

How does land use affect water quality in our watershed?



Land Type	Rain Infiltration (avg.)
Forested	18 in/hr
Lawn	2 in/hr
Impervious Surface	Zero

A watershed is an area of land that drains to a common body of water. We all live in a watershed! Loudoun watersheds eventually drain to the Potomac River, which in turn drains to the Chesapeake Bay and on to the ocean. Everything we do locally can therefore have an impact downstream. In Loudoun County, increasing amounts of natural areas are being wiped clear by development and replaced with **impervious surfaces** such as roofs, streets, and parking lots. This prevents the **rain from soaking slowly into the ground as nature intended**. Instead, rain runs off hard surfaces creating "Storm Water Runoff" which can cause flooding, erosion, and concentrates pollution into our local waterways.

Pollution from storm water runoff

Polluted storm water often affects the quality of our drinking water. It can also kill or damage plants, fish and wildlife. This affects human health, increases drinking water treatment costs and degrades wildlife habitat. In Loudoun, **the Potomac River and Goose Creek** are two important waterways that serve as drinking water for many people.



Pollution found in our waterways includes:

- * **Sediment** from erosion of soil due to the rush of stormwater. Construction sites, bare soil areas in lawns and agricultural land, poorly maintained dirt/gravel roads, and degraded streambanks are potential sources. Sediment makes it difficult for fish to breathe, plants to grow and ultimately will destroy aquatic habitats. Some ways to help slowdown storm water is to cover bare soil with vegetation and use of properly installed silt fences during construction.
- * **Excess nutrients**, mainly nitrogen and phosphorus, from lawn and agricultural fertilizers as well as eroded soil can cause unnatural algae blooms in our waterways. When algae dies, it lowers dissolved oxygen levels which can cause fish and other aquatic organisms to die.
- * **Bacteria and other pathogens** from pet and livestock waste, as well as failing septic systems, can wash into waterways and create health hazards, often making beach/lake closures necessary.
- * **Trash** washed into waterways can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds. Help control litter by organizing a community clean up!
- * **Household hazardous wastes** such as insecticides, pesticides, paint, solvents, used motor oil, road salt and others can poison aquatic life and humans.

SEDIMENT



TRASH & HAZARDOUS WASTE



FERTILIZER (Algae Bloom)



TEN Ways YOU can protect your WATERSHED

REDUCE ROOFTOP RUNOFF: Excess runoff can cause flooding and stream bank erosion during rainstorms. Minimize runoff and pollution by redirecting downspouts into vegetated areas, installing rain barrels or planting a rain garden. Learn more about VCAP, a Loudoun Soil & Water cost-share program which helps landowners implement watershed-friendly landscape. We also sell rain barrels! www.loudounsoilandwater.com/vcap

VCAP



CHOOSE to maintain a low-input lawn: Learn how to manage your lawn with the least amount of fertilizer, herbicides, pesticides and water possible, which also translates into less time, money and water. Learn more about environmentally sound landscape practices from Loudoun County Extension: www.loudouncountymastergardeners.org/programs/my-backyard

LC Extension info



MAINTAIN YOUR SEPTIC SYSTEM: Septic system failures can be costly and can contaminate groundwater and nearby surface waters. Have your septic system inspected and pumped every three years. LSWCD offers \$50 rebate for septic pump out in Loudoun. Learn more at www.loudounsoilandwater.com/programs/septic-pump-out-rebate-program

Septic Pump Out Rebate



SCOOP THE POOP! Pet waste left out in the yard, on sidewalks or on roadsides washes away when it rains and is a major contributor to bacteria problems in local waterways. Dispose of pet waste properly by putting it in a sealed bag in the trash, flushing it down the toilet, or burying it in your yard. https://cfpub.epa.gov/npstbx/files/marc_petwaste.pdf

PROPERLY DISPOSE OF HOUSEHOLD HAZARDOUS WASTE: Never pour chemicals, pharmaceuticals, oil or paint into the storm drain. Keep cars maintained and recycle motor oil. Loudoun sponsors periodic hazardous waste collection events. Learn more about these and how to properly dispose of HHW at www.loudoun.gov/HHW

Tree Planting \$ assistance



GO NATIVE: Reduce your lawn by adding native trees, shrubs and herbaceous plants to your landscape. They require less water and fertilizer and are more resistant to disease since they are already adapted to local conditions. They also support beneficial insects such as pollinators. Get started here! www.plantnovanatives.org

PLANT TREES - STREAM BUFFER: Stream buffers, which are a natural buffer of native trees and shrubs along stream banks, make a huge impact on decreasing runoff pollution from entering our waterways as well as controlling erosion and providing essential fish and wildlife habitat. www.loudounsoilandwater.com/tree-planting

Learn more about Native Plant Landscaping



USE COMMERCIAL CAR WASHES: The best place to wash your car is at a commercial car wash, many of which filter their water before directing it to treatment plants. If you wash your vehicle at home, park it on the grass first, so your lawn absorbs some of the detergent runoff and contaminants.

GET INVOLVED: We all live in a watershed, and every drop counts. Do your part by joining local conservation organizations, participating in community clean-ups, and supporting environmental legislation. Loudoun Wildlife Conservancy offers many ways to become more involved - www.loudounwildlife.org

BE WATER WISE: Never dump anything down storm drains! If you use road salt in the winter, use sparingly and follow directions. Conserve water by using low-flow faucets, showers, and toilets, repairing leaks, taking shorter showers, and turning off the tap when brushing your teeth. Wash your car and water your lawn only when necessary. You will not only be conserving water but also saving money!

