

NATIVE PLANTS PROTECT STREAMS

Why plant your stream bank? Besides increasing your property value, plants stabilize your stream banks and provide living space and food for birds, butterflies, and other animals.

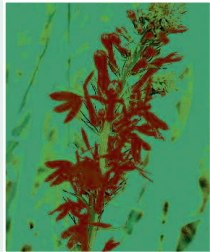
Native plants are best to use near your stream. Native streambank plants can tolerate both periodic wet weather and drought. Native plants are widely available in nurseries — just ask.



Beautyberry



Sweetpepper Bush



Cardinal Flower



Redbud



Sweetspire



Fringetree



Soft Rush

Some native plants used to stabilize stream banks and add beauty to the yard.

PLANTING TIPS

- Plant sedges and rushes at the water's edge. They can tolerate high waters.
- Install “live stakes” on the steepest part of the stream bank. Live stakes are willow or dogwood branches cut off a tree during the winter, when they have no leaves. Pound them into the bank (buds pointing upward) with a mallet, and they will sprout new shrubs in the spring.
- Plant trees, shrubs, or perennials above the bank. Trees grow strong root systems to hold stream banks together, and create shade that's good for fish and other animals.
- Plant native wildflower seed mixes. Seed mixes give color, and don't need mowing.
- DON'T plant turfgrass up to the edge of your stream. Turfgrass roots only grow a few inches into the soil, and you need deep roots to hold the stream bank together. Save yourself mowing time and create animal habitat with taller plants.
- Plant in the fall so plants have time to establish a good root system before the hot, dry North Carolina summer.

IS YOUR BACKYARD WASHING AWAY?

Many North Carolina streams are eroding and have poor water quality. Could your backyard stream use some help?

Stream erosion can cause problems for you, your neighbors, and people downstream. When a stream bank erodes, you lose land. That land washes downstream as sediment.

Excess sediment is the number one pollutant in North Carolina streams. It chokes out fish and beneficial insects. Sediment washes downstream with other pollutants into rivers, estuaries, and the ocean, harming marine life such as oysters. You can start reducing pollution at its source — your backyard.

What can a homeowner do? It depends on the specific problem, the size of your stream, and of course, how much money you can spend. Reshaping your stream banks and planting along the stream can stop erosion, and create a beautiful backyard space.



RESHAPE YOUR STREAM

The North Carolina stream on our cover was chewing into backyards. Efforts to stabilize the creek with sandbags failed, creating piles of fallen sandbags, and erosion continued.

The stream had several problems. The banks were steep, with no plants. Healthy streams have plant roots holding the soil together, and there is less erosion.

The stream had cut a deep channel. During heavy rains, water rushed through the channel, eroding the banks. Naturally stable stream channels are cut less deep. When the water rises, the water can move out onto a floodplain, where it moves more slowly. Slow-moving water is less likely to damage stream banks.

The stream also turned a sharp corner. Where water turned the corner, it hit the stream bank with great force and eroded the yard.

To solve the problems, the homeowner association worked with an engineer at NC Cooperative Extension to change the stream's path. The homeowner



A backyard stream under construction. Erosion control matting covers the bare surfaces. Live stakes (cut from the willow trees) will grow into new shrubs.

association contributed \$7,000 to hire a contractor with excavation equipment, and to obtain state permits. Many state and federal agencies and city governments have programs to help with stream repair costs.

Permits are nearly always required for stream work. The most common permit is a “401 Water Quality Certification”, and comes from the NC Division of Water Quality. State agencies and city governments can sometimes help with permitting fees to restore a stream.

The contractor reshaped the curve of the stream, dug a floodplain along the stream, and created banks with gentler slopes. Community volunteers planted native grass seed and laid down natural fiber erosion control matting. Volunteers put in willow live stakes and trees.

Six months later, the stream looked like this! Compare to the picture of the same backyard stream on the front cover!



The same backyard stream six months after construction. With new plants and a new shape for the stream bank, the stream is much less prone to erosion. Young sycamore and birch trees and willow shrubs will create a shady, attractive space as they grow.

HOW ELSE CAN YOU HELP NORTH CAROLINA STREAMS?

- Get free soil testing and fertilizer recommendations from NCDA before applying fertilizer.
- Keep yard waste out of the stream. Besides causing debris jams, decaying waste uses up precious oxygen in the water, hurting fish.
- Use rain barrels or rain gardens to keep stormwater out of the stream. Stormwater can cause erosion, carry pollutants, and create flooding downstream. You can catch stormwater in a rain barrel and then use it to water lawns or gardens when you need it.

Call your County Extension Center for more information about native plants, soil testing, and working with backyard streams and wetlands.

HELPFUL CONTACTS AND WEBSITES

More information on stream repair, federal, state and city programs to help with funding, finding native plants, building a North Carolina rain garden, and finding licensed contractors:

www.ncsu.edu/sri

State program for stream repair:

NC EEP at 919-715-0476

Permitting for stream work:

NC DWQ at (919) 733-1786

Free soil testing: NCDA at (919) 733-2655



NC STATE UNIVERSITY

College of Agriculture and Life Sciences

