

Building a Sustainable and Resilient Landscape at Home

Land of the Sky Chapter
NC Native Plant Society



Petitt, Anderson, Cumberland, and Hopkins

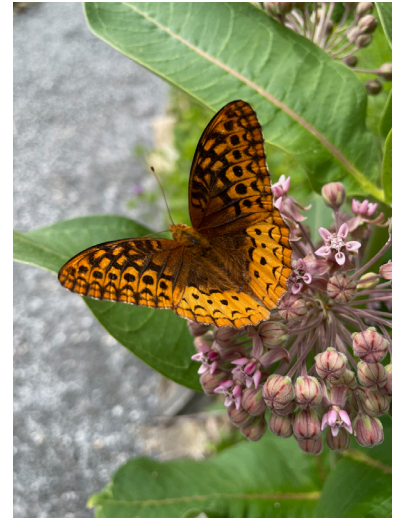


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Understanding Your Landscape

Begin by asking yourself, “what is my land already telling me?” Before making any changes to your landscape, the most valuable tool you have is your own attention. Walking your property slowly, across seasons, and especially during and after a hard rain, will tell you more about what your land needs than any checklist or plant guide. This section is designed to help you build that understanding by looking at your site through a few key lenses: water movement, light, soil, slope, and the ecological context of your region.

Sun and shade matter more than most people realize. Morning sun is cooler and gentler than afternoon sun, and the difference between deep shade and filtered light can determine which plant communities will thrive in a given spot. Note where direct sun falls in summer versus winter, where frost lingers into the morning, and where heat concentrates near pavement or walls. Wind exposure, soil compaction, slope, and the direction your space faces all factor into what will grow successfully and what will struggle.



Know Your Region

If this pamphlet is reaching you in Western North Carolina, you are in the Southern Blue Ridge Ecozone which is one of the most biologically diverse temperate regions on Earth. Within that broader ecozone, your land likely falls within a more specific plant community: Oak-Hickory Forest, Acidic Cove Forest, Floodplain Forest, High Elevation Red Oak, or another. Understanding which plant community historically occupied your land is one of the most valuable steps before choosing plants or making landscape changes as it reduces failure, helps you avoid the wrong species, and connects your yard to the region's larger ecological fabric. While the science of ecozones and ecotones gets technical, the takeaway is simpler: knowing your property's ecological backstory reveals its role and potential, and planting what has regionally evolved here is always the best path to sustainability, resilience, and low-maintenance gardens. For most homeowners, moisture, sunlight, and soil are the most approachable entry points, tying directly into these broader patterns. Soil pH, for instance, is fairly consistent across WNC (mostly acidic) though soils over nutrient-poor bedrock can run more basic and often support notably higher biodiversity, worth identifying if present on your land. Our region's complex geology, hydrology, and topography are a lifelong study, but even a little insight goes far toward appreciating the dynamic microclimates and vegetation WNC is known for. Your property may look nothing like its historic community today, but knowing that history is both useful and genuinely fun to uncover.



Tools for Getting Started

Plant identification apps like iNaturalist and Seek are excellent starting points for homeowners. iNaturalist, Seek, and Flora Quest, offer species suggestions based on photos and location, while the NC Native Plant Society website can help you confirm whether a plant is native to your specific area. A simple soil test kit will tell you about pH and basic nutrient levels. For topography, understanding your slope's aspect is particularly useful: southwestfacing slopes can be ten degrees warmer than northeast-facing ones, with meaningful consequences for soil moisture, plant stress, and what will thrive there. When in doubt, a consultation with a local ecologist or native plant professional can save considerable time, effort and money.

Common Pressures on Our Landscapes

Understanding what has degraded our regional ecosystems helps clarify what we are working to restore. The challenges fall into a few broad categories. Direct human actions, including development, land clearing, chemical use, and the introduction of non-native ornamental plants through horticulture, have fragmented and weakened native plant communities over generations. Ecological consequences such as habitat loss, reduced biodiversity, and degraded soil health compound over time, making remaining natural areas more vulnerable. Invasive species, plants and animals that evolved elsewhere but were brought here by humans, intentionally or not, are threatening our natural areas at an exponential rate. Without the predators, competitors, and climate conditions they evolved alongside, these species become, through no fault of their own, detrimentally successful: they grow fast, tolerate disturbance, and reproduce copiously, decreasing biodiversity and throwing ecosystems out of balance. The delicate, interdependent balance of our natural communities has held on admirably, but without changing course now, our margin for error keeps shrinking. Underlying it all are social and behavioral barriers—lack of awareness, economic constraints, and insufficient enforcement of existing protections. We have the science and data to make better choices; the question is whether we'll find the courage to act on it. This pamphlet aims to offer some guidance and support on that journey.

