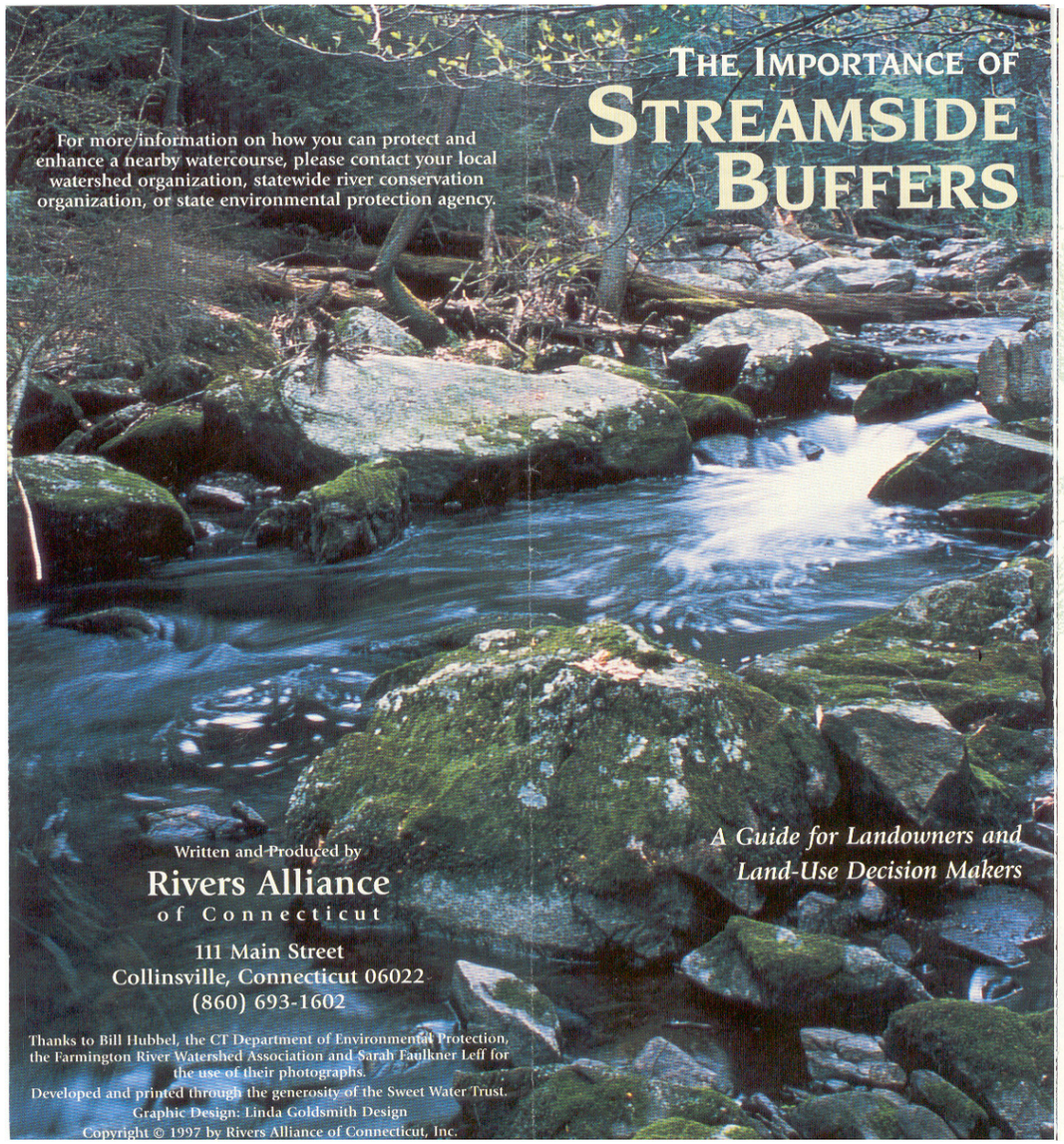

The Importance of Streamside Buffers

For more information on how you can protect and enhance a nearby watercourse, please contact your local watershed organization, statewide river conservation organization, or state environmental protection agency.

A Guide for Landowners and Land-Use Decision Makers

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Streamside Buffers

Rivers and streams are like the veins and arteries of our land. They nourish us, cleanse us, and carry away our wastes. Like the arteries in our bodies, our rivers and streams must be kept clean and healthy in order for us to live healthy lives in a clean environment.

