

## INVASIVE PLANTS

Non-native, invasive plants are quickly out-competing Maine's native plant species. For instance, purple loosestrife rapidly chokes out cattails in wetland areas. The loss of cattails in a wetland affects the wetland's functions of water storage, filtration, and flood control.

Non-native plants lack natural controls of their population growth. They often leaf out early, grow rapidly, and retain their leaves longer in the fall, using more than their share of nutrients and water from the soil. Without natural predators, the growth of non-natives is unchecked, and they soon dominate the site. The entire ecology of the habitat can be affected, leading to permanent changes in wildlife populations.

### **PLEASE AVOID PURCHASING OR PLANTING NON-NATIVE INVASIVE SPECIES SUCH AS...**

Japanese Barberry	Purple Loosestrife
Norway Maple	Bittersweet
Phragmites	Bamboo (aka Japanese knotweed)

### **MORE INFORMATION ABOUT NATIVE, NON-NATIVE AND INVASIVE PLANTS IN MAINE...**

[www.umext.maine.edu/onlinepubs/htmpubs/2500.htm](http://www.umext.maine.edu/onlinepubs/htmpubs/2500.htm)  
*Gardening to Conserve Maine's Native Landscape: Plants to Use and Plants to Avoid*

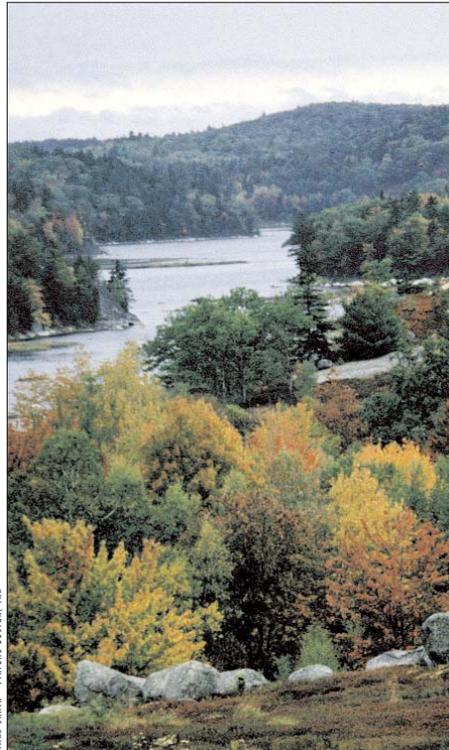
[www.umext.maine.edu/onlinepubs/htmpubs/2502.htm](http://www.umext.maine.edu/onlinepubs/htmpubs/2502.htm)  
*Native Plants: A Maine Source Listor*



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## VEGETATED PHOSPHORUS BUFFER STRIPS



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## VEGETATED PHOSPHORUS BUFFER STRIPS

### WHAT ARE THEY?

Vegetated phosphorus buffer strips are areas of natural vegetation that have been left undisturbed or are replanted to naturally existing species. These vegetative buffer strips are composed of trees, shrubs, bushes, and a thick duff layer (pine needles, bark mulch, etc.)

### WHY DO WE NEED THEM?

Where there are humans, there is nutrient pollution. The way we live tends to over-nourish and pollute our environment. Fertilizers wash down over our carefully graded lawns directly to the lake. The oils and greases from our cars are rinsed off our driveways and roads down to the lake. We rest and play along the lake and our foot traffic tramples the vegetation. We park our cars and launch our boats as close as possible to the lake – our heavy vehicles compact the earth until it's as hard and impenetrable as asphalt. Our lifestyles are hurting the lake.

Vegetated buffers provide a filter and percolation area for the runoff that comes from our home and play areas. The vegetation in the buffer uses the nutrients carried in the stormwater as fertilizer. If the nutrients reach the lake, the aquatic plants will use them and an algae bloom can occur.

Vegetated buffers are designed so that the nutrients are used by land vegetation rather than by lake algae. If you own property on Sebago Lake, the water quality of the lake directly impacts you. If water quality deteriorates, the value of your property decreases.

Boating and swimming through pond scum becomes less attractive. Fish populations can decline or be killed off completely.

Most residents of the greater Portland area are also directly impacted by Sebago Lake water quality—their supply of drinking water. Algae growth causes taste and odor problems. Correcting such problems, if they can be corrected, will require increased costs to consumers.