Table 1. The table below is designed to help you structure your initial observations before taking any action. Use it as a starting point for a walk through your property during and after the next hard rain.

Ecozone	Questions to Ask	Why it Matters	Your Notes:
Wet Zone	Where does water stand hours after a rain event?	Saturated soils signal poor infiltration or natural drainage patterns worth working with rather than against.	
Dry Zone	Where does soil crack or look dusty in dry weather?	Compacted or thin soils lose water quickly and need deep-rooted natives to improve moisture retention.	
Steep Slopes	Where do you see small gullies or bare patches forming on slopes?	Exposed slopes erode rapidly making these your highest-priority areas for vegetative cover.	
Low Lying Area	Where does debris, sediment, or trash collect after a storm?	Natural collection points can be transformed into rain gardens or vegetated buffers.	
Sun & Shade	Where does direct sun fall in summer versus winter? Where does it fall in the morning versus the afternoon or evening?	Light availability determines which plant communities will thrive in each zone. Cold pockets and heat traps create microclimates that affect plant selection and seasonal timing.	

Solutions for Resilience

In the face of so many challenges playing out across our world- political, social, financial, and ecological, it can be overwhelming and paralyzing to think of how one might ever make a difference. The fact is every single action makes a difference, and there are infinite ways in which anyone can do a little good. Our individual efforts, are what it will take to move the needle toward a more sustainable, equitable, and resilient future.



Stormwater, Erosion, and Green Infrastructure

With environmental changes causing more frequent severe weather events, observing, considering, and improving how storm water moves through and across our properties can not only prevent erosion and flooding, but improve water quality and increase biodiversity. It might not seem like it when we have “too much” at once, but rain and the stormwater it creates are, alongside clean air and nutritious food, precious necessities for life on this planet. Unfortunately, fresh water is becoming less abundant and more often compromised through abuse and mismanagement. Building a more resilient future starts with understanding the water cycle (we have, at this moment, all the freshwater we will ever have; it just changes form) and doing what we can to infiltrate stormwater runoff, recharge groundwater, protect and restore wetland and floodplain habitat, prevent pollution and erosion, and keep our streams, lakes, and watersheds clean. The first step for better storm water management is understanding how landscape drainage works. Notice and pay attention to your slopes, surfaces, and downspouts. Managing water flow and absorption using gravity, soil, stones, and native vegetation; integrating these tools with existing landscape features are key to successful landscape drainage. Green Stormwater Infrastructure GSI, or Green Infrastructure GI refers to management techniques that mimic natural systems-they use vegetation, slope and stone to allow rainwater to soak in and prevent excessive, damaging stormwater runoff. Spoiler! Turf grass and mowed lawns are NOT adequate stormwater management tools. Mowing repeatedly compacts soil, exacerbating the already poor infiltration potential which relatively short rooted turf grass offers.



Direct and Dissipate the rain water flowing from your downspout

You can do this by digging shallow trenches (swale) with sloped vegetated sides (bioswale) that follow the contour of the yard to direct water away from your foundation and absorb it into the ground. Dry stream beds (swales lined with river rock, gravel, and boulders) are excellent tools for directing, dissipating, and absorbing stormwater runoff. Stones dissipate the energy of flowing water and well chosen native plants, with their time-tested success at persisting in our climate, develop strong roots, encourage infiltration, improve water quality, and strengthen the biodiversity of the ecosystem. A depressed area with bermed (contoured soil mounds) edges as the collection spot for the dry stream bed or bioswale runoff create the rain garden which will not only function practically and aesthetically, but ecologically. Rain gardens are powerful multifunctioning tools that everyone can employ! Providing not only the opportunity to reduce erosion and pollution, but creating critical, native plant habitat upon which beneficial insects like dragonflies, lady beetles, and parasitic wasps depend. Benefits don't stop at the surface either, as the bermed lower edge of the rain garden allows stormwater to linger and absorb, the native plants drive roots deep into the soil anchoring, aerating, and joining the alchemical symphony which will build healthy soils, create habitat, and move us in a more resilient direction. Water bars, french drains, or other diversion techniques are also great tools to reduce erosion on gravel drives and trails, or to redirect sheet flow off a paved driveway or road into a vegetated swale or rain garden.

