

The following is a list of native shrubs and trees that can be planted along our creeks and streams:

Trees:

- Red Maple
- Sweet Birch
- Black Gum
- Pin Oak
- Hackberry
- American Elm
- Red Oak
- Sugar Maple
- River Birch
- Black Willow
- Tulip Poplar
- American Sycamore
- White Ash
- Black Walnut

Shrubs:

- Red Dogwood
- Arrowwood
- Pinxterbloom Azalea
- Spicebush
- Swamp Azalea
- Elderberry

Your local landscaper will be able to offer additional suggestions.

Sources of Plants:

- Sanwil, Inc. (610) 584-6302
sanwilinc@aol.com
- See Conservation Districts

Tree Shelters:

- Tree Essentials (800) 248-8239
- Tree Pro (800) 875-8071

How Wide does a Buffer Zone Have to be to Help Water Quality?

For complete contaminant removal, a buffer of at least 75 feet has been recommended by the U.S. Forest Service. Smaller buffers, however, do provide many benefits to water quality, such as stream bank stabilization, temperature moderation, and erosion control. Homeowners can have a positive affect on the community’s water quality without committing the entire backyard to forested buffer.

Sources of Information:

Penn State Cooperative Extension Service

- Bucks County (215) 345-3283
- Montgomery County (610) 489-4315

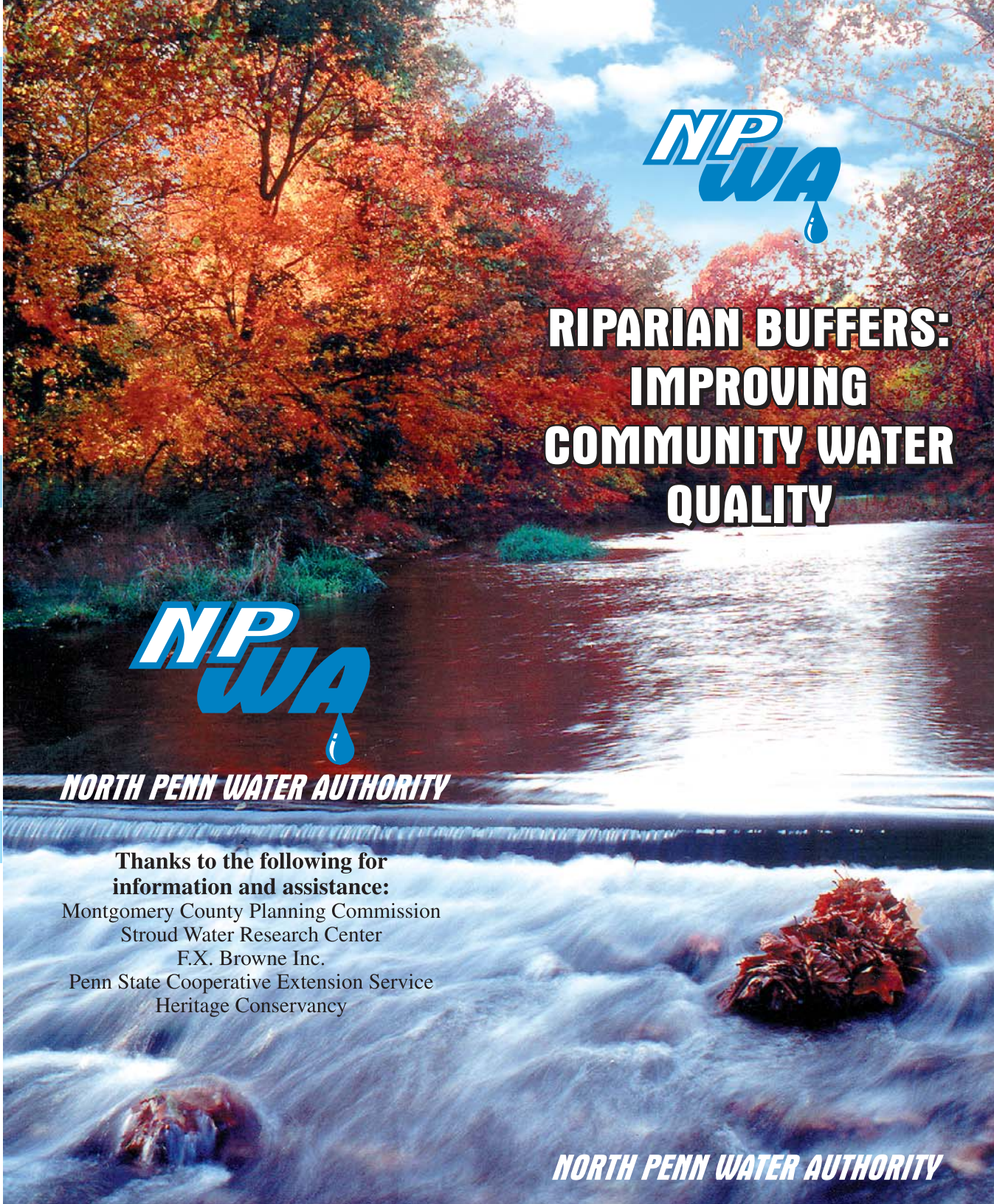
County Conservation Districts

- Bucks County (215) 345-7577
- Montgomery County (610) 489-4506

Publications:

Guidebook for Riparian Corridor Restoration
Available from Montgomery County Planning Commission
(610) 278-3638 • Cost \$6.00

Establishing Vegetative Buffer Strips Along Streams to Improve Water Quality
Available from Penn State Publication & Distribution
112 Ag Administration Bldg.
University Park, PA 16802 • Cost \$5.00



**RIPARIAN BUFFERS:
IMPROVING
COMMUNITY WATER
QUALITY**



NORTH PENN WATER AUTHORITY

**Thanks to the following for
information and assistance:**
Montgomery County Planning Commission
Stroud Water Research Center
F.X. Browne Inc.
Penn State Cooperative Extension Service
Heritage Conservancy

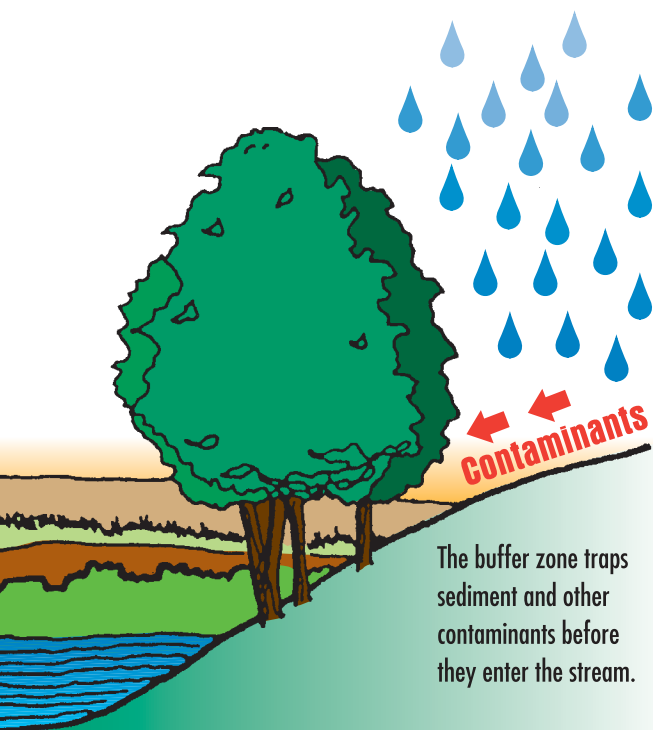
NORTH PENN WATER AUTHORITY

INTRODUCTION

Many homeowners have small creeks or streams flowing through their property. Flooding and erosion are concerns for everyone who lives near a watercourse. Riparian buffer zones provide a natural response to these concerns, and contribute some surprising additional benefits.

