

## Riparian Forest Buffer

### Virginia Conservation Practice Job Sheet

391



#### Definition

An area predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.

#### Criteria

The riparian forest buffer shall be positioned appropriately and designed to achieve sufficient width, length, vertical structure/density and connectivity to accomplish the intended purpose(s).

Dominant vegetation will consist of existing, naturally regenerated, or seeded/planted trees and shrubs suited to the soil and hydrology of the site and the intended purpose(s).

The vegetation will extend a minimum width to achieve the purpose(s). Measurement shall begin at and perpendicular to the normal water line, bank-full elevation, or the top of the bank as determined locally.

Overland flow through the riparian area will be maintained as sheet flow.

For sites to be regenerated or planted, excessive sheet-rill and concentrated-flow erosion will be controlled.

Excessive sheet-rill and concentrated-flow erosion will be controlled in the areas immediately adjacent and up-gradient of the buffer site.

Use the Virginia Technical Note Forestry # 3, Tree and Shrub Establishment Guidelines, <http://efotg.sc.egov.usda.gov/references/public/VA/VATN3ForestryUpdate2014.pdf> and the Virginia Plant Establishment Guide, <http://efotg.sc.egov.usda.gov/treemenuFS.aspx>, for all recommendations for planting rates, species selection, planting methods and techniques and establishment dates.

For plantings and seeding, only viable, high-quality and adapted plant materials will be used. Use tree and shrub species which are native and non-invasive. All tree/seedlings for hardwood tree planting must be 18 inches tall or have a diameter of 1/4inch.

Favor tree and shrub species that have multiple values such as those suited for timber, nuts, fruit, florals, browse, nesting, and aesthetics.

Necessary site preparation and planting shall be done at a time and manner to ensure survival and growth of selected species for achieving the intended purpose(s). Refer to Virginia Conservation Standard *Tree Shrub Site Preparation (Code 490)*.

Periodic removal of some forest products such as high value trees, medicinal herbs, nuts, and fruits is permitted provided the intended purpose is not compromised by the loss of vegetation or harvesting disturbance.

Harmful plant and animal pests present on the site will be controlled or eliminated as necessary

to achieve and maintain the intended purpose. If pesticides are used, refer to Virginia Conservation Standard Pest Management (Code 595) or Herbaceous Weed Control (Code 315).

Volunteer species that exist onsite within the seed-bank will establish themselves. The establishment of these species is encouraged to promote a diverse and fully functional buffer.

Livestock shall be controlled or excluded as necessary to achieve the intended purpose. Refer to Virginia Conservation Practice Standards *Prescribed Grazing (Code 528)* and/or *Access Control (Code 472)* as applicable.

Establish plant communities that address the target aquatic and terrestrial wildlife and pollinator needs and have multiple values such as habitat, nutrient uptake and shading.

**NOTE: This summary does not address all requirements and considerations in the VA Riparian Forest Buffer Conservation Practice Standard (VA-391). Consult the Conservation Practice Standard for further details.**

# Riparian Forest Buffer – Practice Certification

391

Producer \_\_\_\_\_ Farm # \_\_\_\_\_ Tract # \_\_\_\_\_

Field Office \_\_\_\_\_ Contract # \_\_\_\_\_

### Producer's Purpose

- Create shade to lower and maintain water temperature to improve habitat for aquatic organisms.
- Create or improve riparian habitat and provide a source of detritus and large woody debris.
- Reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff and reduce excess nutrients and other chemicals in shallow ground water flow.
- Increase carbon storage and plant biomass and soils.
- Reduce pesticide drift entering the water body.
- Enhance aesthetics.