Pavement, Porosity, and Vegetation

So many of our stormwater woes trace back to our species' penchant for pavement. Roads, sidewalks, driveways, parking lots, and roofs absorb no rain, creating conditions for damaging, even deadly, flash floods; not because we shouldn't have roads or roofs, but because we rarely accommodate the infrastructure needed to handle the runoff they create. We have the evidence and means to fund better stormwater systems, and case studies show green infrastructure, especially in urban areas, reduces volume and velocity, prevents damage, and creates habitat. No one needs green space more than city dwellers, and nowhere are floods costlier. Therefore, every citizen should advocate for better stormwater management, while doing their part at home: soak up rain as it falls, and use water bars and French drains to redirect runoff into bioswales and rain gardens, where native plants play a key role in building resilience. Healthy soils (full of life and death) vegetated with evolutionarily adapted native plants are best at absorbing

stormwater runoff. Build healthy soil by allowing natural decomposition of trees, leaves, sticks, and stems. Fungi, bacteria, and other living creatures who call this dark subterranean world their home are masters at breaking down wood, bark, and all things organic into available nutrition for those who venture above ground. Literally laying the groundwork for healthy habitat above the surface, fungi, decomposers, and decomposing material itself create the sponge-like texture so important to a soil's ability to absorb water, support life, and recycling nutrients back into the system. The mycorrhizal fungi also act as an immune system for plants, providing sugars and minerals essential for adaptation to stressors and foster ecosystem resilience. Although soil can behave nearly like pavement if compacted enough, with repeated visits from vehicles, mowers, or even feet, the tiny spaces between soil particles get squished, reducing the soil's ability to function and drain. Traffic of any kind will compact soils, so designing a system for movement is key to utilizing maximum area for healthy soil and infiltration. Incorporating permeable pavement like gravel, flagstone, pavers, porous asphalt, or pervious concrete are excellent choices for reducing the runoff on our properties as water can pass through into the soil below.

Banks and Slopes

As the porosity of a surface impacts the amount of rainwater potentially absorbed, the degree slope of the surface is the other factor in this equation. Steeper slopes and banks are more vulnerable to erosion, especially those lacking the stabilizing effect of appropriate native vegetation as the root systems anchor the soil in place. Banks adjacent to bodies of water are special cases requiring generously vegetated buffers to protect both the land from erosion, the water from pollution, and both from failure. The very visible vulnerability of our streams' banks highlight the importance of reducing upstream the volume and velocity of our stormwater. Wetlands and floodplains function as energy sponges during storm events by providing vegetated space for storm water to linger, becoming irrigation, habitat, ecosystem, and groundwater.

Flooding, Puddling, and Low Spots

Great news, you already know where the water is going! Here is a challenge and opportunity if there ever was one for home landscaping. Often with flooding issues, the solution is best implemented upstream or uphill depending on the situation. Investigate from where and why the water is accumulating, how best to reduce, redirect, and infiltrate it before it becomes a problem. Investigate how to either capture the water in a rain garden installation, or move the water away from the low spot with swales, dry stream beds, and other slope manipulations and infiltration opportunities.

Green Infrastructure Tools



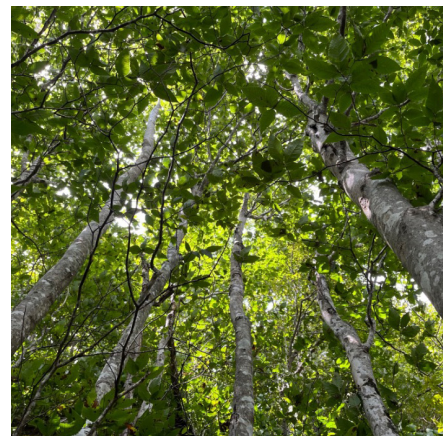
Green Roofs reduce energy costs, heat island effects, runoff, add insulation, improve water quality, provide habitat and garden opportunities. Grow food for your neighborhood or create habitat for wildlife.

