



Related Programs

* VT Lake Wise Program

A program which gives awards to shoreland properties which exemplify good lakeshore stewardship
amy.picotte@state.vt.us

* Conservation Reserve Enhancement Program (CREP)

A program which pays landowners an annual rate for retiring land from active use in environmentally sensitive areas
heather.mateja@vt.usda.gov

* Clear Water Carbon Fund (CWCF)

A program in which landowners are paid a small amount of money to allow trees to be planted on their land, offsetting the carbon usage of CWCF investors
info@clearwatercarbonfund.org

NorthWoods has been involved in water quality monitoring and riparian buffer restoration in the Memphremagog and Upper Connecticut River Watersheds since 2005, planting over 43,000 trees and shrubs during this time period.

Project partners have included the Orleans County Natural Resources Conservation District, NorthWoods Stewardship Center, Beck Pond LLC., VT Department of Environmental Conservation, Memphremagog Watershed Association, and local Lakes Associations and landowners.

Located in East Charleston on the banks of the Clyde River, the NorthWoods Stewardship Center is a non-profit dedicated to environmental stewardship through education and action. For more information about NorthWoods, visit

www.northwoodscenter.org



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The Memphremagog Watershed River & Lake- Shore Buffering Programs



*Planting for water quality,
planning for the future.*

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What is a riparian buffer, and why is it important?

A riparian buffer is a forested strip of land that borders any body of water. The presence of this vegetated buffer between human activity and the water has many benefits, including allowing streams and rivers to meander, improving aquatic habitat through shading and nutrient cycling, stabilizing banks to prevent property loss via erosion, and acts as a biofilter for runoff. Biofilters help to trap excess nutrients and sediment from entering water bodies, preventing eutrophication which occurs when excessive nutrients enter the water, leading to algae blooms. When algae populations spike in an aquatic ecosystem, the algae that die are decomposed by bacteria, a process which uses up more dissolved oxygen in the water. A low level of dissolved oxygen can lead to the deaths of aquatic organisms such as fish or macroinvertebrates.

Over half of the lakes in Vermont surveyed in a 2008 study had more than 50% of their lakeshore developed. Development creates more opportunity for runoff from agricultural practices, fertilized lawns, impervious surfaces such as roads and parking lots, and other human activities to enter lakes, leading to eutrophication and decreasing habitat quality for aquatic organisms and overall water quality within the watershed.



What can you do to help improve water quality?

Planting trees along stable stream banks and lakeshores to act as biofilters helps to prevent erosion and sedimentation, as well as many other negative impacts that human activities tend to have on the water quality in our water bodies, large and small. Various cost-share programs exist to make buffer planting possible, including the NorthWoods Buffer Planting (NWBP) and NEK Lakeshore Buffering (NEKLB) Programs, administered by the NorthWoods Stewardship Center.



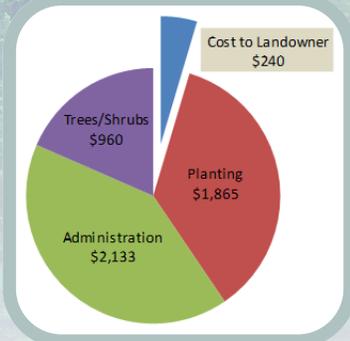
What are the NWBP & NEKLB Programs?

These programs are grant-funded riparian buffer revegetation programs which cover **80% of the cost of trees and shrubs planted, as well as the entire cost of administration, labor, and equipment.** All planning and planting is done in cooperation with the landowner by the NorthWoods Stewardship Center and volunteers.

Before a site can be planted, it must be assessed by a NorthWoods employee to determine if it is eligible for planting under the Ecosystem Restoration grant. Following this, a planting plan is developed and a written agreement is signed by the landowner.

The signed agreement states that (1) the plants will not be disturbed over the next 10 years, (2) NorthWoods staff can return to periodically assess the health of the trees and shrubs, and (3) the landowner will pay 20% of the cost of the trees and shrubs used for their planting. Native, wetland-adapted tree and shrub species are ordered in the fall, and planting occurs in the early spring once the ground has thawed enough to be dug (usually late April or early May).

The total cost to the landowner depends on the size of the planting area and the cost of the trees and shrubs used in the planting. As an example, for a 1-acre planting area, the average cost per tree is \$4 and the average number of trees per acre is 300. This means the total cost of purchasing the trees for this project is \$1200, of which the landowner will pay \$240. The total cost of this theoretical project, including administration and planting time, would be approximately \$5,200.



Although there are some spatial minimums required to achieve an effective buffer, we are pleased to work with landowners to balance aesthetics and recreational access with ecological and water quality values. Interested landowners within the Memphremagog watershed are encouraged to contact Meghann Carter at the NorthWoods Stewardship Center for more information or to schedule a site assessment:

meghann@northwoodscenter.org
(802) 723-6551 ext. 302.