The Benefits of a Native Landscape

Native plants and animals sustain the environment on which we ourselves depend. By planting native species in your streamside buffer, you are providing an excellent opportunity for our native birds, insects and other wildlife to thrive in the habitat they need. Seeds from your native species can travel throughout the watershed, promoting a healthier community environment.

Furthermore, native plants are much better adapted to our specific environment — the climate and conditions of this area. Natives are therefore easier to grow and require far less maintenance than their non-native counterparts.

Native plants can provide year-round color and texture in your streamside area or garden. Vibrant flowers in the spring, colorful berries in the summer, deep colors in the fall, and contrasting bark and branch patterns in the winter are just some of the diverse characteristics of the many native plants available.

Use the chart of plants inside as a guide to select ferns, flowers, grasses, shrubs and trees native to Pennsylvania. They are beautiful, easy to maintain, and they attract wildlife. Important local resources for native plants are listed on the back of this brochure.

For more information contact:

Delaware County Conservation District
Rose Tree Park – Hunt Club
1521 N. Providence Road
Media, PA 19063
610-892-9484
www.Delcocd.org

Native plant sales in Delaware County:

Brandywine Conservancy/Brandywine River Museum
http://www.brandywinemuseum.org/

Scott Arboretum of Swarthmore College
www.scottarboretum.org

Tyler Arboretum
www.tylerarboretum.org

Delaware County Council:
Linda A. Cartisano, Chairman
John J. Whelan, Vice Chairman
Christine Fizzano Cannon
Andy Lewis
Tom McGarrigle

Brochure developed by Lehigh County Conservation District.
Customized by Delaware County Conservation District.

Caring for your Streamside Property

There's more to a stream than the stream itself.

Streamside Buffers

Taking good care of a stream involves taking care of the land around it. A streamside buffer (or riparian buffer) is a planted area along the edge of the stream.

A well-planted streamside buffer:

- **absorbs nutrients and pollutants**
- **stablizes the bank and prevent erosion**
- **reduces floodwater damage**
- **filters out sediment**
- **helps control the temperature of the stream**

Creating a Streamside Buffer

Begin with a "no mow" or "no graze zone" along your stream banks. A buffer of any width is more beneficial than grass. Make yours as wide as possible.

Plant trees and shrubs in your buffer area. They provide many long-lasting benefits and can be quite inexpensive to establish and maintain.

Using shrubs will give your buffer a quick start; many reach full size in just a few years.

Where you do have lawn, set your mower blades at least three inches high. Taller grass slows runoff, resists drought and needs less fertilizer.

Stabilizing Your Streambank

It is best to work with professionals when looking for the causes of and solutions to erosion problems. Where buffers alone aren't enough, there are many new and innovative techniques to help solve the problem. Contact your regional office of the Pennsylvania Department of Environmental Protection (DEP) before making plans to alter a streambank. Permits are likely to be required.

Top Reasons Not to Mow

Promotes bank stability —
Deep rooted native plants hold soil in place and keep banks stable. Turf grass has roots only an inch or two deep - not very effective at preventing erosion!

Flood flow reduction —
Fully grown vegetation slows the velocity of overland flows by providing enough resistance to allow some of the water to infiltrate the soil. This helps to recharge groundwater and reduces flood damage downstream.

Water quality —
Natural vegetation removes pollutants and fine sediment from the waterway, leaving water cleaner and clearer.

Reduction of mosquito habitat —
Turf grass does not absorb water as well as full-height vegetation; consequently, ponding occurs which makes ideal habitat for mosquito breeding. Higher vegetation may absorb more water and decrease the opportunity for mosquitos to breed.

Wildlife habitat —
Stream banks in a natural state provide habitat for a diversity of reptiles, amphibians, birds, and small mammals. Fish and aquatic insects are also protected by the purifying function of a buffer.

Reduce Pollution

Most stream pollution comes from manure, fertilizers, road salts, oil and other chemicals. Called *non-point source pollution*, these come from the entire watershed rather than from any one point. Together, these pollutants add up in the streams and become a big problem. Other accumulated pollution includes trash and yard debris that washes into the streams.

