SOUTHEAST WATERSHED FORUM WETLAND FACT SHEET

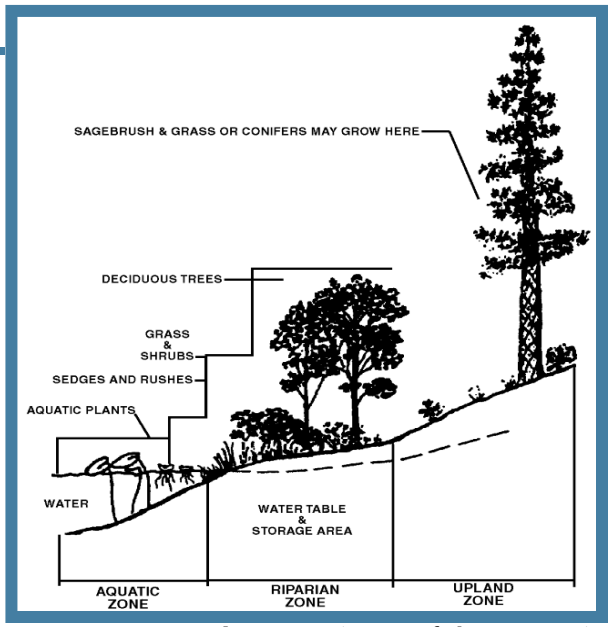
Riparian Buffer Zones

Riparian buffer zones create a transition area between water and land.

What is a Riparian Buffer?

Rich vegetation growing along the edges of a stream is commonly referred to as a the riparian zone. A valuable part of stream health, riparian buffer zones can be found in any type of landscape and are composed of water-loving plants and trees.

Riparian buffer zones create a transition area between water and land that allows for habitat corridors as well as the natural, meandering curves in a river or stream, slowing the speed of water and stabilizing stream banks.



Riparian zone diagram. (Dept. of the Interior)

Did You Know?

Riparian buffers are essential to feed, shelter, and provide travel paths to more than 95 percent of all terrestrial species in North America.

Why are Riparian Buffer Zones Important?

Erosion and Sediment Control: The dense root systems of a riparian buffer zone hold soil on the stream bank and helps to strap sediment flowing downstream that would otherwise become a contaminant. Sediment is a major contaminant in our rivers and streams, but it has been shown that **riparian zones are capable of retaining more than 300,000 pounds per acre, per year of sediment**.

Water Quality: Riparian zones also help to prevent water pollution. Vegetation in riparian zones function as filters—both to filter water flowing downstream and to filter the pollutants in stormwater runoff before it reaches streams and rivers. The USDA has studies showing riparian buffers **reducing nitrogen from agricultural runoff by 68%**.

Riparian buffer zone along a creek. Photo courtesy of USDA-NRCS.

Habitat: The diversity and concentration of vegetation within riparian zones provides habitat for a variety of animals and insects. Long, contiguous strips of riparian buffer can also **provide what are knows as habitat corridors for the migration of species** across large areas.

Flooding & Temperature Control: Riparian zones **help to absorb flood waters that would otherwise damage adjacent urban, forest or agriculture lands** and contribute to stream bank erosion. Shade from plants and trees within riparian zones helps to regulate water temperature.

References &Resources

The Architecture of Urban Stream Buffers
Center for Watershed Protection
www.cwp.org/Resource_Library/pwp.htm

Chesapeake Bay Program— Forest Buffer Restoration
www.chesapeakebay.net/forestbuffers.aspx?menuitem=14780

Connecticut River Joint Commission
Riparian Buffers
www.crjc.org/riparianbuffers.htm

River Keepers
Riverfront Restoration
riverkeepers.org/index.php/resources

USDA—NRCS
Buffer Zones
www.nrcs.usda.gov/feature/buffers/

US EPA
Office of Wetlands Oceans and Watersheds
Riparian Management
www.epa.gov/owow/nps/wetlands.html

Virginia Department of Forestry
Riparian Forest Buffers
www.dof.virginia.gov/rfb/index.shtml

Codes & Ordinances

Soil Erosion & Sedimentation Control
Alpharetta, GA—Sec. 5-101
Minimum requirements by using best management practices: An established undisturbed buffer on all state waters shall be recognized as the base flood elevation of the flood hazard areas inundated by 100-year floods...Where state waters exist but no base flood elevation or professional computation data are obtainable, a distance measured horizontally from the stream bank at five (5) times the width of the stream at the top of bank shall establish the undisturbed buffer.

Stream Buffer Requirements
Greensboro, NC—Sec. 30-7-1.8
Stream buffer widths were established in the Upper and Lower Randleman Lake Watersheds. A 0-30 ft. buffer and a 30-50 ft buffer zone were established with limits on disturbance and development for each zone. The 0-30 ft is to remain undisturbed and limited activities are allowed in the 30-50 ft zone such as utility lines and passive recreation.

Forest Buffer Standards for Streams, Wetlands and Floodplains
Baltimore County, MD—Sec. 14-341
- For a first or second order stream, the forest buffer shall be measured from the centerline.
- For all higher order streams, the forest buffer shall be measured from the stream bank of the active channel.
- For a use I or I-P stream the forest buffer shall be the great of the following: 75 feet, 25 feet from the outer wetland boundary or 25 feet from the 100-year floodplain reservation or easement boundary.
- For a use III, III-P, IV or TV-P stream (natural and recreational trout waters), the forest buffer shall be the greater of the following: 100 feet, 25 feet from the outer wetland boundary, or 25 feet from the 100-year floodplain reservation or easement boundary.

Model Ordinance Guides

Model Ordinances for Regulating Wetlands and Riparian Habitats / Stream Buffers
Association of State Wetland Managers
www.aswm.org/propub/jon_kusler/model_ordinance_051407.pdf

Model Ordinances to Protect Local Resources: Aquatic Buffers
U.S. Environmental Protection Agency
http://www.epa.gov/nps/ordinance/buffers.htm

Model Vegetated Buffer Ordinances
South Carolina Department of Health and Environmental Control
www.scdhec.net/environment/ocrm/pubs/docs/model.pdf

Protecting Stream and River Corridors: Creating Effective Local Riparian Buffer Ordinances
University of Georgia, River Basin Center
www.rivercenter.uga.edu/publications/pdf/riparian_buffer_guidebook.pdf