Rain Barrels and Cisterns capture and store runoff for later use. This reduces the volume and velocity so important during heavy rainfalls and provides water for irrigation, or other uses during droughts or emergency situations.



Bioswales, Bio-Retention Basins, Dry Stream Beds, Rain Gardens, and Wetlands are bio-filtration systems which use grade manipulation and native vegetation to direct and retain runoff allowing it to slow down, linger, and infiltrate before entering larger hydrologic systems like storm drains and rivers, while reducing sediment, eliminating toxins and creating beneficial habitat.

Mini Forests are densely-planted plots of native tree, shrub, and perennial species that mimic climax species forests. They sequester carbon, reduce temperature, and create a diversity haven; all while absorbing and releasing stormwater in beneficial cycles reducing flood risk. The root systems of trees and shrubs create stable, healthy soils which in turn support the growing forest!



Leave the Leaves, Stems, and Sticks

Reduce your Lawn!

Building Biodiversity at Home

Building a more resilient, sustainable future is a big challenge. And, like all challenges since the beginning of time, the apparent problem simultaneously creates an opportunity. Every small step toward a more sustainable future creates a ripple effect and those steps add up faster than you might think. The actions that got us here are numerous, but so are the actions that can move us toward a better tomorrow. When you slow stormwater on your property, you reduce erosion. Plant some natives while you're at it, and you'll find they thrive with less care, fewer inputs, and bring more life to your yard in the process. One simple action leads to another, and the benefits keep growing in surprisingly broad and meaningful ways. We're all part of the same system on one planet with one shared reality. As such, every positive choice you make ripples outward into the world around you.

Don't use chemicals, ever, if possible. The vigilant, repeated cutting of any vine, shrub, or tree will spend the plants energy stores yielding the desired result. Smothering with cardboard or newspaper for lawn transition with the addition of soil and mulch to prepare an area for immediate garden installation is so successful, there is no reason to reach for the sprayer. Soil bacteria is very sensitive and is damaged by even 'organic, non-toxic' applications like horticultural vinegar or neem oil. The snip and drip method (i.e: clip the plant and carefully dab the cut with a shoe-polish bottle full of herbicide: make sure to follow all label instructions!) is the last resort for non-native ecologically harmful species removal. Your best defense is diversity! Healthy soils filled with a diverse array of well chosen native plants will be the healthiest, most

resilient garden as the food web is based on predation and recycling where balance is ultimately (though dynamically) achieved naturally- no chemicals needed.

Turn off lights at night. Use yellow, blue or other color bulbs, direct light waves downward, or use solar lights that fade after a couple hours to protect the night creatures. With over 10 times the number of moth species as butterflies, these nocturnal, camouflage cuties warrant so much more respect and attention than they currently get! Since caterpillars (and other insects) are the baby food of choice for nearly all songbirds (96%), if we garden, landscape, and steward for the moths, we will be stewarding for the birds. Night lights harm moths and other nocturnal creatures. Migrating birds who fly at night are also negatively impacted by lights at night.

Remove plants that didn't evolve here, and replace them with plants that did: Historically called 'invasive' and 'native', the critical part is the relationship between the pollinators and their symbiotic partners, the flowering plants. Without the native plants, and their flowers, there will be no pollinators and vice versa. The beneficial insects, pollinators, and other critters who inhabit the lower levels of the food chain do not recognize plants with whom they did not evolve. A yard full of Nandina, Falsecypress, Japanese Maples, Hosta, and Daylilies will have very little ecological benefit unless you live in Asia. Even if a Butterfly Bush is covered with dozens of butterflies getting a sip of sweet nectar; the fact the Butterfly Bush did not evolve with our Lepidoptera will prove to keep it a poor choice for future ecologic resiliency. Not to mention its ecologically harmful status in many states, it remains unusable to female Lepidoptera who, for their short life will rely upon only the evolutionarily determined host species to feed her babies when they hatch. Planting native species known to host butterflies and moths will best build genetic diversity enabling adaptation to future environmental changes. This is easier than it sounds considering a single keystone native oak tree (and the earth beneath it) can support hundreds of species. Support nature by gardening and landscaping with native plants. The life they support will be aweinspiring, colorful, and audible; better to invest in binoculars and a hand lens now.



