

Enhancing Your Buffer

Whether you live on a river, have a stream on your property, or just like to sail, everyone wants to enjoy clean and healthy waterways. Planting in the Buffer benefits everyone by improving shoreline conditions.

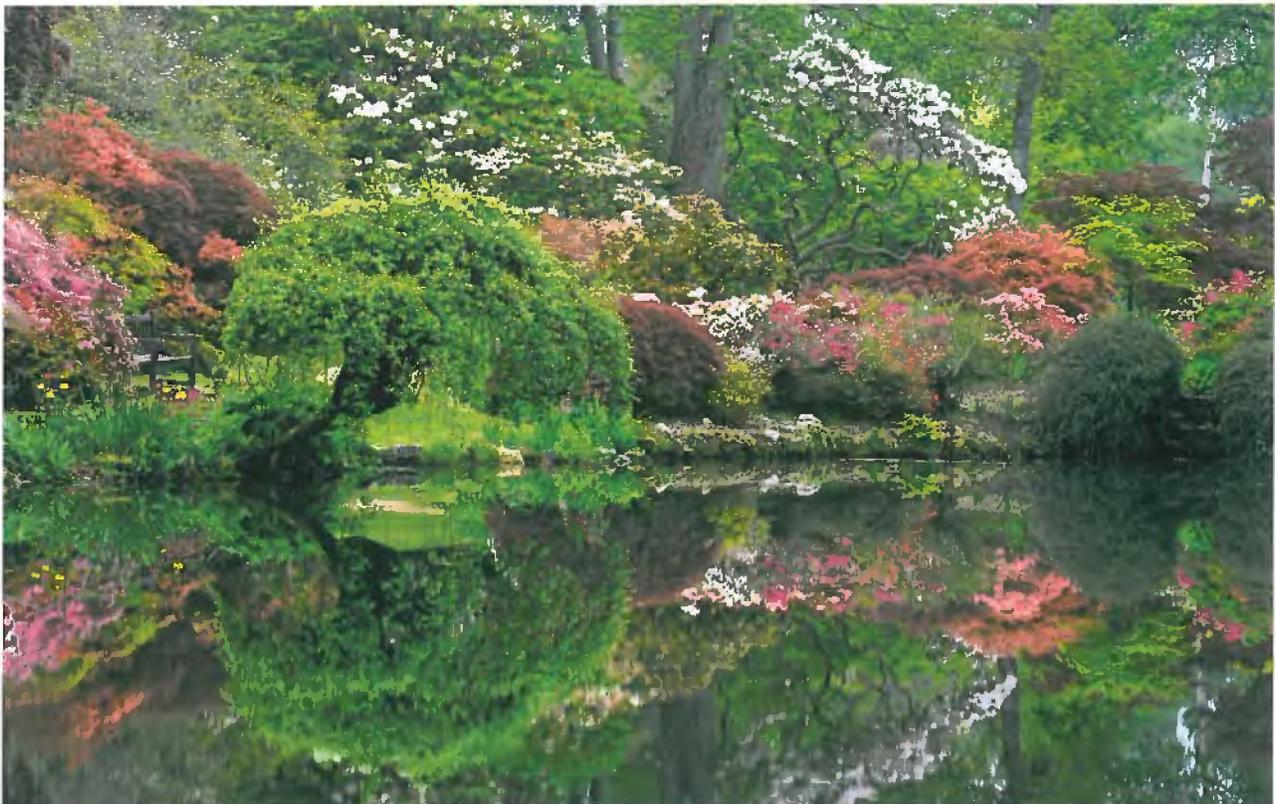
Even if you already have trees in your Buffer, planting native shrubs and herbaceous plants enhances the capacity of your Buffer to provide water quality benefits to adjacent streams, creeks, and rivers. Increasing the number and variety of plants in your Buffer also benefits wildlife species by increasing food, cover, and nesting areas.

Native Plants Improve the Buffer

Native plants are those plants that grow naturally in a specific region or geographic area. In Maryland, hundreds of native tree, shrub, grass, vine, and herbaceous plant species are considered native to the "Coastal Plain." Many of these native plants have beautiful flowers, berries, seed pods,

or cones. These plants will enhance any garden, whether the design is formal or natural. If there are already trees in your Buffer, you can plant shrubs, herbaceous plants, and groundcovers between them. This will improve the water quality and habitat benefits of your Buffer by providing different layers and forms of plants.

