties can use much more water than ordinary, everyday use. Running your tap continuously while preparing food or washing dishes wastes water and can use more than two gallons of water every minute your tap is running. That's a lot when you're cooking a big meal for extended family members and friends! Find ways to reduce your water and energy use, for example:

- Scrape dirty dishes clean, instead of using water to rinse them before you put them in the dishwasher.
- If you don't use a dishwasher, fill the sink with a few gallons of soapy wash water, clean your dishes, and put them aside. Then rinse them all together afterward.

Either of these simple practices could save 10 gallons of water. If every American household reduced their water use by 10 gallons on just Thanksgiving Day, it would save more than 1 billion gallons of water, as well as save any energy or materials used to pump or treat tap water. [More tips on WaterSense water-efficient products \[https://www3.epa.gov/watersense/products/index.html\]](https://www3.epa.gov/watersense/products/index.html).



### Stormwater in the news!

#### ROVER X Helping to Create Roanoke's Clean Water Legacy.

Roanoke Stormwater was spotlighted in this month's [Envirosight newsletter](#). Roanoke Stormwater Utility uses ROVER X sewer inspection camera crawlers and a Quickview Haloptic zoom camera to aid them in their mission to create a "Clean Water Legacy." The information the stormwater crew collects is used by engineers to address flooding concerns and benchmark assets. Using the ROVER X has been a major asset in mapping the City's storm-drain system and locating sources of pollutants, [such as a gasoline leak!](#)

"We take a proactive approach to stormwater management. Knowing the condition of our stormwater infrastructure and being able to locate assets help us better manage the quality of our water source and prevent flooding," states Ryan Apple, Stormwater Utility's Maintenance Crew Leader.

Learn more about what Roanoke Stormwater is doing on our [Facebook page!](#)



#### Stay in stream

[2016 Leaf and Brush Collection](#)

[City Plans Public Meetings to Update Downtown Plan Nov. 29](#)

[Street Sweeping Schedule](#)





Be part of the solution, not the pollution.  
Together, we can leave a Clean Water Legacy!



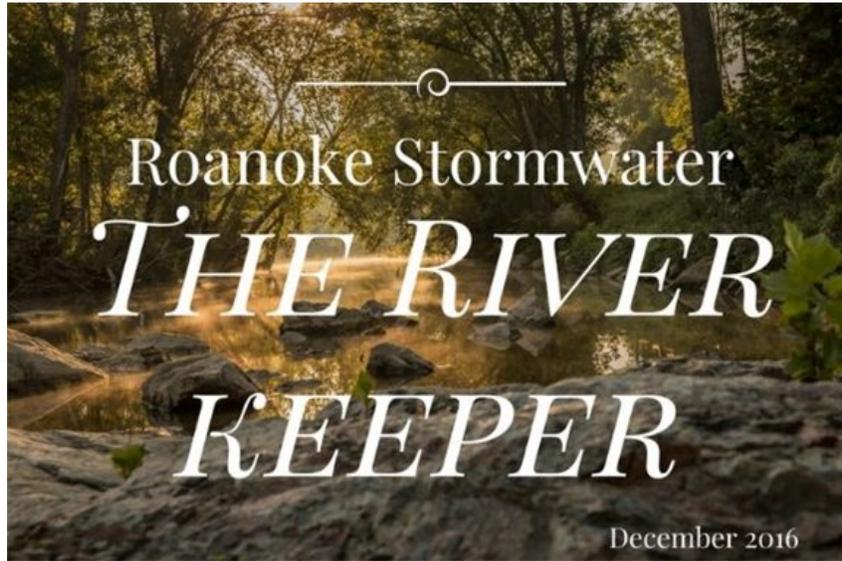
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### Deck the Halls, Not the Creeks!

We have all seen the plastic shopping bags hanging from tree branches as if they were ornaments hanging from a Christmas tree. Holiday shopping, gift-giving and family celebrations can generate litter and unnecessary waste. Wind and runoff quickly move trash through our community and into our storm drain systems and creeks.

Here are some simple things we can do to prevent holiday pollution:

- Bag your trash, tie it off and close your dumpster lid.
  - Pay extra attention to your trashcans during the holidays. Don't allow trash to spill out and litter your neighborhood and your local environment.
  - Pick up any stray garbage lying around.
  - Reduce the number of bags thrown out by bringing reusable cloth bags for holiday gift shopping. Tell store clerks you don't need a bag for a small or over-sized purchase. Some stores may give discounts for bringing in your own bags!
  - Wrap gifts in recycled paper or funny pages and reuse gift bags from year to year.
  - Get creative and try [Furoshiki](#) wrapping with tons of different styles of [wrapping!](#)
  - Recycle leftover wrapping paper and gift boxes at your local drop-off site
- By recycling litter and disposing of trash properly, you can help keep our waterways and community clean.

**Don't forget, let's Deck the Halls, Not the Creeks!**



- Set the table with cloth napkins and reusable dishes, glasses, and silverware. Also save and reuse party hats, decorations, and favors.
- Be sure your guest know where to properly dispose of and recycle their waste at your party.
- After holiday festivities, put leftovers in recyclable containers, and share them with family, friends, or others. Donate untouched leftovers from parties to a local food bank or homeless shelter.
- After meal, fill your dishwasher up completely before running it. You will run fewer cycles, which saves energy.



### *O Tannenbaum*

Approximately 33 million [<https://www3.epa.gov/epahome/hi-winter.htm#water>] live Christmas trees are sold in North America every year. Don't dump your trees outside thinking they will go away. Although 'natural' Christmas trees are slow to decompose and are often treated with pesticides or preservatives. After the holidays, look for ways to recycle [<http://blog.nwf.org/2014/01/recycleyourtreeforwildlife/>], mulch or reuse your tree instead of sending it to a landfill. The City of Roanoke will collect Christmas trees during the week of Jan. 2, 2017 [<http://www.roanokeva.gov/documentcenter/view/6147>]. Residents are asked to hold trees until that time.

## Call for new Roanoke Tree Steward Volunteers

### Training starts next month!

The Roanoke Tree Stewards are Roanoke Parks and Recreation volunteers who care for young trees on city-owned property under supervision. They also plant trees and do community outreach. The Roanoke Tree Stewards are looking for new volunteers and the required training starts January 23. Register by January 17. Learn from experts and gain hands-on experience in the field on how to prune, plant and identify trees. The Roanoke Tree Steward program is a lot of fun; you meet like-minded people, learn new things, and help city-owned trees.



To sign up for the program, go to [PlayRoanoke - Roanoke Parks and Recreation](http://www.playroanoke.com/) [<http://www.playroanoke.com/>] and click on the big orange button in the top right corner (Register for Activities). Then search for course 7027 (called Tree Steward Training) and register. The training is free of course.

If you have questions, contact Helen Smythers at 540-853-5225 or [helen.smythers@roanokeva.gov](mailto:helen.smythers@roanokeva.gov).



### Stay in stream

Snow Removal Information  
[<http://www.roanokeva.gov/documentcenter/view/3392>]

Holiday Trash Collection  
[<http://www.roanokeva.gov/documentcenter/view/6147>]

Become a "Citizen for Clean & Green"  
[<http://va-roanoke.civicplus.com>]





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