What is a Riparian Buffer Zone?

A riparian (ri-pâr-ē-on) buffer zone is the area of trees and other herbaceous vegetation that grows along the course of a river, creek, or stream. This vegetative strip reduces the velocity of run-off water as it flows into the receiving stream. As these plants and shrubs slow the run-off, they are also removing some of the sediment and contaminants from the water before it enters the stream.

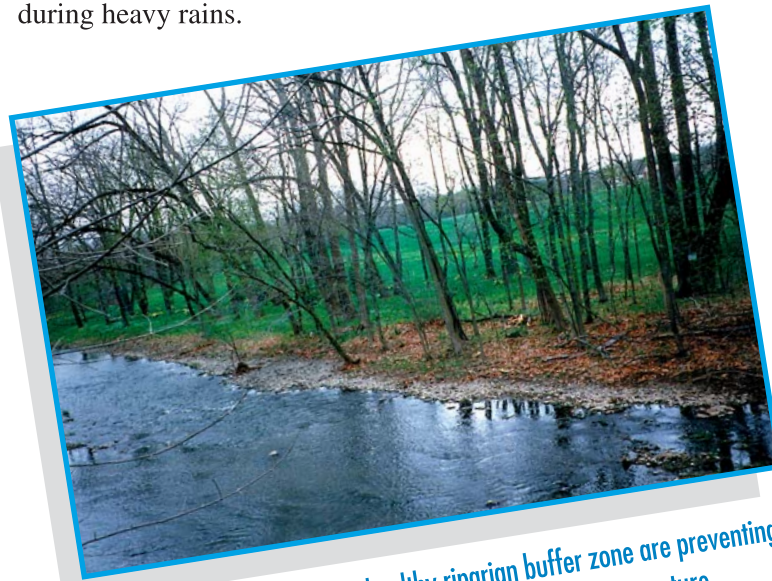


Why is a Riparian Buffer Zone Important?

Riparian buffers offer many benefits:

A well developed streamside buffer will provide some protection from flooding. The buffer reduces the amount of run-off that reaches the channel of the waterway during a storm event. The buffer zone will also hold water that has overflowed the banks of a stream, acting as storage space for flood waters. A healthy streamside buffer will reduce the severity of flooding downstream from the buffer.

A vegetated riparian zone will reduce streambank erosion by preventing excess solids and soil from entering a stream. The roots of trees and shrubs form a network or physical barrier that holds soil and prevents the soil from being washed away during heavy rains.



The trees and shrubs in this healthy riparian buffer zone are preventing streambank erosion while reducing stream water temperature.

Water quality can be enhanced by a small buffer zone of trees and shrubs. Shade from the trees reduces the temperature of the stream water, making it more hospitable for the fish and aquatic organisms that live there. The vegetation in the buffer zone removes nutrient contamination. Nitrogen and phosphorous from fertilizer run-off are nutrients that can fuel unwanted algal blooms.

In addition to improving water quality, the vegetated riparian zone provides an important habitat for wildlife, including migrating and nesting songbirds.



This is an example of an advanced state of erosion that may have been prevented by a healthy riparian buffer.

What Can a Homeowner do to Develop a Riparian Buffer Zone?

Landscaping along the stream with native vegetation is the most effective method of establishing a riparian buffer zone. After non-native plants have been removed, native plant seedlings can be planted on the site. Seedlings can be obtained for about 1/10 the cost of intermediate sized trees. The survival of these seedlings relies on biannual weeding of competing plants, usually in May and August. "Tree Shelters" also aid in the survival of seedlings by protecting them against grazing from rabbits and deer.

Native plants are important to the riparian zone because they are better suited to local environmental fluctuations. They also can reduce the need for chemical sprays and fertilizers while providing food for the stream inhabitants and wildlife.

Another method of establishing a riparian buffer zone is to allow vegetation to grow along the watercourse. To accomplish this, refrain from mowing up to the edge of the streambank. Biannual weeding of invasive plants is still encouraged.