

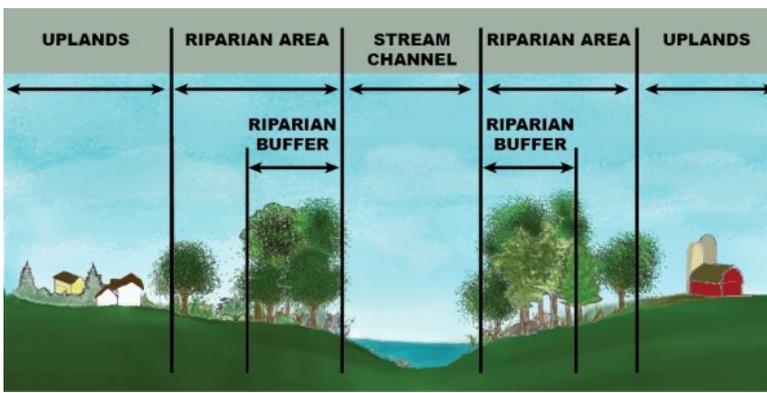


Conservation Practice Fact Sheet

Cooling Streams for Trout

Improving Trout and Wildlife Habitat - Minnesota is home to 3800 miles of trout streams with approximately 350 miles in Carlton County. The health of a trout stream relies on habitat, water quality and temperature. Trout, a cold water species, are sensitive to warm stream temperatures so a healthy habitat including a cooler water temperature is vital for their continued survival.

Planting trees in the riparian buffer limit how much solar radiation reaches the stream surface. As a result, water temperatures are lower and fluctuate less during hot summer days. Trees also provide woody debris for the stream, another important component of trout habitat. Depending on the landowner's objectives, plant materials can be selected to provide food, shelter and nesting areas for various wildlife species. Wider buffers enhance wildlife habitat while narrow buffers may provide a travel corridor.



Forested Riparian Buffers are plantings of trees & shrubs primarily for water quality, and fish and wildlife habitat purposes. Planted along streams, lakes and some wetlands, riparian buffers help to prevent pollutants from reaching surface waters. Benefits include:

- Protect water quality.
- Helps stabilize streambanks and shorelines.
- Provides shade, shelter and food for fish and other aquatic species.
- Provides habitat and travel corridors for diverse plants and animals.
- Establishing trees in riparian buffers is widely recognized as a tool for stabilizing stream temperatures and improving trout habitat.

Successful buffer establishment takes planning and maintenance. Our knowledgeable staff can help guide you through the planning process.

Call the SWCD office at (218) 384-3891



Lack of tree roots led to erosion resulting in property damage and soil clogging the stream.

Fun Fact:

Approximately three miles of stream are improved each year through cooperative efforts between the DNR, local angling groups, landowners that have sold easements, and other government agencies.



Healthy stream riparian buffer.

Did You Know?

Eroding streambanks send sediment downstream to clog lakes and destroy spawning habitat for fish and other aquatic life.

What is “Woody Debris?”

A stream is only as healthy as the variety of aquatic insects that can live there. An important factor for those insects is **woody debris** (leaves and twigs from stream side trees). Woody debris drops to the water supplying larva stage insects with shell building material. When these insect hatch into their flying stage, they lift off the water and land in streamside trees to dry their wings. The insects then live for a few days and return to the stream to lay their eggs starting the cycle over again. These aquatic insects in all their stages are vital food to stream trout.



Mayfly from a June hatch

Establishing a healthy diverse riparian buffer is difficult work and can take 8-10 years to accomplish. But once a good Riparian Buffer gets established there are ways to protect it and keep it in place.

What is a Conservation Easement? A conservation easement is a set of restrictions a landowner voluntarily places on his or her property in order to preserve its conservation values. The conservation values of the property and the restrictions created to preserve those values, along with the rights reserved by the landowner, are detailed in a legal document known as a conservation easement. This document is filed with the local county land records.



A conservation easement is conveyed to a government agency or nonprofit conservation organization qualified to hold and enforce easements. Most conservation easements are perpetual. They apply to the current owner and all future landowners, permanently protecting the property.

Each conservation easement is unique, specifically tailored to the conservation values of the land and to the particular situation of the landowner.

What are the benefits of a Conservation Easement?

- **Land Protection** - conservation easements are a cost effective way to protect land, costing much less than purchasing land outright.
- **A Living Legacy** - conservation easements give landowners the knowledge that their special place will remain an enduring legacy to their family and community.
- **The Common Good** - conservation easements contribute to the common good by protecting the land and water resources.
- **Financial Benefits** - conservation easements may reduce a landowner’s tax obligations.

The MN DNR Lake Superior Coastal Program addresses the coastal management goal of protecting and restoring the coastal area’s natural resources and habitats. The Carlton SWCD’s project targets riparian zone tree establishment and potential protection of these restored riparian areas with permanent conservation easements to provide water quality and habitat improvement benefits.

Call a Carlton SWCD Conservation Specialist at 218-384-3891 to learn more about this project.

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