Quick Tips:

to restore and protect the water quality, wildlife habitat and recreational uses of your streamside property

Do plant buffers of native trees and shrubs along the stream
Do maintain streambank protection structures such as rock slopes and walls
Do avoid using chemicals and fertilizers anywhere near a stream
Do keep your septic tank in good working condition
Do build steps or ramps where the stream is accessed often
Do pick up pet droppings to keep excess nutrients out of streams
Do wash your car on the lawn or at a car wash to keep soapy, salty water out of the storm drains

Don't disturb the stream bed or banks or remove gravel without a permit
Don't throw lawn clippings or other yard waste into the stream or on the banks
Don't remove vegetation along the banks, unless it's about to fall in
Don't dump waste oil or other contaminants into storm drains
Don't remove logs unless they are obstructing the flow of the stream
Don't allow pets or grazing animals near the stream edge
Don't dig in the stream, change its course or drive along the shoreline
Don't dump old tires, car parts, chemicals, plastic bottles, paint cans or other garbage into the stream

shrubs to plant for streambank protection:

- Streamco or Bankers Willow
- Red Osier Dogwood
- Smooth Alder
- Virginia Creeper
- Buttonbush

shrubs to plant for streamside wildlife habitat:

- American Elderberry
- Common Spicebush
- Winterberry holly
- Ninebark
- Red Chokeberry

What is a watershed?

A watershed is the area of land that water flows across or seeps into on its way to a river, lake or stream. Watersheds are separated from each other by high points such as the crest of a hill.

Everyone lives in a watershed and should be able to enjoy healthy streams and the opportunities they provide. Almost every human activity, from lawn care to recreation, affects the quantity and quality of water in the watershed. We share our watershed with wildlife that also depend on a healthy watershed for food, shelter and water.

Erie County Soil and Water Conservation District
50 Commerce Way
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stream side

restore and protect the water quality, wildlife habitat and recreational uses of your streamside property

Prepared by the Erie County Soil and Water Conservation District through a grant from the Great Lakes Aquatic Habitat Network and Fund.

For more information call: (716) 652-8480

stream side

tips for protecting your streamside environment

Streamside property owners lose valuable land every year to streambank erosion that can often be prevented.

Streams, rivers and lakes have become impaired from common lawn care practices - tons of fertilizers, pesticides, nutrients and sediments are destroying aquatic habitat and polluting drinking water.

Stormwater carrying harmful pollutants from residential properties also degrades water resources.

It's **your** stream - and you **can** make a difference!

Why should we restore and protect streams?
Why should we want healthy streams?
Why be concerned?

benefits of stream protection:

- Safer drinking water supply
- Healthier wildlife habitat
- Improved aesthetics
- Flood retention
- Increased property values
- Safer environment for children to explore
- Better opportunities for swimming, fishing and boating
- Reduced threats to property from streambank erosion

Our health depends on clean water - it's important to prevent pollution in our streams *before* it becomes costly to our health and our economy!

Streambank Maintenance:

The cost of having an unobstructed view of the stream is usually loss of valuable property from an eroding streambank.

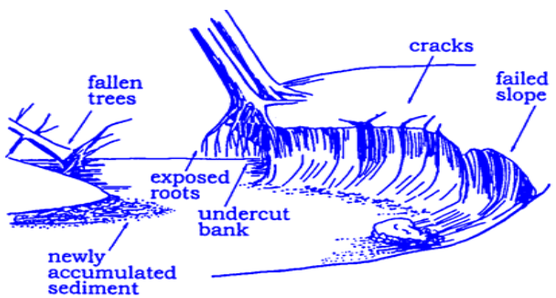
Streambank erosion can destroy healthy streams

Animals and people trampling on streambanks can destroy vegetation leaving the soil unprotected. Heavy rainfall loosens unprotected soil and washes it into the stream, where it destroys aquatic habitat. Soil, gravel and debris buildup in the streambed can cause damming and flooding.

Streamside residents often replace stream buffers with manicured lawns mowed right to the edge. The shallow root systems of lawn grasses do not sufficiently protect the streambank from eroding, and are ineffective in trapping pollutants from entering the stream. Eroding streambanks result in muddy water which blocks sunlight for plants, clogs fish gills, reduces oxygen in the water and buries stream-bottom habitat.

signs of soil erosion:

- Widening or deepening of stream channel
- Undercut trees falling into stream channel
- Steep streambanks, often with bare soil
- Muddy water in stream or on paved surfaces following rainfall
- Gullies or rills forming on lawn areas
- Deposits of fine sediment in low areas



Stream buffers protect your property - and the environment

A good stream buffer is undisturbed land along a streambank with native trees, shrubs and understory vegetation which have roots that stabilize the soil to prevent it from being washed away. Buffers also provide nesting sites, food and cover for wildlife, filter out harmful pollutants, and shade the stream, keeping the water cool for fish and other aquatic life.

preventing streambank erosion:

- Maintain existing vegetation on streambanks to hold the soil in place
- Plant strong-rooted vegetation such as willow, dogwood or birdsfoot trefoil on banks
- Terrace steep lawns to reduce gully formation
- Install splash blocks under pipe outlets

Streamside Stormwater Management:

How do pollutants enter the water supply?

