PROJECT DESCRIPTION

The MRWP, along with ACRPC and the Otter Creek Natural Resource Conservation Service (NRCS) were awarded a grant through the Clean Water Act 2002 Pass Through Funds to conduct an assessment of the riparian buffer zones along the Middlebury River.

The goal of the project is to inform and educate the landowners of the benefits of programs and projects designed to maintain and increase shoreline habitat and to improve the vegetated buffer zone.

This brochure is designed to give landowners and citizens of the region a better understanding and appreciation of how a buffer zone works to maintain the health, stability and abundance of life in a riverine habitat.

This brochure will also describe some federally funded programs that your land may be eligible for, and give you some practical and useful ways to help keep the vegetation plentiful in the zone around the river.

What can you do to support a healthy river?

Research on buffer widths indicates that between 50 to 150 feet of riparian vegetation on each side of a channel is necessary. If you are a landowner in Addison County with property in certain riverine habitats, you may be eligible for federal assistance programs that create cost-share relief to improve the health and vitality of riverbanks.

SOME PROGRAMS LANDOWNERS MAY BE ELIGIBLE FOR

CREP/CRP

Conservation Reserve Enhancement Program (CREP) and the Conservation Reserve Program (CRP) allow the USDA to work with individual farmers that have erosion and water quality problems on croplands, marginal pastures and other sensitive areas.

WHIP

Wildlife Habitat Incentives Program (WHIP) allows the USDA to assist eligible landowners create and restore priority habitat types in Champlain Valley.

PFW

Partners for Wildlife (PFW) program is administered by the US Fish & Wildlife Service, and can assist landowners with habitat restoration practices such as riparian buffer improvement and wetland restoration.

What else can be done?

If you are not eligible for one of the programs described above, or want to do even more to improve water quality, there are a number of things you can do:

- Plant bundles of native species such as willows, silver maple, cottonwood and green ash along the riverbanks.
- Allow a natural buffer to form from the edge of your lawn at least 25 feet to the river. You can do this by simply not mowing to the edge of your property along the waterway, and watch as the native grasses and shrubs fill in to improve the health of the buffer zone and reduce runoff to the river.
- Re-position your home's rain gutter so that it drains to lawn instead of pavement.

Contact the Middlebury River Watershed Partnership (MRWP) for more information at 388-6746 x5 or mrwpcoordinator@yahoo.com.

RIPARIAN BUFFER ZONES

VITAL TO HEALTHY RIVERS & STREAMS

A brochure to educate and inform people within the region of the benefits of healthy riparian buffer vegetation and what they can do to conserve their land to improve water quality.

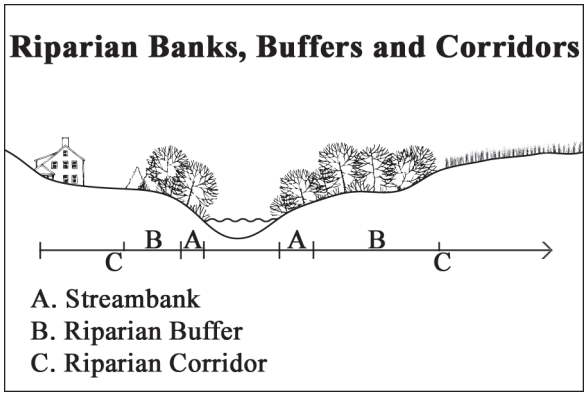
Addison County
REGIONAL PLANNING COMMISSION

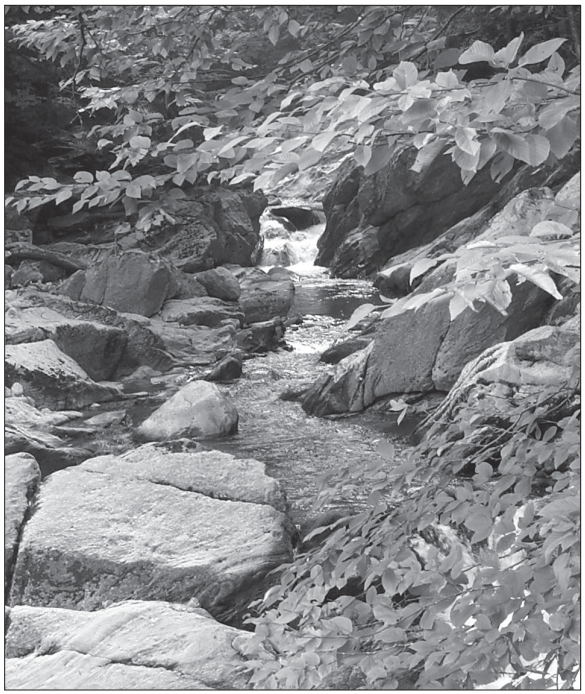
MRWP
Middlebury River Watershed Partnership

What is a Buffer Zone?

A riparian buffer area is defined as a belt of trees, shrubs and grasses located adjacent to and "up-slope" from a body of water.

A healthy buffer zone is a complex, highly productive ecosystem with a great deal of biodiversity.





What does a healthy buffer zone do?

The most important thing a buffer zone can do is help maintain the quality of water as safe and usable for the activities that Vermonters enjoy, like swimming, fishing and drinking clean water. The thick vegetation along the river or stream serves a number of purposes, all to benefit the landowner, the community and the health of the waterway.

REDUCES NON-POINT SOURCE POLLUTION

A well maintained buffer serves as a natural filter, reducing the amount of nutrients, sediments and chemicals that enter a stream or river.

Excess nutrients such as phosphorus and nitrogen come from many different human activities, such as lawn and crop fertilizer application and improper waste disposal.

Heightened levels of nutrients in a river can cause algal blooms, ultimately reducing oxygen levels and limiting the life of riverine organisms.

DECREASES FLOOD SEVERITY

The high velocity and load of rivers during floods can have overwhelming affects on the landscape, property and have the potential of resulting in human death.

The natural process of transpiration by plants, in which a plant soaks up water, nutrients and chemicals for use and storage, reduces the amount of water that will enter the river during a flood event. The soil and vegetation act together to create a "sponge" to help soak up the excess water.

Besides reducing amounts of runoff during a flood event, the velocity of the water is also slowed down as a result of the increased friction the groundcover provides.

STABILIZES BANKS AND REDUCES EROSION

Eroded streambanks are usually found on the outside corner of a stream or riverbed, cut into by the movement of the river across its floodplain. This cutting causes the sediment on the bank to scour off, increasing the suspended particles in the water and depositing the sediment to areas farther downstream.

Streambanks can also erode to a point that they threaten the foundation of structures, which could have deleterious affects during a flood.

Thick vegetation along the banks binds and traps soil particles together, reducing streambank erosion and limiting the river from meandering.

PROVIDES IMPORTANT HABITAT

With the increased canopy that trees and shrubs provide, direct sunlight is reduced, lowering the water temperature. Cooler water is able to absorb more oxygen then warmer water, and as a result the abundance of life found in the river can be increased with the higher oxygen availability.

Riparian buffers are essential to feed, shelter and provide travel paths for more than 95 percent of all terrestrial species in North America. In addition, the intricate root system associated with a healthy buffer zone provide essential habitat for spawning fish, and attracts many other fish, bird and mammal species.