Frequently Asked Questions About Riparian Buffers

Riparian Consortium

What kind of maintenance is involved and who is responsible for it?

Specific maintenance will vary from site to site depending on pre-existing conditions. In general, short term maintenance procedures include vegetation control around the trees through mowing and spot spraying, invasive species control, insect and disease monitoring, and making sure tree tubes and netting are structurally sound. Seedlings generally do not need to be watered, but larger potted or "balled and burlapped" trees will need routine watering until they become established.

Long term maintenance includes similar procedures as short-term maintenance but less frequently, as the trees become more established. This includes continued weed and invasive species management, removing tree tubes before the tree trunk grows into them (even if they are perforated), removing bird netting once the tree is taller than the tubes, and insect and disease monitoring.

Responsibility for maintenance depends on the program being used and the agreement signed by the landowner. Some buffer programs cover some maintenance for a certain time period after the buffer is planted, such as 3-5 years while the buffer is in the "establishment" period. For example, the James River Buffer Program offers three years of maintenance for buffers and after that time period, the landowner is responsible for maintenance. Other federal and state programs may require that landowners maintain buffers throughout their lifespan.

Who will install the buffer?

It depends on the program that is being used, but buffers are typically installed by tree-planting contractors who handle site preparation and installation, like herbicide spraying, soil scalping, and tree planting. Some site preparation practices, such as mowing, may be the responsibility of the landowner. Occasionally, there may be NGO staff or volunteers planting on smaller sites or smaller sections of a buffer.

How much does a buffer cost?

The cost of a buffer will vary. Cost-share programs can help cover a significant portion of the cost associated with installing a buffer while others are completely free with no out-of-pocket costs. Other variables depend on acreage, size of planting stock (bare root vs. containerized), species selected, site preparation method selected, use of planting protection devices (tree tubes), and planned maintenance.

How will a buffer impact my property values?

In addition to providing "curb appeal" to most properties, established buffers can improve water quality, reduce erosion, and enhance wildlife habitat, which serves as an enhancement to the property. Installing buffers can also provide tax breaks for a property and enhance the resiliency of a property, which might help with flood or other insurance rates.

Will dead trees be replaced?

It depends on the program and agreement, but most likely yes. Most buffer plans and agreements will include replacement for vegetation that dies since a certain percentage of mortality is expected.

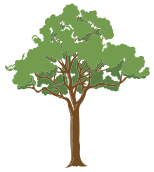
What is the survival rate of trees that are planted?

Different programs have different target survival rates, which typically range from 70-90% but all aim to have the highest survival rate possible. Survival rate depends on pre-existing site conditions, site preparation practices, what species are selected, proper planting technique, and follow-up maintenance.

What species will be planted?

A variety of species can be planted depending on the site, landowner goals, and the program. Typically, planted species will have a moderate tolerance to water and can be found naturally in floodplains and along waterways to provide maximum ecological value to the site. Common tree species include sycamores, red maples, and tulip poplars.

Types of buffers:



Hardwood
Most common

Red & silver maple, sycamore, river birch, willow, tulip poplar

Pine
Grow quickly

White pine, loblolly pine, shortleaf pine, Virginia pine

Pollinator
For bees & butterflies

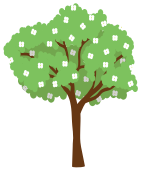
Black locust, redbud, black gum, button bush, serviceberry

Food-producing
For you & wildlife

Walnut, hazelnut, persimmon, paw paw, apple, plum, mulberry

Natural regeneration
Requires patience

Local trees seed an empty field, eventually turning it into a forest



Scenic
Preserve river view

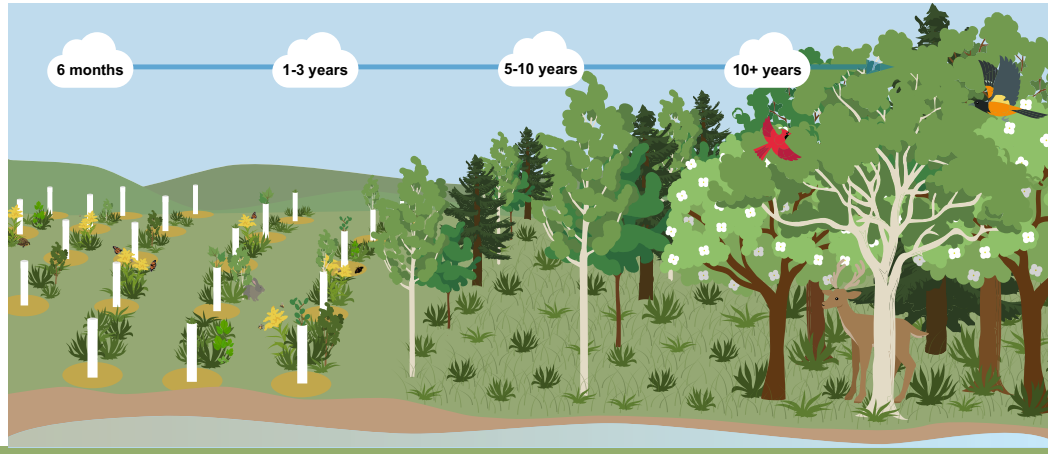
Short trees & shrubs like redbud, spicebush, buttonbush, witch hazel

What are those tubes?

