

Hold the Stormwater, Please!

tips for stormwater management on your property



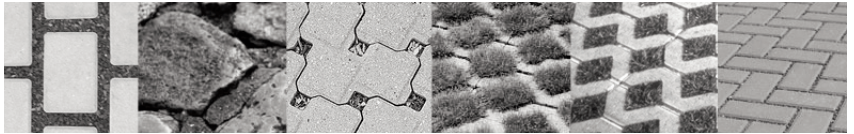
DID YOU KNOW:

- We depend on rainfall soaking into the ground to recharge our groundwater levels.
- Increased number of impervious (non-porous) surfaces, such as asphalt and rooftops, result in fewer opportunities for rainfall to soak into the ground causing flooding and increased pollution of our streams.
- Low groundwater levels result in critically low or even dry creek beds and diminished drinking water supply during periods of reduced rainfall.

Here are some ways you can help in your own backyard:

1 Substitute porous surfaces for impervious ones.

Patios, walkways, driveways, and parking areas can be constructed with porous materials that reduce stormwater runoff. One option is special blocks or pavers with voids that can be filled with gravel or planted with grass that allow stormwater to soak into the soil.



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2 Direct stormwater to areas where it can seep into the ground.

Do any of your downspouts direct rooftop runoff down the driveway into the street or directly into a stream? Redirect those downspouts away from the foundation of your home to a grassy area, seepage pit, mulched bed, or rain garden. Use a PVC extension or pipe.



3 Hold stormwater for use or release later.

Use a rain barrel to retain stormwater coming off rooftops for reuse in gardens or to release at a later time. For best results, direct overflow from your rain barrel to a more porous area such as a mulched bed or a rain garden.



4 Plant more trees, shrubs, and mulched beds.

Trees, shrubs, and mulched beds with flowers will intercept and infiltrate rainwater better than mowed lawns. Consider planting one or more large canopy trees, such as maples and oaks. Each large tree will intercept over 1,000 gallons of rainwater each year.

For Cleaner Creeks, Save Fertilizer for the Fall.

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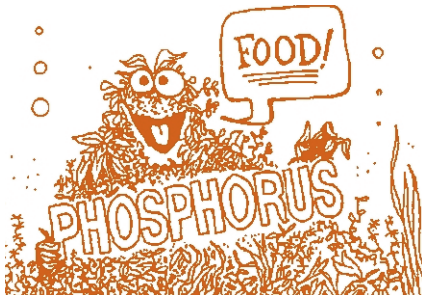
DID YOU KNOW:

- Fertilizers contain nitrogen and phosphorus which wash or leach into our streams and ponds.
- Even small levels of these nutrients can overload ponds or streams, and result in undesirable weed and algae growth. Algae depletes oxygen, killing fish and limiting the diversity of what lives in our streams.

To minimize the impact of lawn fertilization on our streams:

1 Fertilize in the fall.

Pennsylvania Department of Environmental Protection discourages spring application of fertilizer because it creates excessive top growth of grass. DEP recommends instead that homeowners **fertilize lawns around Labor Day** and use a second application in late October if needed. Fall fertilization promotes vigorous root growth and prevents fertilizer from leaching into streams and ponds in the spring.

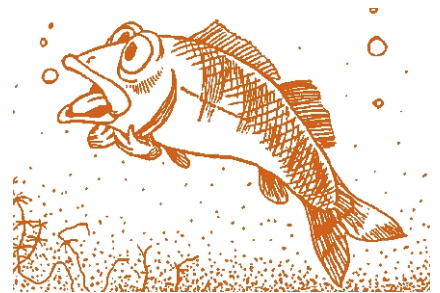


2 Do a soil test and consider phosphorus-free fertilizers.

Phosphorus is typically the limiting nutrient in algae growth. If your phosphorus levels are already adequate, select a phosphorus-free fertilizer. If your property drains to a stream, pond, or reservoir, do not use phosphate fertilizers. Mail-in soil test kits are available from your County Extension Service.

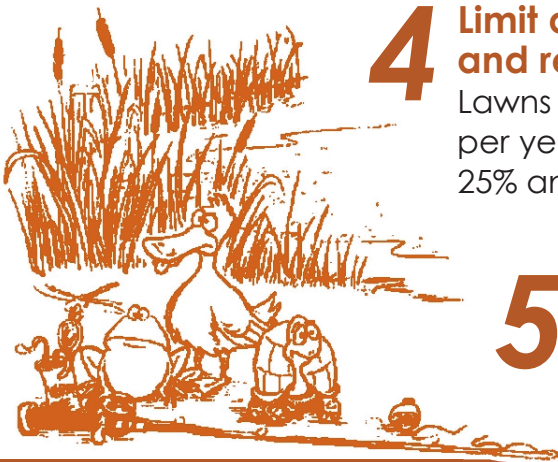
3 Use slow-release and organic alternatives.

Select fertilizers with "slow-release" forms of nitrogen which release more slowly into the soil and are less likely to leach. Choose organic rather than chemical-based fertilizers.



