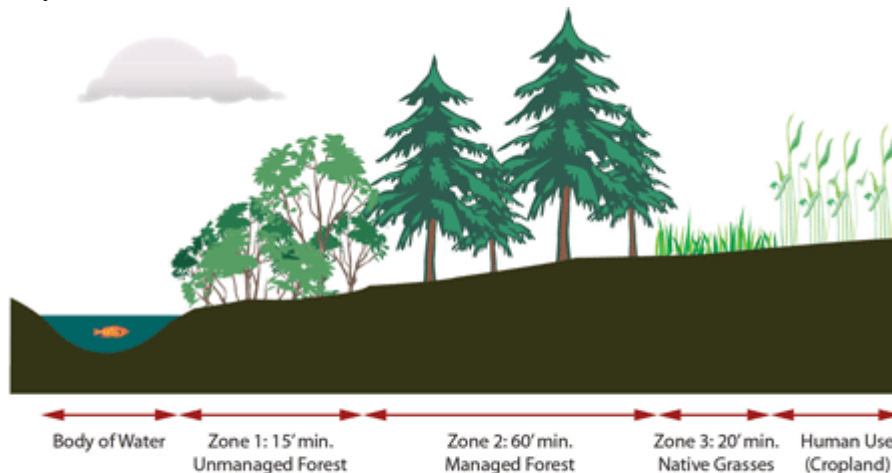


Edible and Woody Floral Agroforestry Riparian Buffers

By: Katie Trozzo & John Munsell, Virginia Tech; James Chamberlain, USDA Forest Service; Christy Gabbard & Kim Thurlow, Catawba Sustainability Center

Riparian buffers are streamside zones critical for water quality, soil retention, and habitat. Traditionally, these areas are devoted solely to conservation and planted with trees and shrubs. This method benefits the watershed as a whole, but does not fully account for the landowner's potential loss of productive land.

Edible and woody floral agroforestry riparian buffers offer landowners the opportunity to obtain products such as fruits, nuts, and woody floral stems from these riparian areas while still conserving water, soil, and habitat. Native woody plants with edible products include: black raspberry, persimmon, black walnut, pawpaw, blueberry, or basically any tree, shrub or vine which produces fruits or nuts. Native woody floral plants include trees, shrubs, and vines with colorful, twisting, or flower-laden twigs used in floral arrangements, such as curly willow, pussy willow, witch-hazel, and red maple. Both edible and floral plants have economic value and ready markets.



*USDA 3-Zone
Riparian Buffer
Planning Model.
Image from The
Virginia Outdoors
Foundation.*

The typical structure for an agroforestry riparian system is to plant fast-growing and flood-tolerant species in the first zone (15 feet from the stream bank). These species are not meant for production; instead their main purpose is to provide erosion protection, water quality enhancement, and habitat modification. The second zone is upslope from zone 1 and is a 60-foot managed buffer, where woody edible and floral plants can be grown. The third zone is a filter strip of grasses up to 20 feet wide, which can be grazed, hayed, or periodically mowed.

A demonstration of a native woody edible riparian buffer was planted in the fall of 2010 along with an edible roadside planting at the Virginia Tech Catawba Sustainability Center in Catawba, Virginia (www.vtrc.vt.edu/catawba). Catawba community members, VT Corps of Cadets, and VT students volunteered during the planting day. Another section of the Center's riparian buffer was planted in native woody florals in the spring of 2011. These projects were funded by the USDA National Agroforestry Center (www.unl.edu/nac).



**Volunteers plant and mulch a serviceberry tree.
Photo by: Courtney Kimmell, Virginia Tech.**

The Catawba Sustainability Center (CSC) is a showcase **for** university education and engagement with the local community – a place to practice, demonstrate, learn, and teach about sustainability issues that affect our world today and into the future. The CSC is an ideal place to demonstrate the economic and environmental benefits of these plantings. These plantings will continue to serve as a learning tool for faculty and students as they conduct further research and engage with the local community on the benefits, adoption, and implementation of these practices. A testimonial demonstrates a community member's view of the project:

"As a resident of the Catawba Valley and a member of Catawba Landcare (www.Catawbalandcare.org), I am always on the lookout for projects that will not only improve the health of our land but also the Catawba Valley community. By participating in the Edible Riparian Planting at the Catawba Sustainability Center I felt that I could both contribute and learn in ways that would benefit the Catawba Valley."

-Rob Guiles-

Edible and woody floral agroforestry riparian buffers provide a viable option for landowners interested in conserving their riparian areas while maintaining a source of production and revenue. For more information, please contact Katie Trozzo.

Resources

USDA National Agroforestry Center: www.unl.edu/nac; VT Catawba Sustainability Center: www.vtrc.vt.edu/catawba

Association for Temperate Agroforestry: <http://www.aftaweb.org/>

USDA NAC information on Conservation Buffers: <http://www.unl.edu/nac/bufferguidelines/>

Virginia Department of Forestry Publication on Riparian Forest Buffers:

<http://www.dof.virginia.gov/wq/resources/pub-rfb-forests-on-waters-edge.pdf>

- Katie Trozzo is a graduate student in the Department of Forest Resources & Environmental Conservation, Katie.trozzo@gmail.com;
- John Munsell is an Assistant Professor in the Department of Forest Resources & Environmental Conservation, jfmunsel@vt.edu, 540/231-1611;
- James Chamberlain is a Research Scientist, 540/231-3611, jchamberlain@fs.fed.us;
- Christy Gabbard is the Director of the Catawba Sustainability Center, 540/767-6114, cgunnells@vt.edu;
- Kim Thurlow is the Assistant Director of the Catawba Sustainability Center, kthurlow@vt.edu.