2022
WHITE RIVER ALGAE BLOOMS

what can we do?

Benthic algae, *cladophora glomerata*, has a strong ability to hold and store nutrients. Reduced spring and summer streamflow was identified as a major contributor to algal blooms across years. Several other factors including water temperature, nutrients, and streambed stability also contribute to increased benthic algal biomass. There are multiple solutions needed to decrease the algae, and it will take a community effort. One action we can take is improving the riparian buffer along the river.

Riparian Buffer Overview

The riparian buffer consists of natural, undisturbed vegetation from the edge of the stream bank throughout the area next to the stream (riparian zone). This strip of vegetation has a crucial role in the health of the environment. The vegetation itself is a tool for stabilizing the stream banks, which reduces erosion and offers shade cooling the water as it flows. The root system is able to trap and hold sediments while filtering other material from runoff, increasing the water quality.

Riparian Buffer Options

NO MOW BUFFER ZONE

Creating a "no mow" buffer. Moving the mowed area away from the riverbank a minimum 35 feet is one of the simplest steps a property owner could take.

SEED MIXTURE

Seed the area with a mixture tailored to the soil conditions. Over time, and without mowing, new plants grow in the buffer. This is an easy and cost-effective way to get a lot of diverse plants, but it takes time.

PLANTING NATIVE SPECIES

Planting a combination of native trees and shrubs is a great way to build a more established riparian buffer without waiting for seeds to mature.

Contact

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No Mow Buffer Zone

A no mow buffer promotes the reduction of sediment, organic material, pesticides, and excess nutrients both in surface and subsurface runoff. This is achieved through the filtration system in the plant. Having a 35-foot buffer zone extending from the bank is the minimal width for effectively supporting physical and biological needs of the river. Periodic mowing may be required to ensure quality of vegetation in the buffer while growing. Ensure a minimum of 8 inch stubble height.

Seed Mixtures

A native seed mixture takes more time but can be highly beneficial to the ecosystem. Select plant types and species that are adapted to the site that will provide structural and functional diversity for fish and wildlife habitat. Native species contain root systems suited to the area leading to lower maintenance requirements. Another factor to consider is the possible limitations of the maintenance and management of the species selected. The key to having successful growth is to plant during the recommended time the seed mixture instructions provide. Standards from the NRCS recommend the location, layout and density of the buffer compliment the natural features.

Planting Native Species

A typical riparian zone contains a mixture of trees and shrubs. The shrubs and trees provide shade cooling the water and stabilizing the bank with a deep root system. Planting native trees allows for a higher percentage of nitrogen removal along with the ability of native vegetation being able to store larger amounts of runoff and releasing it slower as it filters out the nutrients and sediment. When selecting plants, keep in mind the amount of light and water the location receives. Also consider the type of soil and necessary upkeep requirements.
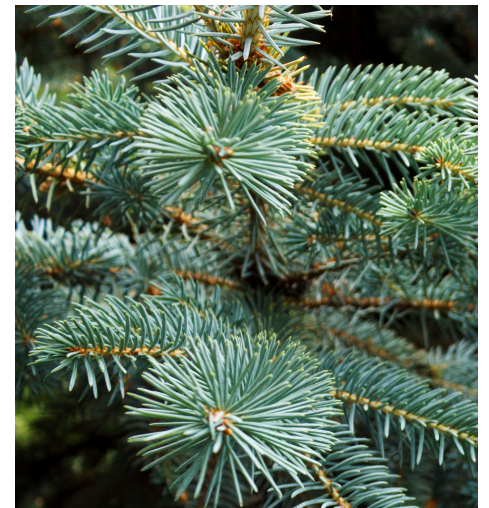
Resources

Protecting Our Waterways: Creating a Successful riparian buffer by Dan River Basin Association

Protecting and Enhancing Riparian Areas by Noe Marymor

NRCS eFOTG Filter Strips 393

NRCS eFOTG Riparian Herbacous Cover 390

NRCS eFOTG Riparian Forest Buffer 391

NRCS eFOTG Field Border 386

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