The tubes, also called tree shelters, protect the tree saplings. During the early stage of growth, the trees are susceptible to deer rub and browsing, rodent damage, weather damage, and more. The tubes increase survival, helping trees mature to a stage where they are less vulnerable. Lastly, the tubes also act like mini-greenhouses, trapping heat and CO_2 to improve growth.

How long until it looks like a forest?

That depends on the species planted and your definition of a forest. Pines, sycamore, and maple are some examples of fast-growing trees and oaks are an example of a slow-growing species. A reasonable estimate is between 10 and 25 years for canopy closure, but the buffer will begin functioning like a forest before then (maintaining itself, providing benefits to the land and wildlife, etc.).



Can I plant fruit and/or nut trees?

Yes, depending on the program. Also consider whether the tree will grow at the site - only species that can tolerate riparian conditions and soils are viable options. There are several native riparian species that produce fruit and nuts for wildlife and humans such as paw paw, persimmon, elderberry, and hazelnuts.

Can I plant shrubs instead of trees?

The best option is to plant shrubs *with* trees, not instead of trees. Trees are uniquely suited to provide benefits because of the shade that they provide and their deep, extensive root systems. Shrubs add their own benefits to a buffer such as food and shelter for wildlife and are considered to be a valuable addition to a forested buffer.

How are weeds/invasives handled? Are herbicides used?

Harmful vegetation can be handled in a number of ways, including targeted herbicides for particularly stubborn invasives (only aquatic-safe herbicides will be used near riparian areas). If you have concerns about herbicides, ask your conservation professional what other options will be effective. They may suggest other methods including mowing, weed mats or stone mulch (crushed rock) placed on the ground around the trees, and pulling plants by hand.

Common nuisance plants include:

Canada thistle

Mile-a-minute

Tree of heaven

Japanese knotweed

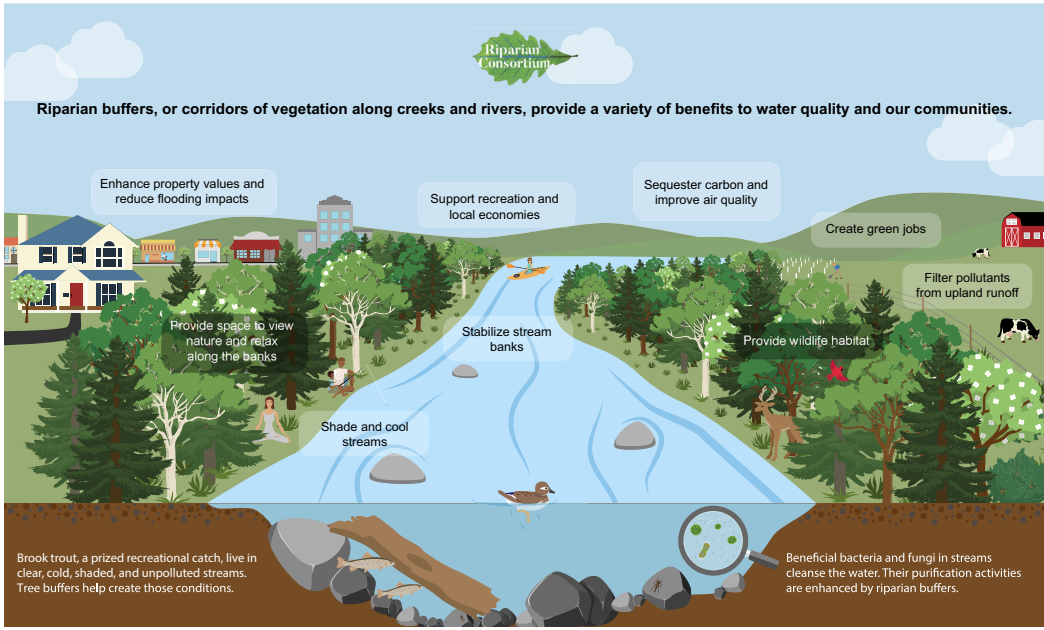
Reed canary grass

Kudzu

Why is installing a buffer important?

Buffers have important benefits for your property as well as the broader public. They reduce erosion of streambanks, provide wildlife habitat for viewing (like birds) or hunting (like deer), and shade the stream, making recreation near the stream more pleasant as well as improving the biodiversity of the stream.

Beyond your property, buffers store carbon and reduce pollution in runoff that can harm local streams. The water from these streams eventually reaches the Chesapeake Bay.



Where on my property will a buffer have the biggest impact?

Buffers have many benefits along any streamside! Areas to focus on will depend on your goals - for example, planting a buffer near a particularly steep area will stabilize the streambank and planting a buffer in an area that receives industrial, agricultural, or urban runoff will mitigate pollutants.

What does the process look like from start to finish (from idea to completed buffer)?

1. First, you'll need to find a program or contact your local conservation professional. In order to form the plan, the conservation professional visits your site and discusses your options with you.

2. Once you have a plan, the conservation professional (or you, depending on the program) selects a contractor to prepare and plant the site. The forester checks quality and suggest maintenance.

3. With proper maintenance (as detailed in FAQ 1) by the landowner, contractor, and/or volunteers (depending on the program), it takes about 10-25 years for the tree canopy to close. At this point, the buffer will look like a forest and require less maintenance.

How do I get started?

Visit the Landowner Resources section of the James Riparian Consortium website for more information about buffers, programs to help cover costs, and the Streamside Program Report Tool which will provide useful information specific to your property, including contact information for your local conservation professional.

To learn more:

jamesriverconsortium.org

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