Parking lots, driveways, streets and rooftops all prevent rain and snow from falling directly on the ground and infiltrating, or soaking into, the soil. Rainfall on these surfaces becomes stormwater runoff. As it flows through ditches, culverts and street drains, stormwater accumulates pollutants such as fertilizer, yard waste, animal waste, oil, road salts, chemicals, soil particles and litter, and flows untreated into waterways. Too much runoff quickly draining into streams can cause local flooding. Water that is allowed to soak into the ground enters streams more slowly. Vegetation slows runoff and traps chemical-laden sediment. Soil filters harmful pollutants.

Where does runoff go when it leaves my property?

- Separated Sewer System - storm sewers carry rain water to streams, sanitary sewers carry wastewater to the sewage treatment plant.
- Combined Sewer System - storm and sanitary sewers both drain to the wastewater treatment plant.

During heavy rains, wastewater treatment plants can't process the additional rain water, so some of the sewer flow (including raw sewage) must be discharged directly into streams. These sewer overflows can be extremely harmful to fish and wildlife - and us!

- Septic Systems - septic tank and leach fields filter pollutants from household wastewater but poorly maintained systems contaminate soil, groundwater and streams.

How can I control runoff?

Swales and rain gardens slow down runoff by allowing stormwater to infiltrate soil slowly, replenishing groundwater and filtering pollutants.

Sump pumps should drain into lawns instead of the sewer or road ditch.

Replace driveways and walkways with gravel, brick, flagstones or interlocking pavers to allow more stormwater to infiltrate the soil instead of flowing directly into sewers.

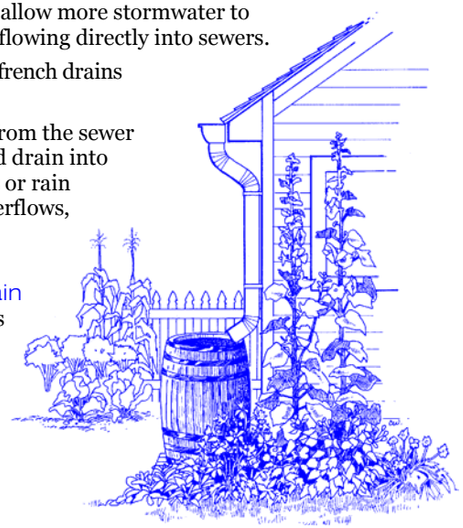
Install gravel trenches or french drains along driveways.

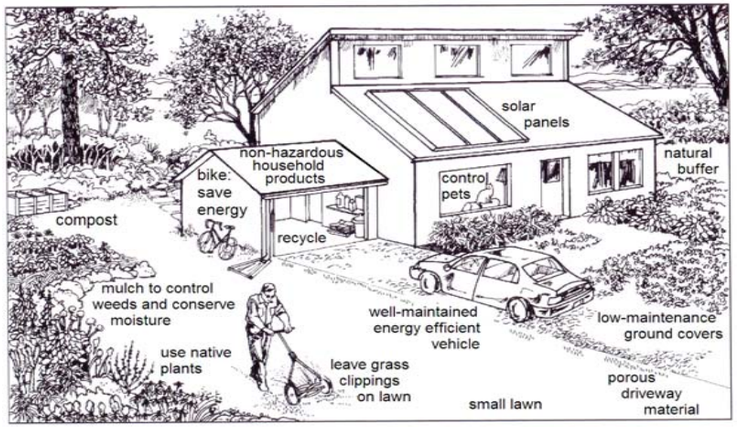
Disconnect downspouts from the sewer system - downspouts should drain into grassed areas such as lawns or rain gardens to reduce sewer overflows, stream flooding, basement flooding.

Direct downspouts into a rain barrel for watering gardens during dry periods.

Inspect and maintain septic tanks routinely to prevent leaks or overflows.

Plant vegetation along streambanks to trap soil in runoff.





Streamside Lawn and Garden Care:

Everything you apply to your lawn can potentially contaminate surface and ground waters.

Good lawn care practices not only add to the value of your property, but also contribute to healthier, cleaner streams and water supplies.

Use Integrated Pest Management (IPM)

- select native disease-resistant and pest-resistant plants
- plant the right plant for the location
- maintain healthy soil
  have your soil tested to determine fertilizer needs and use compost or slow-release fertilizer - excess fertilizer leaches from the soil or washes away into storm sewers and streams
- monitor and correctly identify insects and diseases
  establish your personal threshold - are a few insects tolerable? - avoid excessive chemical applications - minimizing use costs less too
- apply the proper treatment for the pest problem
  remember - insecticides kill beneficial insects too

Start a compost pile

Use grass clippings and yard waste to build a compost pile instead of dumping them on stream banks where they can wash into the stream, adding nutrients, fertilizers and pesticides, and contributing to unhealthy algae growth. Add kitchen scraps to build healthy, natural, soil-enriching compost that can replace fertilizer to improve soil structure, encourage root growth, aerate soil, retain water and release nutrients slowly.

Manage animal waste

Pet waste left on paved surfaces and in floodplains washes into storm sewers and streams, carrying excess nutrients and bacteria that are harmful to fish and waterfowl. Discard pet waste in trash or sanitary system. Don't feed wildlife! - Waste from geese, ducks and rodents contain bacteria that can contaminate surface and ground water, causing beach closings and health concerns.

Use and dispose of chemicals properly

Never pour motor oil, paints or chemicals down storm drains or sinks. They can be harmful to wildlife, septic systems and drinking water supplies. Recycle used automotive fluids and chemicals; clean up and report spills.