4 Limit application amounts to designated levels, and recycle grass clippings.

Lawns typically require 2.5 - 3 pounds of nitrogen per 1,000 square feet per year. Recycling grass clippings on your lawn can meet between 25% and 50% of nitrogen needs.



5 Avoid stream edges and stormwater conveyances.

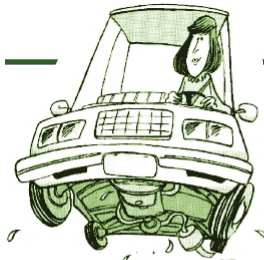
Do not fertilize stormwater basins, or drainage swales leading to basins, or within 25 feet of stormwater basins or streams.

This message is brought to you by your municipality and Chester-Ridley-Crum Watersheds Association, www.crcwatersheds.org.

Sources: PA Department of Environmental Protection "Grasscycling: It's OK, to Let it Lay."

Cars for Cleaner Creeks

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DID YOU KNOW:

Cars contribute to pollution of our streams. Even small amounts of used oil or leaking fluids are easily washed by stormwater into stormdrains where they pollute our streams.

Here are some tips on how to operate your car to minimize your impact on the environment.

1 Recycle Oil and Antifreeze

- Motor oil can be reprocessed for reuse. Put used oil in a clean container with a tight lid, and take it to a community oil recycling center. Do not put anything else in with the oil because contaminated oil cannot be recycled.
- Used antifreeze should not be flushed down the drain or put in the trash because it contains toxins that may cause problems for wastewater treatment plants or leach from landfills.

For a list of sites that recycle automotive wastes, see links listed below.*



2 Use Commercial Car Washes

- Take your car to a commercial car wash or spray booth where dirty water is typically filtered for reuse, and ultimately is treated at a wastewater treatment plant.
- Conduct fundraisers in partnership with local car wash operators.

3 Keep Your Car Serviced

A well-tuned car saves you money by using 20% less gasoline. Regular tune-ups reduce the amount of hydrocarbons, nitrous oxides, and other pollutants which pollute our water as well as our air.

4 Repair Leaks

- Spots on your driveway or garage floor mean the engine, transmission, or radiator in your car is leaking. Have the leak repaired right away.
- Clean up spots and spills with cat litter or another absorbent material and put in the trash.
- Do not dump or hose these pollutants into streets or stormdrains.



5 Return Used Batteries

- Return your used car or truck battery to the place where you bought it.
- Do not throw old batteries in the trash or bury them—you'll be breaking the law. Old batteries contain hazardous chemicals that can leach through the soil and pollute our groundwater.

6 Check Tire Pressure

- One of the simplest and cheapest ways to prevent pollution is to keep your tires properly inflated. For every pound that your tires are underinflated, your car loses 1% in gas mileage.
- Underinflated tires also wear out sooner.

*For a list of certified Automotive Drop-Off Centers, see www.chestercountyswa.org/pdf/auto.pdf or www.co.delaware.pa.us/recycle/pdf/motoroil.pdf.

This message is brought to you by your municipality and Chester-Ridley-Crum Watersheds Association, www.crcwatersheds.org with credit to the University of Wisconsin-Extension.

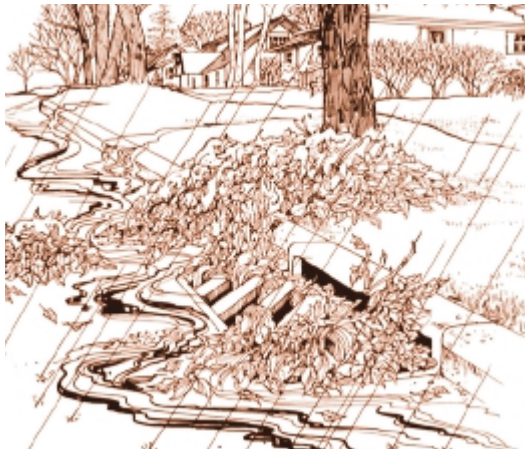
Stormwater Pollution and Yard Waste

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DID YOU KNOW:

- Yard debris, including leaves and other organic plant material like shrubbery trimmings and grass clippings, are a significant source of stormwater pollution. This debris can clog culverts, storm drains, and pipes, causing flooding.
- Debris can carry fertilizers and pesticides from your yard and deposit them in streams and ponds.
- Piles of leaves and grass clippings will overload a stream's ability to process leaf litter, causing nutrient pollution and oxygen depletion.

It is easy to do your part to protect our streams and the drainage systems leading to our waterways:



- 1 Do not pile leaves or other yard waste near streams or drainage channels** where they can blow or wash into creeks. Use designated leaf collection bags for curbside leaf recycling.

- 2 Do not blow leaves or grass clippings off your property** into streets, streams, ponds, or drainage swales.



- 3 Recycle grass clippings and their nutrients on your lawn.** Use a mulching lawnmower to recycle remaining leaves into your lawn in the fall!



- 4 Compost leaves and grass clippings along with yard waste.** Select a location removed from streams, ponds, and wetlands.