Removing an area of lawn and planting native plants in its place provides multiple benefits at the shoreline. It promotes infiltration, increases habitat, eliminates the need for fertilizers and pesticides, and reduces the time you spend mowing. It also helps your yard to function more like a natural forest. Encouraging your neighbors to enhance the shoreline habitat on their properties can help to build protective vegetated corridors that are essential to maintaining healthy wildlife populations. Every square foot of Buffer planted increases the benefits to Maryland's waters and wetlands.



Using a variety of plant types in the Buffer improves structural diversity, which is an important characteristic of healthy forests.



Many native herbaceous plants are quite hardy and spread naturally, blanketing areas with beautiful flowers.
Photo by Ann Rohlfling

Native plants are ideal for planting in the Buffer because they have adapted to the soil, water, and climate conditions in the Chesapeake and Atlantic Coastal Bays' watersheds. These species are easier to grow and, once established, generally require less maintenance than non-native plants. This can be very important during drought conditions, particularly if your planting area is large, and water is not readily available. Some native plants, particularly grasses and herbaceous species, will go dormant during severe conditions and appear to be dead. However, the roots of the plants will stay alive, and the plant will begin to grow again when

conditions change. Many herbaceous plants, vines, and ferns will disappear completely during the winter months but will emerge in the spring.

Buffers Provide Quality of Life Benefits

In addition to the natural resource benefits that Buffers provide, they can also enhance your enjoyment of your property. Densely planted trees and shrubs absorb sound and reduce noise levels from nearby roads and surrounding development. Trees and shrubs can also be strategically placed to provide privacy and screening, creating a "garden sanctuary" near the water. Many waterfront communities are densely developed, so planting areas of lawn with trees and shrubs provides separation and can enhance outdoor living space.

Planting can also provide "microclimate" benefits. Trees provide cooling shade in the summer and can block cold, gusty winds in the winter. The "evapotranspiration" process of trees and shrubs, whereby water moves through plants and is evaporated into the air, actually can make the air temperature feel several degrees cooler. This is why you feel more comfortable on a hot August day when you are standing in a forest as opposed to being near a busy street. Plantings also moderate heat absorption and glare reflection associated with smooth surfaces like rooftops and pavement.

Trees and Shrubs Can Frame Views

Beautiful views of the shoreline, a beach, or a tidal marsh are one of the many benefits of living on the water. Although it may seem that planting in the Buffer could block water views, this does not have to be the case. The arching branches of mature trees and interwoven forms of large and small shrubs can frame a view and provide a unique vista. The leaves of different species of trees and shrubs can create a beautiful mix of colors, patterns, and textures. They can surround and direct a view through the Buffer. The varying tree and shrub forms provide a much more interesting (and ever changing) perspective than the somewhat austere and monotonous appearance of an area of turf grass that ends abruptly at the shoreline.

When planting in your Buffer, it is important to consider the mature height, structure, and form of the trees and shrubs that you are planting. You can use taller trees to frame a view, particularly if their branching structure is relatively open. Species like oaks are ideal for surrounding views and can be pruned, if needed, to create larger openings.

Lower-growing shrub species can be planted between taller trees in order to direct a view to a focal point or to the water. Smaller shrubs can be used to maintain an opening for a view, while still establishing riparian forest cover. Many native shrub species are quite hardy and can be pruned regularly. Low-growing ferns, vines, and flowering perennials can also be used to establish and build a functioning forest Buffer, thus helping to stabilize the shoreline, promote infiltration, and improve soil health.

Different Plant Types Improve Structural Diversity

Many waterfront lots do not have a naturally forested Buffer. In some instances, there may be isolated trees and shrubs growing in turf grass in the Buffer, but the presence of a community of plants of varying heights, sizes, shapes, and forms is lacking. Structural diversity is the term used to describe this combination of different types of plants growing together at various heights in a forest setting. Ideally, a riparian forest has a canopy layer, an understory layer, a shrub layer, and an herbaceous layer with natural duff covering the ground. The mixture of species will vary depending on site conditions. Often areas with a mature canopy will have a sparser herbaceous layer than areas with younger trees because the dense canopy shades out other species. Some areas may develop a dense shrub layer because the soil type or moisture conditions are not as conducive to deeper rooted species.

