

Rainwater Path

Rain that falls on natural areas follows steps that ensure clean, fresh water.

UPPER STORY:

The intertwined branches of mature trees absorb the full impact of rainfall, breaking up the drops before they reach lower levels of vegetation.

UNDER STORY:

The mid level – made up of young trees or small tree species – also slows the speed of the raindrops, while using and holding rainwater before gently releasing it onto the next layer.

GROUND FLOOR:

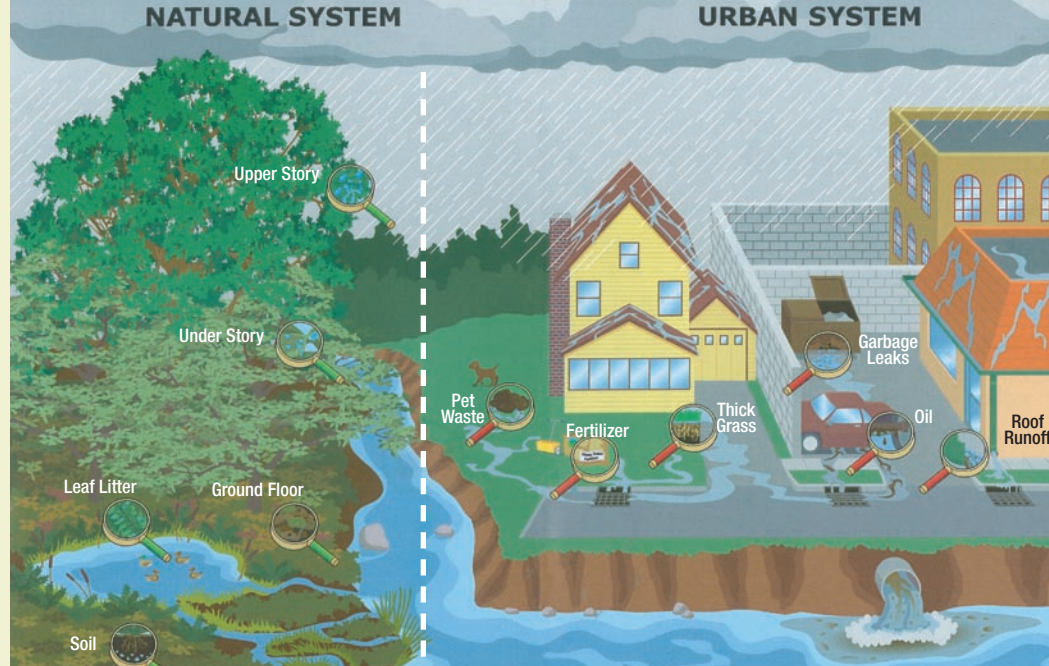
This layer of growth is a soft carpet of mosses, ferns, grasses, wildflowers, shrubs and bushes. It holds water, protecting the soil from washout.

LEAF LITTER:

Fallen leaves, branches, and plant matter form a giant sponge, holding moisture and releasing it slowly into the soil.

SOIL:

The soil layer provides moisture and nutrients for plant and tree roots. The moist soil remains cool even on the hottest days, and is vital to nature's rainwater drainage system.



What You Can Do To Help:

Try these ideas - Use Nature as a model!

To Use Rainwater on Site:

- Minimize use of concrete or asphalt by substituting gravel, paving stones, or turf stones.
- Direct water from roof drains and gutters to vegetated areas on your property.
- Install a rain barrel to collect roof runoff. Use it to slowly soak your landscapes.
- Use trees, shrubs and other deep-rooted plants to hold and use water on your property.
- Reduce the amount of lawn by adding berms, and flower, herb, native-plant, decorative-grass vegetable and rain gardens.

In Your Landscape:

- Stop soil erosion by planting vegetation on all bare areas.
- Minimize or eliminate the use of fertilizers and pesticides on your lawn.
- Use phosphorus-free fertilizer when possible.
- Bag or compost yard wastes.
- Sweep and collect (don't wash) fertilizer and grass clippings off driveways and walkways.
- Aerate your lawn to increase absorption
- Create buffers of plants between waterways and hard-surface areas to help filter out pollutants.

Vehicle Tips:

- Keep your vehicles tuned up, and repair all leaks.
- Wash your car on the lawn or on gravel.
- Use phosphorus-free detergents when washing your cars (windows and siding, too!)

Hazardous Chemicals:

- Never pour used oil, paint thinners, or other pollutants into storm drains or onto the ground.
- Clean up spills quickly.
- Properly use and store all household chemicals.
- Take household hazardous waste to a recycling/ collection center.

General:

- Walk your dog in areas of vegetation, and bury or flush pet wastes.
- Clean litter from the street and stormdrains in front of your home.
- Use salt sparingly for snow and ice control. Choose magnesium or calcium chloride alternatives when possible.
- Report any pollution, illegal dumping, or soil erosion to the proper authorities.

Stormwater Path

Rain that falls directly to the ground and runs off hard surfaces to the storm drains picks up speed and contaminants.

ROOF RUNOFF:

Stormwater collects tar, gravel, bird droppings and heat as it runs off rooftops.

THICK LAWN CARPETS:

Stormwater cannot be absorbed into the lawn because the dense root structures act like thick door mats, holding dirt and contaminants that run off into the road and storm drains.

GARBAGE LEAKS:

Garbage spills and discarded trash are carried into the drains.

VEHICLE DISCHARGES:

Fuel, oil, and antifreeze emissions, along with metals and rubber, are picked up by the swiftly-moving water and carried into the storm drains.

ANIMAL WASTE:

Pet waste remains on top of the lawn carpet until it is washed into the waterways.

FERTILIZERS/CHEMICALS:

Using products to green our gardens and lawns can lead to disastrous effects in the waterways. Excess product causes the water to become toxic.



Get more information about the City of Waterloo's approach to meeting the requirements of the Clean Water Act and NPDES Phase II requirements, please contact Gary Heinick, P.E., Associate Engineer at 319-291-4312, or visit waterloo-ia.org. For additional information on clean water, visit epa.gov/nps and epa.gov/npdes/stormwater



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City of Waterloo Stormwater Management Program

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*A homeowner's
guide to healthy
habits for clean
water.*

