

Riparian Forest and Herbaceous Buffers



There are a variety of federal, state and local programs to assist with the costs and implementation of vegetated buffers, including the NRCD program Trees for Streams (TFS).

What

Riparian forest and herbaceous buffers are a slightly more advanced version of a grass filter strip. These buffers utilize woody and herbaceous vegetation to similarly remove nutrients, sediment, organic matter, pesticides, and other pollutants from surface runoff and subsurface flow. While these buffers are typically not harvested, there are some species that may be incorporated into a buffer plan which have commercial value (elderberries, etc.). These types of buffers are very similar to what would naturally occur near a river and are a preferred method of protecting water quality.

Why

Riparian forest and herbaceous buffers serve a number of functions.

They capture sediment and filter runoff (e.g. pesticides and fertilizers) from agricultural fields and can provide wind shelter for crop fields. Riparian forest buffers, in particular, provide high quality fish and wildlife habitat by providing

stream shading, riparian cover and food resources and travel corridors. Finally, forested buffers increase the “roughness” alongside a watercourse, slowing floodwater flows, capturing sediments and nutrients and reducing streambank erosion rates.

How

Buffers widths vary depending on the stability of the river and the management considerations for the cropland or pasture, but a minimum 35 foot average buffer is needed to accomplish the goals of filtering nutrients and protecting riverbanks from erosion. Under Vermont AAPs, all farms are required to have a 10 foot minimum buffer from crop field and the ‘top of bank’ of an adjacent waterway. However, a minimum 35 foot average buffer is required under many state and federal cost-share programs. Under Vermont AMP’s forest landowners must maintain a protected riparian buffer along streams during harvesting operations. An area of native grasses and forbs may be added to a riparian buffer only for concentrated flow conditions, dependent on the site.

Site preparation and planting is typically done in the spring or fall to best ensure plant growth and survival, when soil moisture is most adequate for establishment. Species selected for planting should be suited to site conditions and intended uses, and have the capacity to achieve adequate density and vigor within an appropriate period to stabilize the site. Only high quality, native or adapted planting stock should be used. Species on the Vermont State listed noxious, invasive or watch list are not allowed.



Riparian forest and herbaceous buffers help with the proper filtration of nutrients, runoff and other potential surface water contaminants. They also provide shade, habitat and sustenance for aquatic life.

Costs

It is estimated that establishing a forested buffer can cost anywhere between \$1,000-\$2,000 per acre for the materials alone.

Associated and Complimentary Practices

- Grass Filter Strips
- Animal Trails and Walkways
- Livestock Exclusion

Benefits