### Practice Specifications

- Forestry plan attached
- Forestry map attached

### General Prescriptions

Implementation and Management Prescriptions	Site Prep	Companion Planting	Available Seed Source at site	Number of Trees per Acre	Number of Tree Shelters per Acre	Tree Mats	Post Emergence Spraying
<b>Alternative 1</b>	Spraying to kill weeds/fescue	Yes <sup>2</sup>	Yes <sup>1</sup>	110 (20x20 spacing) <sup>1</sup>	Up to 100% of trees planted	No	Only needed if heavy weed/fescue pressure remain
<b>Alternative 2</b>	Spraying to kill weeds/fescue	Yes <sup>2</sup>	No	300 (12x12 spacing)	Up to 200 tree shelters per acre	No	Only needed if heavy weed/fescue pressure remain
<b>Alternative 3</b>	Strip or circle spraying for tree planting	No	Yes <sup>1</sup>	110 (20x20 spacing) <sup>1</sup>	Up to 100% of trees planted	No	Required spraying around tree shelters to reduce weed/fescue competition
<b>Alternative 4</b>	Strip or circle spraying for tree planting	No	No	300 (12x12 spacing)	Up to 200 tree shelters per acre	No	Required spraying around tree shelters to reduce weed/fescue competition
<b>Alternative 5</b>	Scalping fescue/weeds	No	Yes <sup>1</sup>	110 (20x20 spacing) <sup>1</sup>	Up to 100% of trees planted	Yes	Only needed if heavy weed/fescue pressure remain

Implementation and Management Prescriptions	Site Prep	Companion Planting	Available Seed Source at site	Number of Trees per Acre	Number of Tree Shelters per Acre	Tree Mats	Post Emergence Spraying
<b>Alternative 6</b>	Scalping fescue/weeds	No	No	300 (12x12 spacing)	Up to 200 tree shelters per acre	Yes	Only needed if heavy weed/fescue pressure remain

<sup>1</sup>Natural regeneration will likely occur where there is an available seed source at the planting site and will fill in the gaps to provide canopy closure. <sup>2</sup>If companion planting is seeded, tree mats are not necessary.

### Site Preparation

<input type="checkbox"/> Chemical application <input type="checkbox"/> Mechanical <input type="checkbox"/> Prescribed burning	Description of treatment: _____ _____
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### Planting Stock

- Natural Regeneration (If yes, show seed source on attached sketch.)
- Bare Rooted Seedling
- Cuttings (Usually for bioengineering projects.)

*Note: All tree/seedlings for hardwood tree planting must be 18 inches tall or have a diameter of 1/4 inch.*

<b>Field #</b>					
Alternative #					
Acres					
Existing land use					
Competing Vegetation					
Planting dates					
Aspect & Slope					
Planned species *					
Invasive species					
Soil drainage					
Soils type					
Natural Seed					
Source Species					

Are tubes and mats required?  Yes  No (If yes, please specify.)

Refer to VA Technical Note "Tree and Shrub Establishment Guidelines"

\*See *planting plan*

### Operation and Maintenance

- Ensure livestock cannot access the area.
- Invasive species should be located and controlled. It is more economical and effective if they are treated with herbicide when they are first detected. Check with the Virginia Cooperative Extension Service for the best herbicide to control your problem species.
- Controlling vegetation with glyphosate, or other recommended herbicide, within 3' of the tree is desirable.
- Check to see if there is a live seedling. For future reference, it is helpful to mark shelters, which do not have a live tree. They may re-sprout the second year.
- Straighten any leaning tree shelters and ensure the shelter is still 2-3 inches in the ground (if present).
- Replace any broken or rotten stakes or missing ties. Landowners can expect to replace 10 percent or more of the stakes in the first three years.
- Remove wasp nest inside the tree shelter. Nest can get large enough to block the growing seedling.
- Grass or weeds inside the shelter should be removed during the first 3 years. Do not pull up the clump of grass, since that can pull up the tree or damage tree roots. Raise the shelter, leave the soil in place and cut off the weeds or grass at ground level, then replace the shelter and seat it 2 to 3 inches deep.
- When the tree is within six inches of the top of the shelter the bird net should be removed on the tree shelter so as not to impede the growth of the tree.
- Shelters may be cut off when the tree is 2 to 3 inches in diameter at the top of the shelter, if necessary. Shelters must be rigid plastic with a perforated line that will split off with normal stem growth. Shelters should be checked to ensure no mold or fungus is growing on the bark inside the shelter, especially with yellow poplar seedlings.

#### Planner Certification

The Riparian Forest Buffer practice planned in this job sheet fulfills minimum requirements of Virginia NRCS Conservation Practice Standard 391.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

#### Certification of Practice Completion

The Riparian Forest Buffer practice planned in this job sheet has been completed and maintained according to Virginia NRCS specifications (indicate in Practice Specifications any changes to the planned activities and acreage).

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