Economical Protection of Our Communities

As we build new houses, businesses and facilities for people, we sometimes make changes to our landscape that cause expensive problems in the future. It is far more economical to prevent pollution and destruction of a river than to clean it up after the damage has been done. Luckily for rivers and other waterbodies, there is an easy, low-cost, efficient solution to many problems: by simply leaving a strip of natural plants along our rivers and streams, we can avoid problems that would be very costly to repair.

Known as buffers, these bands of vegetation help prevent flooding, stop erosion, absorb many kinds of pollution, increase our recreational enjoyment, improve our fishing, and support wildlife. And how do we receive all these benefits? By merely *not* changing what nature has already given us. Instead of expensive clean-up projects and government programs, we can make enormous improvements in our own water quality and lives by simply leaving well enough alone.

Buffers

What is a buffer? It is the land next to a river or stream. In its natural state, it has plants growing on it: trees; shrubs; and tall, coarse grasses. As the name suggests, these plants "buffer" the stream from anything that might flow into it — polluted water, eroding soil, or toxic chemicals. The roots of the plants hold the banks of the rivers in place, stabilizing the land and absorbing the water and materials that flow across the land.

Buffers are the green ribbons of life along the edges of our watercourses. Also known as "riparian areas," they range in width from a dozen feet to hundreds of yards wide. They support both land and water based animals, insects and plants, and are essential in the interrelated web of our natural world.

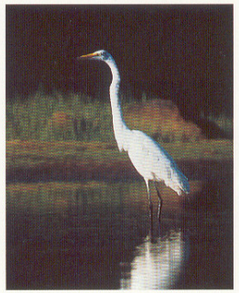
Buffers are easily affected by both natural and human-caused changes, and are easily destroyed. Yet, left in their natural state, they provide a tough barrier to pollution and help prevent damage to our rivers and streams. Unfortunately, too few Americans understand the importance of streamside buffers. Many people destroy buffers unnecessarily through lack of knowledge. Real estate developers clear plants for better views; road builders bury buffers underneath highways; engineers construct culverts, stream channels, and retaining walls over buffers; farmers often cultivate down to the river bank; and homeowners and timber harvesters clear trees right to the water line.

What You Can Do

Landowners can make an enormous difference for clean water by simply leaving or restoring a strip of native plants along their segment of river or stream. Width of the strips should be determined individually, considering slope, geography, and threats to the river. Local watershed or river groups, state environmental protection agencies or state river groups can advise landowners on buffer widths. In protecting stream buffers, there is little loss of use for land owners and no direct cost for not developing such lands. But the benefits are incalculable.

Controlling Erosion

As rainwater flows down hills and into our streams, it picks up and carries away any loose soil. Known as erosion, this natural wearing away of soil by water is accelerated by human activity. Loss of topsoil is damaging to farms, homes and businesses, and harms our rivers and oceans. Soil settling into our rivers chokes our clean streams, destroys fish and animal homes, and eventually winds up clogging our harbors and shellfish beds in our bays and estuaries. Yet erosion can be controlled simply by keeping a strip of natural plants along the banks of our streams and rivers. Such vegetation catches eroding soil before it reaches our watercourses. The roots of plants also strengthen and prevent erosion of stream banks, keeping water clean and maintaining stream channels.

