



Preparing the Site

To Provide Suitable Conditions for Planting



Site preparation is a critical step in establishing native plants along your streambank or reservoir shoreline. Naturally, the approach you take will depend on the existing conditions on your property. This fact sheet provides suggestions for three types of existing conditions: pastures, lawns, or fields; early successional forests; and mature forests.

Pastures, Lawns, or Fields

If your property is a pasture, lawn, or field, the success of your waterfront landscaping will depend on controlling the existing grasses. If not managed, these grasses will compete for nutrients and water with your plantings. Two methods of grass control are selective mowing and herbicide application. The use of sod cutters or tilling should be avoided on streambanks and shorelines as these techniques can result in erosion or accelerate the spreading of the plant you are trying to eliminate.

In selective mowing, mow the area to be landscaped as short as possible. After mowing, plant your trees and shrubs and remove at least a 2-foot circle of grass from around each plant. Applying mulch around your plants will help control the growth of unwanted species and minimize maintenance. This approach requires occasional mowing and weeding for several years. As trees and shrubs mature, the canopy will close and shade out the grasses and understory vegetation that require full sun. Shade-tolerant understory plants like flowering dogwood and wildflowers can then be planted to complete your project. Leaving the leaves on the ground in the fall will improve soil conditions and decrease the mowing area.

The use of herbicides is another method of grass control that effectively kills most grass species. Consult your nursery, garden center, or agricultural extension agent for information about products and methods suited for your specific situation. Always use extreme caution when handling and applying herbicides. Follow the label directions exactly and keep in mind that more is not better. Many herbicides are not approved for use near water because they can harm aquatic life. Be sure to protect any desirable plants, as some herbicides will kill most any plant they contact. The dead turf should be left in place since it will help prevent erosion and provide organic matter as it breaks down. Plant your trees and shrubs through the dead turf. Herbicides may need to be applied seasonally to completely kill competing species and reduce maintenance.





Early Successional Forests

Succession is a natural process that a plant community experiences as it recovers from disturbances such as clearing or fires. A lawn or pasture will undergo this process if no longer mowed. Eventually, the plant community will recover and it will be similar to that which existed before the disturbance. This process can take decades to complete under natural conditions. During the early stages of succession, grasses, vines, shrubs, and sun-tolerant tree saplings will probably cover the site. The plant community may also be dominated by undesirable invasive species, many of which are exotic. Success in establishing your waterfront landscape plan will depend on controlling these invasive plants. As succession proceeds, trees and shrubs will provide shade needed for many understory plants to become established.

Even if your streambank or shoreline is an overgrown thicket of plants, it will probably contain desirable native plants. These natives are important for protecting the shoreline ecosystem, and preserving them can speed up your landscaping project and reduce plant costs. It is important to identify, mark, and protect these plants in an effort to incorporate them into your overall conservation strategy.

Once undesirable trees and shrubs have been cut, they may continue to sprout from the stump. An application of approved herbicides to the fresh cut or new sprouts may be necessary to eliminate these plants. This strategy leaves roots in place and will help stabilize the shoreline while your new plantings become established.



Using a weed removal tool (like the one shown in the photo below) is a method of extracting shrubs and small trees that minimizes soil disturbance. Tractors or other power equipment can be used to pull vines, shrubs, or small trees out of the ground. However, using heavy equipment is likely to cause extensive ground disturbance and lead to erosion problems.

You may have questions about whether herbicides or mechanical methods would work best in controlling undesirable plants. Your local nursery, garden center, or agricultural extension agent can provide information about products and methods suited for your specific situation.



Mature Forest

If your waterfront supports a mature forest, your job is easy. The first and most important step is to identify plants growing in the riparian zone. Retaining all native plants is a good way to protect water quality, prevent erosion, and meet many other objectives. If you must remove some plants, it helps to think carefully about your objectives before taking any action you may regret later. It can take a lot of time and money to put back what nature has given you. It is best to focus on removing the exotics and selectively removing only a limited amount of other vegetation necessary to meet your objectives. Shade-tolerant native species can be planted to replace any undesirable plants and enhance the site. Make sure that any new species you plant is suited to the existing environmental conditions.

