

## Sustainable Landscaping – What is Conservation Landscaping?

Habitat fragmentation began in North America when humans began transforming diverse forests and grasslands that once covered the continent into plant crops and create cities to live. This left suitable islands of habitat that many plants and animals found refuge. However, as time went on and the human population grew, fragmentation of our remaining forests and prairies continued, which reduced them into smaller scattered patches that often are not able to sustain a diversity of plants and animals. These tiny islands of habitat often have high rates of species extinction, which leaves a void to be filled. This void is often filled by non-native invasive species of plants, further reducing diversity. Ecosystems which lack biological diversity, have less energy flow and therefore produce less plant and animal biomass by weight. From only a human perspective, this reduces ecosystem services for us such as creating more fish, lumber, and oxygen, filtering water, sequestering carbon dioxide, buffering weather systems, just to name a few.

The landscape of a typical suburban home in Lake Ridge consists primarily of a lawn composed of non-native grass species with a tree or two and foundation shrubs that are typically non-native, which lacks diversity. An average homeowner spends about 40 hours/year cutting grass, using a quart of gas per hour. *Per hour of operation for small gas-powered engines used for lawncare emit more hydrocarbons/hour than a typical automobile 10 times, 21 times more for a string trimmer and 34 times more for a blower. In addition to time and money spent mowing, turf grass also requires frequent over seeding, aeration, high inputs of water (often overapplied), pesticides and fertilizers (often applied at a rate 10 times higher than in agriculture) that pollute our streams and rivers, creating dead zones in the Chesapeake Bay. A typical yard with ¼ acre of turf requires approximately 10,000 gallons of water per summer to stay green, which accounts for well over 30% of water used on the East Coast.*

Fortunately, our community still contains forest fragments on both individual lots as well as common ground that can be expanded upon to increase habitat necessary to support many species of plants, mammals, reptiles, birds, and invertebrates. In fact, there are many things the average homeowner can do within the confines of their property (no matter how big or small) to increase the size of habitat within the boundaries of their property, helping reconnect them to other forested areas of the community. This can be achieved through the practice known as “**conservation landscaping**,” which can be defined as landscaping with specific goals of reducing pollution and improving the local environment. Conservation landscaping requires much lower maintenance over the long term and can still provide a “maintained” and much greater visual interest than turf. The incorporation of native plants, vines, shrubs and trees into your property will provide a habitat for local and migratory mammals and birds, while also improving water quality. Since native plants are adapted to our local climate and growing conditions, they generally require less inputs of water and fertilizer. Native plants are also better able to resist insects and diseases, making it less likely they will need pesticides. Native wildlife has evolved with native plants and is therefore reliant on them for food, shelter and rearing their young, which cannot typically be provided by non-natives. It is also important to note that conservation landscaping can be used as a solution to address erosion, poor soils, steep slopes, or poor drainage.

The following conservation landscaping practices are recommended for homeowners interested in creating a more sustainable landscape that will help increase ecological diversity within our community.

- **Reduce lawn areas** – Replace turf areas with native plants by creating or expanding existing landscape beds.
- **Have an overall vision** - Draft a sketch for your entire yard before starting the project. Start with a small area and expand over time.
- **Use native plants** – Start by using native plants to replace any aggressive non-native invasive plants, then continue by replacing other less aggressive non-native plants that may be dead or dying.
- **Avoid non-native species** – Non-native species may be invasive, so should be avoided. They have not naturally competitors, such as insects, so can spread rapidly and outcompete native vegetation.
- **Improve water quality** – Native species planted on slopes, along water bodies and drainage ditches help prevent erosion and pollution stabilizing soil and slowing the flow of rainwater runoff. Depressions can be created in your yard “rain gardens” and landscaped with native water loving plants to capture and hold water temporarily for 1-2 days, removing pollutants onsite.
- **Enhance and create wildlife habitat** – Provide food, water, shelter, and breeding or nesting space. Plants selected should provide a variety of seeds, nuts, berries or fruits for year round food and shelter. Stems and seedheads of flowers and grasses should remain throughout fall and winter. Group trees, shrubs and perennials to create layers of vegetation to resemble a natural forest. Rock walls, piles, stacked wood, brush piles, fallen trees, and leaf litter provide habitat for insects, birds, small mammals and salamanders as well as improve the soil. Standing dead trees provide habitat for woodpeckers.
- **Consider naturalistic planting** – Naturalistic landscaping should be considered instead of a formal one. It uses patterns found in nature and allows for natural changes to occur such as expanding an existing forest edge by planting trees and shrubs along the wood line by using native species that grow in the area.