Table 2: These are some non-native, ecologically harmful species that should be avoided and removed if possible. Check the NC NPS website for more detailed lists. Keep in mind, all plants need to be selected for the 'right' conditions. Refer to Table 1 to determine your site conditions.

<u>DON'T Plant</u>	<u>DO Plant</u>
<i>Vinca major</i> , <i>Vinca minor</i> , Periwinkle	Violets, Wild Strawberry, Green-and-Gold
<i>Euonymus alatus</i> , Burning Bush	Virginia Sweetspire, Blueberry, Smooth Southern Bush-Honeysuckle
<i>Liriope muscari</i> , Liriope, Monkey Grass	Blue-Eyed Grass, Purple Lovegrass, Cherokee Sedge
<i>Buddleia davidii</i> , Butterfly Bush	Joe Pye Weed, Milkweed, NJ Tea
<i>Berberis thunbergii</i> , Barberry	Huckleberry, Ninebark, Swamp Rose

Leave the Leaves, Stems, and Sticks. So you just planted an oak tree for the moths and birds. Excellent. Now, please leave the entire area under and around the tree, even as it grows, alone. Actually, plant it with native understory perennials that evolved to grow in such a condition. The best thing for building more ecological function is to leave this 'leaf litter' to fulfill its destiny. The leaves break down, with the help of decomposers in the soil who turn it into nutritious food for the plants. This delicate, rich, complex habitat of a forest floor is some of the most important to the food web. Hundreds of species are in there, over wintering, developing, gestating, living, dying, eating, being eaten. The order



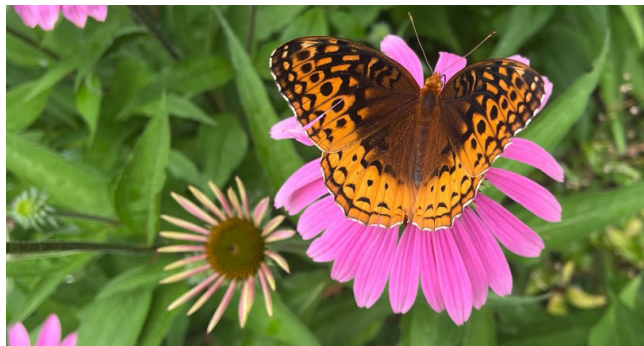
Lepidoptera (winged insects, moths and butterflies) upon which the songbirds so desperately rely, need this humble habitat to complete their life cycles. Native bees, wasps, and countless other beneficial insects need those fallen trees, dead branches, and last year's milkweed stem to lay their eggs and feed their babies. Pollinators also need protein rich pollen provided only by the flowers of plants with which they co evolved. The layers of benefit are as rich and endless as the layers in a well designed native plant landscape. From groundcovers like ferns and sedges to sun leaves in the canopy high above; taking steps to understand how nature works, and garden with those parameters in mind, will bring benefits that are exciting, inspiring, and excellent medicine. Reduce your lawn! Monocultures of any kind, by definition,

lack diversity, and therefore are vulnerable to stress, disease, and changing climate. Be generous, keep only the lawn you need, let it be diverse, and trim it with care (set mower to highest setting) or not at all. Violets, Selfheal, Fleabane and other natives can make your lawn much more life sustaining, colorful, and resilient. When in doubt, consult the bountiful websites, conservation groups, and native plant chapters or perhaps consult a local native plant grower or gardener for insight. Consider the lawn like an area rug rather than wall-to-wall carpet. Or, restrict the clipped grass to walkways which meander through and define the more diverse areas of the yard.

