



# LIVING WITH THE RIVER

## THE IMPORTANCE OF RIPARIAN BUFFERS FOR YOUR LAND AND YOUR ENVIRONMENT

### WHAT ARE RIPARIAN BUFFERS?

These strips of grass, shrubs, and/or trees along the banks of rivers and streams filter polluted runoff and provide a transition zone between water and human land use.

Riparian buffers are the single most effective protection for our water resources in Vermont and New Hampshire. Buffers are also complex ecosystems that provide habitat and improve the stream communities they shelter.

### WHY ARE BUFFERS IMPORTANT?

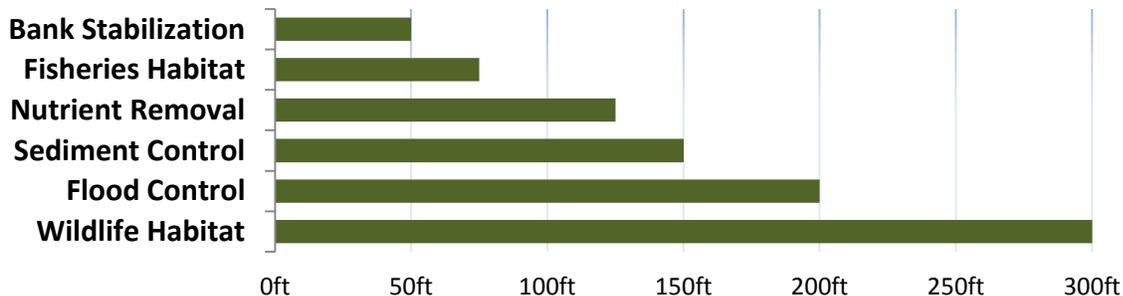
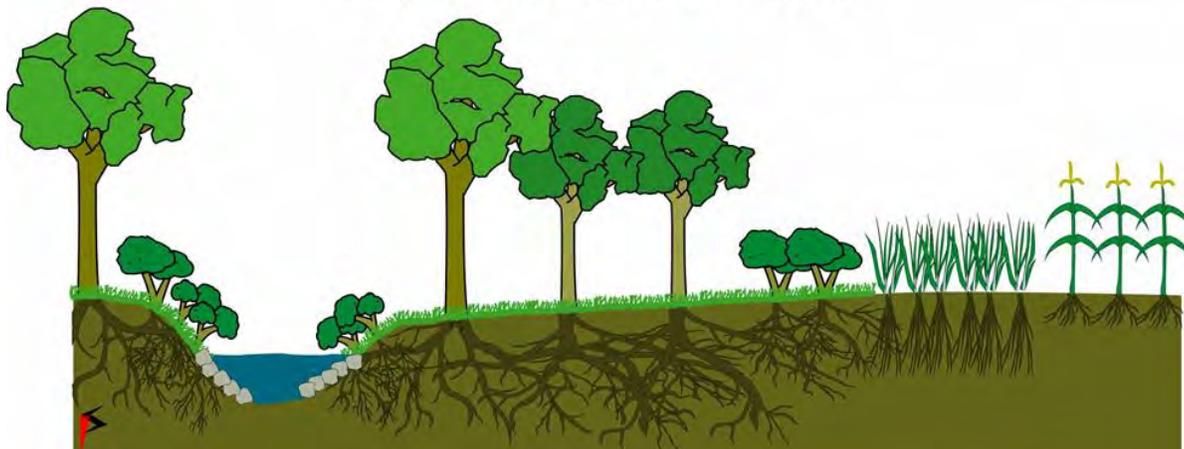
Natural riparian buffers have been lost in many places over the years. Restoring them will be an important step forward for water quality, riverbank stability, wildlife, and aesthetics in the Connecticut River Valley.

**Landowners, town road agents, local governments, farmers, and conservation organizations** can all help restore and protect the riparian buffers which in turn restore and protect the quality of our streams.

### HOW WIDE DO BUFFERS NEED TO BE?

The basic bare-bones buffer is 50' from the top of the bank. You get more benefit with every foot.

#### Riparian Buffer Widths



## HOW DO BUFFERS WORK?

### ■ *Filter Sediment from Runoff*

From 50–100% of the sediments and the nutrients attached to them can be absorbed as buffer plants slow sediment-laden runoff waters. Wider, forested buffers are more effective than narrow, grassy buffers.

### ■ *Filter Pollution and Chemicals and Absorb Excess Water*

Phosphorus and nitrogen from fertilizer and animal waste can become pollutants but 80–85% can be captured when sediment is filtered out of surface water runoff by passing through the buffer.

### ■ *Regulate Stream Flow to Recharge Groundwater*

By slowing the velocity of runoff, the riparian buffer allows water to infiltrate the soil and recharge the groundwater supply. This helps control flooding and maintain stream flow during the driest time of the year.

### ■ *Stabilize the Streambanks to Reduce Erosion*

Vegetation helps to stabilize streambanks as roots hold bank soil together, and stems protect banks by deflecting the cutting action of waves, ice, boat wakes, and storm runoff.

### ■ *Stabilize Stream Beds to Absorb Runoff*

Riparian buffers can also absorb surface water runoff and slow water velocity. When plant cover is removed, more surface water reaches the stream, causing the water to crest higher during storms or snowmelt.

### ■ *Provide Wildlife Habitat*

The distinctive habitat offered by riparian buffers is home to a multitude of plant and animal species. Continuous stretches of riparian buffer also serve as wildlife travel corridors.

### ■ *Support Aquatic Habitat*

Forested riparian buffers benefit aquatic habitat by improving the quality of nearby water through shading, filtering, and moderating stream flow. Cooler water holds more oxygen and reduces stress on fish and other aquatic creatures. A few degrees difference in temperature can have a major effect on their survival.

### ■ *Provide Recreation and Aesthetics*

Forested buffers are especially valuable in providing a green screen along waterways, blocking views of nearby development, and allowing privacy for riverfront landowners. Buffers can also provide such recreational opportunities as hiking trails and camping.



**For more information on living with rivers, see [www.crjc.org](http://www.crjc.org) Publications and Resources.**

#### **Some other great resources:**

Trout Unlimited - My Healthy Stream  
<http://www.tu.org/my-healthy-stream>

Watersheds United Vermont - Living in Harmony with Streams  
<http://www.watershedsunitedvt.org/resources/wuv-resource-directory>

NH Department of Environmental Services Shoreland Program  
<https://www.des.nh.gov/organization/divisions/water/wetlands/cspa/>