To protect a stream from pollution:

- don't overuse fertilizers - more is not better - and don't use fertilizer near streams.
- limit your overall use of pesticides and herbicides, and use extreme caution when using them near streams.
- compost, don't bag, yard waste. Leave lawn trimmings in place for effective recycling of nutrients.
- don't burn refuse near streambanks.
- don't store or dump manure, garden waste, or grass clippings near streams.
- store firewood, trash, or other materials away from streams.
- never dump trash or chemicals into streams, storm drains or sewers.
- keep farm animals out of and away from the stream. Contact the county conservation office to find out about farm fencing programs.

Prevent Excess Sediment

Every stream carries with it, fine particles of soil. But too much soil can clog the streambed, covering rocks and gravel where fish lay their eggs. Excess sediment can choke out the life of a stream. A major source of silt and sediment is construction or any project that disturbs the soil. Farming activities can also cause soil runoff.

To protect the stream from silt:

- use hay bales or a special silt fence to prevent soil from washing off a work site.
- never store loose piles of soil near a stream
- cover piles of soil with tarps to protect them from rain
- use good farm practices like no-till cropping and planting winter cover crops to conserve soil.
- contact your local county conservation office if you see soil run-off from a construction site.

Ticks are an unpleasant and potentially dangerous reality in this area of Pennsylvania. Deer ticks can carry Lyme disease and are often found in areas of high grass and shrubs. Fear of ticks, however, should not be a reason to mow your streambank to the edge. Some basic precautions will minimize this danger:

- consider mowing a path through the buffer to access the stream without having to walk through high grass.
- learn to recognize deer ticks and check yourself and your pet thoroughly if you have been walking through the woods or fields.

Caring for Streamside Buffers — What to Plant?

Often, when left to grow up on its own, a streamside buffer will contain mostly weeds and other undesireable plants. One way to make sure this doesn't happen is to plant native plants. The plants below represent just a limited selection of Pennsylvania's native species appropriate for planting throughout the state along streams and in adjacent floodplains and wetlands. Choose plants adapted for your soil conditions, and your garden will thrive with less watering and without the need for chemical fertilizers or pesticides. There are many resources to help homeowners with native plantings. For some help, contact one of the organizations on the back of this brochure, or visit one of the following websites: PA Department of Conservation and Natural Resources - www.dcnr.state.pa.us or PA Native Plant Society - www.pawildflower.org

Illustrations by Erin Frederick, Lehigh County Conservation District

Ferns

Cinnamon Fern
Osumnda cinnamomea
Full sun to shade
Wet to moist soils
Cinnamon-colored fertile fronds; moist acidic soils
Photo: Robert Mohlenbrock, USDA

Royal Fern
Osmunda regalis
Part shade
Consistently wet or saturated soils
Unique form and texture
Photo: Robert Mohlenbrock, USDA

Sensitive Fern
Onoclea sensibilis
Full sun to shade
Wet to moist soils
Sunny or shaded swamps, marshes, moist meadows
Forms colonizing masses

Flowering Perennials

Wild Bergamot
Monarda fistulosa
Blooms May to September
Full sun to light shade
Moist to dry soils
Dry open woods, wet meadows, ditches, edge of woods and marshes

Black-eyed Susan
Rudbeckia hirta
Blooms May to June
Moist to dry soils
Full sun to light shade
Attracts birds and butterflies

Blue Lobelia
Lobelia siphilitica
Blooms from July to October
Light shade
Wet to moist soils
Attracts hummingbirds

Blue Vervain
Verbena hastata
Blooms June to September
Full sun to light shade
Dry soils
Bright flowers; herbal uses; streambanks and moist meadows

Boneset
Eupatorium perfoliatum
Blooms July to August
Light shade to full shade
Wet to moist soils
Wet meadow species

Plains Coreopsis
Coreopsis tinctoria
Blooms April to June
Full sun to light shade
Moist to dry soils

Purple Coneflower
Echinacea purpurea
Blooms April to September
Full sun to light shade
Moist soils
Herbal uses

Ironweed
Vernonia noveboracensis
Blooms August to September
Full sun
Wet to moist soils
Tall plant with brilliant late summer flowers

Joe-Pye Weed
Eupatorium fistulosum
Blooms August to September
Light shade
Wet to moist soils
Attracts beneficial insects; herbal uses

Blue Mist Flower
Conoclinium coelestinum
Blooms July to November
Full sun to light shade
Moist soils
Good border plant or colonizing ground cover; attracts butterflies

New England Aster
Aster novae-angliae
Blooms August to October
Full sun to light shade
Wet to moist soils
Showy and frequently cultivated; dry to moist meadows