Garden for All the Seasons, All the Life, with All the Layers

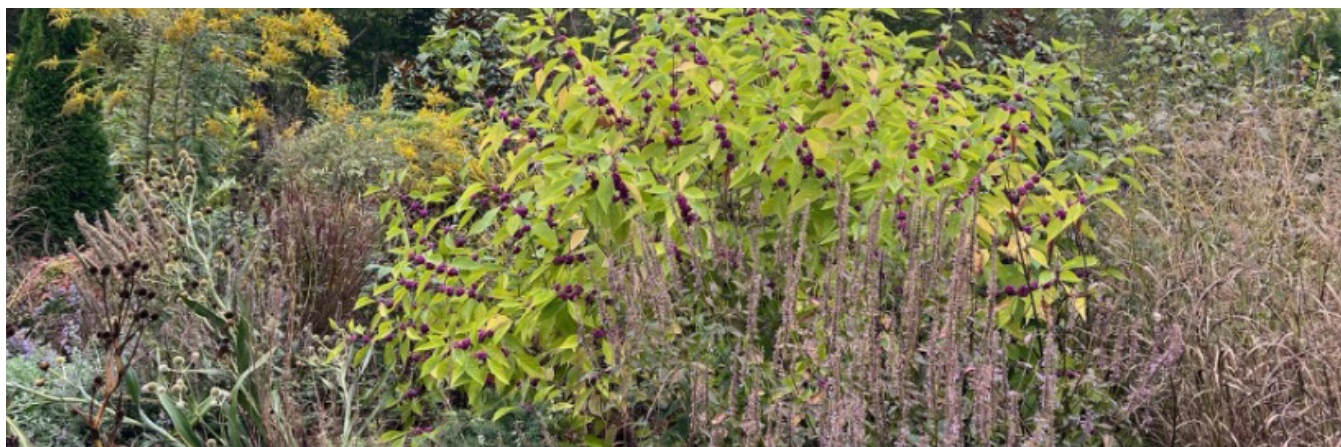
If possible, utilize trees, shrubs, perennials, and groundcovers in your yard, creating multiple layers that maximize habitat and diversity. Certain keystone species support more life than others (for example, 14% of native plants support 90% of Lepidoptera species). Though many pollinators are specialists and can only use one or two species for nutrition as they grow to adulthood. So, best to include some keystone plant species and some that will support the specialists (plants that support specialists will also support generalists). Also aim to have blooms steadily from early spring (Packera, Violets, and Flea bane) to late fall (Goldenrod and Aster) for pollinators to forage. Consider berries and nuts for migrating birds - Lindera Spicebush, Serviceberry, Callicarpa Beautyberry, and Virginia Creeper berries have some of the highest fat content. Also consider host plants for Lepidoptera to foster caterpillars that will support families of songbirds. Keep seed heads on Echinacea, Silphium, Zizia (everything!) for birds to eat later, to encourage propagation, but also the stems are handy for perches when birds are hunting for insects. Foster the insects as they are the largest and most diverse group of animals on the planet! Nothing draws birds like insects. Stems and 'leaf litter' are the essential habitat for beneficial predatory wasps, beetles, and other insects that will help keep your native plant landscape healthy and resilient. The more diverse your garden, the more numerous the benefits, the healthier it will be. Cover for winter months include evergreen trees like American Holly and Eastern Red Cedar—both offer berries which birds relish. Shrubs like native Rose, Elderberry, Viburnum, Inkberry, and Hazelnut offer nest opportunities, protein rich pollen-laden flowers, and nutritious fruits and nuts. Wild Strawberry, Phlox, Self-

heal, Ferns, Sedges, and Ginger cover the ground, filling-in around and under trees, shrubs, and perennials. This lowest layer is important for erosion control, soil insulation, nest material, and excellent food sources. Mulch is useful initially when first planting things, but aim for a fully grown together, harmonious, dynamic, living ecosystem that will evolve, adapt, and change. Mulch doesn't itself support much life. Mulch isn't always immediately conducive to seed germination, inhibiting the self-sowing ability of many native plants, extending the establishment period.



Educate and Advocate

The benefits of landscaping for ecology and beauty, sustainability and resilience are too numerous to include in this publication. But they are so far reaching that by simply choosing native plants for your next container on the porch, tree out in the yard, or full on transition to meadow with pathways, you will be building a stronger ecosystem which will benefit everyone. Today and tomorrow. Educate yourself. Educate kids. Talk to your neighbors, colleagues, family and friends anyone who shows interest or claims to be a gardener or love birds. Tell them about the better way to garden. The better way to bring birds, foster wildlife, improve biodiversity, sustainability, and resilience.



Taking Action

Many people arrive at ecological landscaping with a handful of urgent, practical questions: How do I attract more birds? How can I reduce erosion? How do I increase my property's climate resilience? Why does my yard flood after heavy rain? These are the right questions to be asking and they share the same fundamental answer: take a whole-system approach.