There is no single exact combination of plant types that will work perfectly on a specific site. Usually, many planting options will work on any site. When deciding what to plant in an unvegetated Buffer, the following general design standards will work on most sites: 1) approximately half of the area to be planted should be canopy and understory trees; 2) about 40 percent of the area can be large and small shrubs; and 3) the remaining ten percent can be groundcovers, vines or herbaceous plants. If your Buffer has some existing vegetation, additional plants can be added to improve its natural resource value. Adding a row of native shrubs along the edge of your lawn can provide an attractive transition to a more natural forest. Planting a four-foot to six-foot wide strip with small shrubs and herbaceous plants can create an attractive border to an area that you decide to stop mowing and allow to naturally regenerate. It is important to remember that many herbaceous

plant species are dormant from November to March so the benefits that they provide during the winter are limited.

Species Variety Improves Resilience

Selecting a variety of plant species not only promotes structural diversity in the Buffer, but also ensures the long-term health and vitality of your planting area. In natural systems, resilience is the ability to recover rapidly from adverse conditions. Planting several different tree and shrub species improves resilience. This helps to decrease the likelihood that a disease, such as Dutch elm disease, or a pest that targets certain species, such as the Emerald Ash Borer, will destroy your Buffer.

Using a variety of species also mimics the way natural forests grow and mature. A walk in a mature forest (one that has been growing 30 years or longer) is an easy way to observe the variety of species that occur naturally. You may notice that there are several different canopy tree species, understory tree species, and large and small shrub species. The species present will vary depending on the seed sources, moisture levels, soil types, sunlight, and exposure.

Planting both deciduous and evergreen species provides different types of food and forms of cover for wildlife. Evergreen species also enhance the water quality function of a riparian Buffer because the needles or leaves are present during the winter months when deciduous trees and shrubs are bare.

Attracting Wildlife

One of the objectives in planting, enhancing, and protecting forested Buffers adjacent to waterways is to enhance habitat. Planting in the Buffer or allowing this strip of land to naturalize can allow it to function as a wildlife corridor. Even in a developed community, a forested Buffer can provide a way for wildlife to move from one forested tract to another. Strips of forest provide protection from both the weather and predators. In general, a wider area of forest provides more benefits to a larger number of species.

Buffers planted with native trees, shrubs, and herbaceous plants can provide the food, water, cover, and nesting areas that wildlife need. Different wildlife species have different food and habitat requirements, so a variety of plant species will attract a variety of wildlife species. Wildlife

species may eat the twigs, leaves, or stems of plants, as well as any berries, nuts, or seeds that they produce.

Making the Buffer as natural as possible is essential to attracting wildlife. Many wildlife species use dead trees or brush piles in the forest. If possible, dead trees should be left standing so that they can be used by wildlife species, such as bluebirds, that nest in cavities. Dead trees are also an important source of food for many woodpeckers. A brush pile can be hidden behind shrubs and provides a way for limbs and branches to decompose naturally rather than being added to a landfill.

The Creative Touch

The many habitat and water quality benefits of Buffer Gardens are emphasized throughout this book; however, Buffer Gardens also offer aesthetic benefits and opportunities for creative expression. The trees and shrubs that provide the structural framework of the planting area form the foundation of the Buffer Gardens in this book. These are the permanent features of the garden, although they will change with the seasons and over time as the plants mature. Many flowering trees and shrubs boast beautiful berries during the winter months, providing striking color on bare branches when viewed against a backdrop of dark green evergreens.

You can highlight, enhance, supplement, and personalize your Buffer Garden in a variety of ways. Seasonal touches can be added by using colorful annuals that complement the landscape and enable the gardener to change the “look and feel” of the garden. (Herbaceous perennial plants can also be used, just make sure that they are native species or, at the very least, are not invasive.) Depending on the wildlife in your neighborhood, you can choose natural ornaments (pumpkins, gourds, driftwood, or an interesting stone) to provide a focal point or add interest. Garden ornaments and small sculptural elements can also be placed in your Buffer Garden. Select those that are sturdy, stable, and weatherproof as the shoreline location may expose them to salt spray, wind, and harsh sunlight. Make sure that they are small enough (no more than two square feet) that they do not require any type of footing or foundation and that they do not interfere with plant growth or natural infiltration.

A Buffer Garden provides many opportunities for self-expression, both in the selection of the basic plan itself and in the choices of plants within it. Don't be afraid to try different plant species, or to add or move plants to suit your needs and your site. Remember, your Buffer Garden will grow and change over time, providing endless opportunities to make adjustments and create a new look.



Even a small Buffer garden can provide habitat for wildlife that surprise, amaze, and delight us.