Common Sneezeweed
Helenium autumnale
Blooms July to September
Full sun Consistently wet to moist soils
Moist open areas along streams & ponds; wet meadows

Grasses

Sedge
Carex vulpinoidea
Blooms Summer
Full sun
Consistently wet or saturated soils
Swampy areas

Switch Grass
Panicum virgatum
Blooms August to September
Moist soils
Clump grass; can help to control erosion
Sandy and river soils
Photo: Bonnie Harper, Lady Bird Johnson Wildflower Center

Virginia Wild Rye
Elymus virginicus
Blooms June to September
Full sun to light shade
Wet to moist soils
Moist woods, meadows, stream banks
Photo: EPA

Shrubs

Arrowwood
Viburnum dentatum
Blooms May
Full sun to full shade Moist soils
Dark blue fruits in fall; high wildlife value; streambanks, pastures
Photo: Campbell and Lynn Loughmiller, Lady Bird Johnson Wildflower Center

Buttonbush
Cephalanthus occidentalis
Blooms June to September
Full sun Consistently wet or saturated soils
Multi-stemmed; tolerates inundation
Photo: Norman Flaigg, Lady Bird Johnson Wildflower Center

Highbush Blueberry
Vaccinium corymbosum
Blooms May to June
Light shade
Wet to moist soils
Multi-stemmed; edible berries; fall color; very high wildlife value

Nine Bark
Physocarpus opulifolius
Blooms May to July
Full sun to part shade
Wet to moist soils
Wet woods, sandy or rocky stream banks
Photo: Stefan Bloodworth, Lady Bird Johnson Wildflower Center

Red Chokeberry
Aronia arbutifolia
Blooms May
Part shade
Wet to moist soils
Red berries; high value for wildlife
Photo: Robert Mohlenbrock, USDA

Serviceberry
Amelanchier arborea
Blooms March to April
Part shade Moist soil
Small tree with early spring flowers; delicious edible berries in summer
Photo: Stefan Bloodworth, Lady Bird Johnson Wildflower Center

Silky Dogwood
Cornus amomum
Blooms May to July
Full sun Wet to moist soils
Flowers in summer; blue berries; multi-stemmed; very high wildlife value
Photo: Sally & Andy Wasowski, Lady Bird Johnson Wildflower Center

Spice Bush
Lindera benzoin
Blooms March to May
Light shade to shade
Wet to moist soils
Bright red berries in fall; herbal uses; wildlife value

Winterberry Holly
Ilex verticillata
Blooms May to June
Part shade Wet to moist soils
Showy berries in winter; high wildlife value; good colonizing shrubs for stream banks
Photo: George Bruso, Lady Bird Johnson Wildflower Center

Trees

American Beech
Fagus grandifolia
Blooms April to May
Full sun to full shade
Moist, but well-drained soils
Large tree with handsome gray bark; high wildlife value
Foliage photo: Bill Cook, Michigan State University

American Sycamore
Platanus occidentalis
Blooms April
Full sun
Wet to moist soils
Large tree with showy mottled bark; riverbanks, floodplains and alluvial soils

Black Gum
Nyssa sylvatica
Blooms April to May
Full sun to part shade
Moist soils
Tall tree with outstanding fall color; high wildlife value
Photo: Keith Kanoti, Maine Forest Service

Green Ash
Fraxinus pennsylvanica
Blooms April to May
Part shade
Wet to moist soils
Fast growth; good fall color.
Photo: Robert Mohlenbrock, USDA

Pagoda Dogwood
Cornus alternifolia
Blooms May to June
Part shade
Moist soils
Small tree for moist woods and shaded ravines; dark blue fruit

Red Maple
Acer rubrum
Blooms March to April
Full sun to full shade
Moist soils
Adapts to a range of moisture conditions; good fall color
Photo: Bill Cook, Michigan State University

River Birch
Betula Nigra
Blooms May
Full sun to part shade
Wet to moist soils
Notable for its peeling bark; floodplains, streambanks, wet woods, swamps
Photo: Steven Katovich, USDA Forest Svc

Shagbark Hickory
Carya ovata
Blooms in May
Full sun to part shade
Moist soils
Shaggy gray exfoliating bark; very high wildlife value
Photo: Keith Kanoti, Maine Forest Service

Swamp White Oak
Querus bicolor
Blooms in May
Part shade
Wet to moist soils
Large tree with very high wildlife value; good wetland oak
Photo: Mark Brand, Univ. of CT