The health of your yard is not determined by any single plant or practice, it is shaped by all the layers of vegetation working together. That includes trees, shrubs, perennials, groundcovers, and soil interacting across all seasons and supporting all forms of life. When you begin to see your landscape as an interconnected system rather than a collection of individual maintenance tasks, the path forward becomes clearer.

How do I attract more birds and pollinators? The single most effective thing you can do is plant native species with a focus on those that serve as host plants for insects. Birds, especially during nesting season, rely almost entirely on caterpillars and other insects to feed their young. Those insects depend on specific native plants to complete their life cycles. A yard full of non-native ornamentals offers very little of this foundational food. Add layers such as a canopy tree, understory shrubs, perennial wildflowers, and groundcovers. In doing so, you create shelter, nesting habitat and a yearround food source. Leave the leaves, brush piles, hollow stems, and decaying wood as they are all important habitats.

How do I reduce erosion on my property? Roots are your most powerful erosion control tool. Bare soil, compacted lawn, and denuded slopes are highly vulnerable to the kind of heavy rainfall events our region now regularly experiences. Vegetation such as deep-rooted native plants are able to hold soil in place, slow water movement, and increase infiltration. Slopes are especially vulnerable, as water moves across them faster and with more force. Vegetated buffers along streambanks and water edges are among the most effective practices available. Where slopes are steep, consider live staking with native species, redirecting water flow with stone, and establishing groundcover as quickly as possible to protect bare soil.

Why does my yard flood, and what can I do about it? Water is a resource, not just a problem to be redirected. After a rain event, pay attention to where water stands, where it flows, and where it disappears quickly. These patterns tell you a great deal about your soil's health and your landscape's capacity for infiltration. Compacted soils which are common in yards with heavy lawn coverage absorb very little water and instead, send it flowing across the surface. Native plantings, organic mulch, and healthy soil biology dramatically improve infiltration and natural landscape function. The addition of rain barrels, dry creek channels, and bioswales can further capture and direct stormwater, fostering a stubborn nuisance into a generous gift for your landscape.

How do I increase my property's climate resilience? Resilience starts with diversity. A landscape dominated by a single species (a monoculture) has no redundancy. When conditions shift, such as a drought, that landscape begins to fail. A landscape with a high number of distinct native species, varied physical structure, and healthy soil can absorb stress, adapt, and recover. Removing invasive species is a critical first step in increasing resiliency, as they crowd out the genetic diversity and ecological function that native communities depend on. Choosing straight native species over cultivars further strengthens resilience, as cultivars are bred for consistent performance rather than adaptability. The more closely your landscape reflects the plant communities historically present on your land, the better equipped it will be to face an uncertain future.

Where do I even start? Start by observing. Walk your property during and after a hard rain and notice where water pools, where soil is bare, where slopes are eroding. Using Table 1, note where the sun tracks in summer versus winter, where frost lingers, where the soil feels compacted underfoot. These observations will tell you more about your landscape's needs than any checklist. Get out into your local natural areas and study your local bounty. Notice what grows where and with whom they are growing. From there, the steps are straightforward: reduce lawn, remove invasives, add native plants suited to your specific conditions, and let the system begin to do its work.

Step-By-Step Guide

Once you have observed your landscape and identified your goals, implementation becomes a matter of working methodically from the ground up. The process does not need to happen all at once. In fact, a gradual, intentional approach tends to yield better results than wholesale transformation.



Begin by identifying and removing plants that are not native to your region, prioritizing the most aggressive species that spread quickly, reseed heavily, or crowd out native plants. This step alone can dramatically improve the conditions for everything that follows. From there, assess your site thoroughly: sun and shade patterns across seasons, soil type and compaction, moisture levels, and any nearby ecosystems with which your yard might connect and benefit.



Plan your hardscape before your plantings. Footpaths, patios, parking areas, and drainage routes should be established first so that your planting design can work around them rather than compete with them. Once the landscapes are in place, begin reducing your lawn. Smother existing grass with layers of newspaper or cardboard topped with locally sourced mulch which kills the turf below while building organic matter above. In areas where the lawn is already thin or sparse, you can plant directly into it after applying a layer of mulch. For more intensive installations, bringing in locally sourced soil on top of cardboard before mulching creates an ideal planting bed.