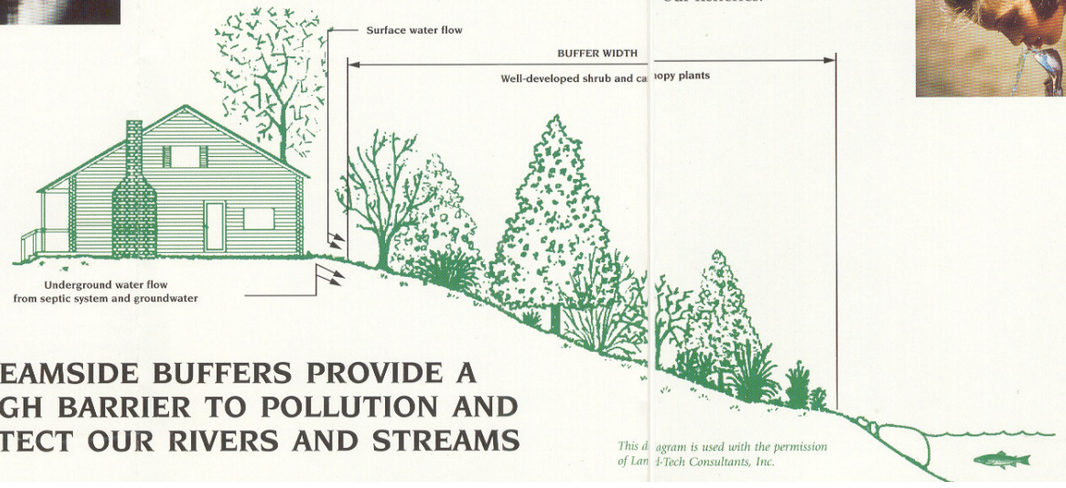


Providing Homes for Animals

Watching deer drinking from a stream or ducklings learning to swim are experiences that we all love. Yet animals like these cannot live without food, shelter, and paths to travel. The land around rivers and streams is very important for wildlife. Keeping a green border along our watercourses provides the travel corridors, nesting areas, feeding sites and protective homes for a great variety of animals.

Enjoying Our Rivers

Hiking, camping, picnicking and paddling along rivers brings joy to many of us. Our rivers and streams are most beautiful when in their natural state, cascading over rocks and surrounded by natural woods and fields. Pristine streams provide habitat for many species of wildlife, sitings of which give pleasure to us all. Buffers are vital to our pleasure in the outdoors. Rivers without plants on their banks lack the beauty, serenity, and peace that they bring to our lives.



Streamside buffers provide a tough barrier to pollution and protect our rivers and streams

This d agram is used with the permission of Lan -Tech Consultants, Inc.

Protecting Where Fish Live

Streamside forests help create homes for our rivers' fish. Fish cannot live in water that is either too hot or cold. The plants along streams shade the water, helping keep water temperatures from changing too much. Plants that fall into the water provide hiding and breeding places for fish. Leaves are a source of food for aquatic insects, which become the base of the food chain for fish and other animals. Maintaining a continuous planted buffer along streams is a critical element for our fisheries.

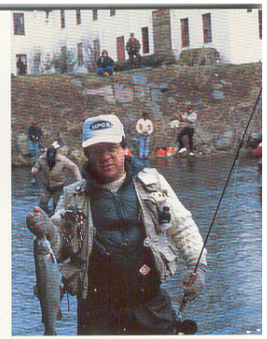
Strengthening Our Economy

Clean rivers and streams are an essential part of our economy. Tourism, fishing, boating, hunting, and scenic enjoyment are important to our quality of life and attract both residents and businesses. From safe drinking water to recreation, it is important that we keep our rivers and streams clean to benefit us all financially. The easiest and most cost-effective way to do this is to protect naturally vegetated buffers along our rivers and streams. Doing so costs us very little, yet returns immeasurable financial benefits. Through their natural functions, buffers help keep our water clean and prevent or reduce expensive cleanup.

Reducing Flooding

Water runs into our rivers and streams when it rains or snows. The rivers rise and flooding occurs naturally. Like a sponge, the lands surrounding our rivers absorb the rising and falling water. The plants in these areas help slow down the speed of the flood, store water for future use and slowly release the water back into the stream over a long period of time. If the lands around our streams are paved or developed and their plants removed, this natural protection against flooding is reduced. Without the natural, vegetated areas, flood waters will rise and fall suddenly and increase flood damage. Worse yet, loss of flood plains and stream buffers creates even greater flooding further downstream.

The opposite of a flood is a drought: a time when natural rainfall is very low and our rivers and streams start to dry up. Again, streamside plants and their buffer lands act like a giant sponge, helping to trap water when it falls and slowly release it into the streams. The role of buffers cannot be replaced in helping to maintain a base flow of water during dry spells.



Reducing Pollution

One of the greatest remaining threats to the nation's water is pollution that runs off the land without a particular source of origin. This "non-point source" pollution, includes oils, salt and sand from our roads, fertilizers used on our lawns and farms, and manure from our livestock. The most efficient and cost-effective way to keep these pollutants out of our water is to trap them before they enter our streams. Plants do this naturally. By simply maintaining a buffer of natural plants along our streams and rivers, many pollutants will be absorbed by the natural filter of trees, shrubs and grasses.