### WHERE SHOULD BUFFERS BE LOCATED?

Vegetated buffers need to be placed between people and the lake. We need to filter the stormwater runoff from our houses, garages, driveways, roads (both paved and gravel), and road ditches through flat vegetated areas. Lakeside parking areas and playing fields should drain through a buffer, too.

Equally important are the streams that flow into the lake. They also need to be protected by leaving vegetated buffer strips next to them.

*You can preserve your view, stabilize your property, and protect the lake with attractive landscaping!*  
**Contact PWD or CCSWDC for ideas about constructing beautiful, functional vegetated buffers, using native plant species.**

## BUFFER BASICS

### TAKE ADVANTAGE OF NATURAL FEATURES.

- Leave the depressions and irregularities in your lawn. Don't grade it to drain directly into the lake.
- Don't mow down to the edge of the lake. Leave as much shrub and tree growth as possible between the lawn and the lake.
- If you have flat wet spots on your property, use them. Deliberately filter roof, driveway or road runoff through them. Don't mow these areas – let them grow up naturally.

### REDUCE THE IMPACT YOU'RE MAKING NOW.

- For new construction, minimize the amount of roof, driveway, and parking area (impervious surfaces)
- Minimize your lawn area (don't mow as much.)
- Minimize bare areas by defining and limiting your parking area, beach area, and footpaths. Be sure footpaths to the lake are kept narrow (6 feet or less) and winding (not a straight shot to the lake which would channelize the water). Stabilize heavily trafficked areas with wood chips, bark mulch, or some of the newer erosion control materials (some of these can support car traffic and still allow grass to grow up through them).
- Tell your family and visitors about why it's important to protect the vegetation (don't forget the kids!). Make them familiar with the recommendations from "For Your Lake's Sake."

## PLANTING A VEGETATED BUFFER

### COMPOSITION

Select a variety of trees, shrubs, and ground covers to be used in your buffers. All of these types of plants should be included because in combination they take up the most water and nutrients. To make the best choice, look at what is already growing in your area and try to replace it.

In areas where the view of the lake is desired, the predominant plantings can be shrubs. Keep the opening in the tree canopy small! Be aware that when you eliminate trees you also reduce the quality of the buffer for deflecting rain-drops and taking up nutrients.

The natural duff layer that occurs in a forest needs to be replaced also. A thick layer of mulch material such as bark mulch can be used. In a pinch, a grass mix, along with a good hay mulch, will temporarily protect the area between trees and shrubs.

### WIDTH

Buffers range in width from 25 feet to 250 feet. Do the best you can to make it as wide as possible.

### GRADING

In general, leave the buffer as irregular as possible. However, if water is channelizing through it in a small stream or ditch, this should be changed. Water must flow through the buffer as sheet flow (think of it as a thin film of water only about  $\frac{1}{8}$  inch deep at most) for the buffer to be able to treat stormwater runoff.

If the site previously had a lot of foot or vehicle traffic, the soil will need to be loosened up before planting can occur. Plants can't grow in soil that is too compacted.

### LOCATION

Refer to figure 1 for guidance as to where buffers should be located.

### PLANTING INFORMATION

For general information about planting, refer to #6 in fact sheet "Trees, Shrubs, Vines and Ground Covers- General Planting Guidelines".

### SOURCES OF PLANT MATERIAL

Area nurseries, Soil Conservation Districts.

### FOOTPATHS

Foot traffic to the lake through the buffer should be limited to a winding path 4 to 6 feet wide at the maximum. Stabilize the footpath with bark mulch, etc.

**Landowners in the Sebago Lake Watershed may be eligible for discounts from area nurseries on planting materials used for installing vegetated phosphorus buffer strips. Contact the Cumberland County Soil & Water Conservation District (856-2777) or the Portland Water District (774-5961) for more information.**

## PROTECTION AND MAINTENANCE

- Don't allow vehicles to cross the buffer.
- Restrict cutting and thinning of vegetation in the buffer as much as reasonably possible. Some cutting is vital to preserve the health of the forest. Contact a local forester and use the standards from the new Shoreland Zoning Ordinances.
- Inspect the buffer annually and repair channelization and erosion problems.
- Don't rake the duff layer- leave it undisturbed.

FIGURE 1: PROTECTION AND MAINTENANCE