When selecting plants, match species to your site conditions. Plug trays of 32 or 50 establish quickly and offer good value for perennials and groundcovers; seedlings or small containers are sufficient for shrubs and trees. Early spring and fall are the best planting windows. For larger areas, seeding is most cost-effective but demands careful preparation. Avoid mulching seeded areas, as seeds require direct soil contact. Sow in late winter for natural cold stratification, keeping in mind that seeds remain vulnerable to birds, rain, and disturbance during germination. In areas with deer pressure, consider fencing new plantings for one to two years. Once established, most natives tolerate browsing well. A well-placed native plant, given time to root deeply, becomes self-sufficient.

Maintaining Native Landscapes

A well-designed native landscape takes less of your time when compared to non-native alternatives. The goal is not a yard that requires constant intervention, but one that gradually builds its own momentum with the accumulation of soil health, deepening of root systems, and support of more life with each passing season.

The most important shift in mindset is learning to leave things in place. Plant material left standing through winter provides critical shelter and food for birds and insects. Rather than removing the leaves, rake them into the garden bed to retain soil moisture and build the organic layers in which native plants and the soil organisms they depend on thrive. A leaf pile is the preferred overwintering habitat for hundreds of species. Brush piles, hollow stems, and standing dead wood serve similar functions and cost nothing to maintain.



Managing light is another powerful tool. Thinning competing vegetation to improve the sun-to-shade ratio around young oaks and hickories, for example, can make a meaningful difference in their establishment and long-term growth. Over time, as your eye becomes more attuned to your landscape, you will notice which plants are thriving, which are struggling, and where non-native invasives are attempting to reestablish. Addressing invasives consistently, even in small increments, prevents them from undoing the progress your native plantings have made.

Think of maintenance not as a seasonal checklist but as an ongoing, evolving relationship with your land. Small, consistent actions compound into a landscape that largely sustains itself, becoming more diverse, more functional, and more resilient with each year.



Local Resources & Continued Learning

The most valuable resources for this work are often the most local. Native plant nurseries in your region, nonprofit plant sales hosted by conservation organizations, and meetings of your local Native Plant Society are excellent starting points both for sourcing appropriate plant material and for connecting with others doing similar work. The knowledge available through these networks is often more relevant to your specific conditions than anything found in a general gardening guide. When selecting plants, seek out straight native species rather than cultivars whenever possible. As mentioned above, cultivars, whether bred, selected, or hybridized for consistent appearance or performance lack the genetic diversity that allows plants to adapt to shifting conditions over time. Resilience depends on that diversity. Native species bring with them the full web of ecological relationships that have developed over thousands of years including viable reproductive parts, nutritious seeds, foliage that wildlife can recognize and digest, and soil interactions that support the broader food web. Cultivars have not been broadly studied for these functions, and there is legitimate reason for caution about how hybrid genetics may interact with existing wild plant populations.

Tools like the native plant guide on the North Carolina Native Plant Society website, iNaturalist, and the Biota of North America Program (BONAP) maps can help you identify what is growing on your land and whether it evolved there. For those in Western North Carolina, understanding which plant community historically occupied your land, whether oak-hickory forest, acidic cove forest, floodplain forest, or another type, can meaningfully guide your plant selections and reduce the risk of introducing species unsuited to your conditions. Just as important is recognizing how those original conditions may have changed since, and how that shift shapes your landscape today and any future plantings. Follow the recommendations here to read your land: pay attention to the cues that reveal its conditions, and let those insights guide your choices. When in doubt, a consultation with a local ecologist or native plant professional can save significant time and effort.

Above all, approach this work with curiosity. Every observation you make such as where water moves, which plants return on their own, which birds appear after a new planting adds to your understanding of your land. That understanding, built over seasons and years, is the most resilient resource of all. Ready to take the next steps? Not sure where to start? Join your local NC Native Plant Society chapter (ncwildflower.org) for a meeting or reach out to the creators of this pamphlet for a consultation. We look forward to seeing your native landscape thrive!



This book was researched, designed and written for the Land of the Sky Chapter in celebration of the 75th anniversary of the North Carolina Native Plant Society.

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