

Setting the Stage for Success: Preparing Sites for Native Plant Establishment

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Why Site Preparation Matters

Successful native landscapes begin long before the first plant is installed.

Proper site preparation:

- ✓ Improves plant survival
- ✓ Encourages healthy root development
- ✓ Reduces weed pressure
- ✓ Minimizes future maintenance



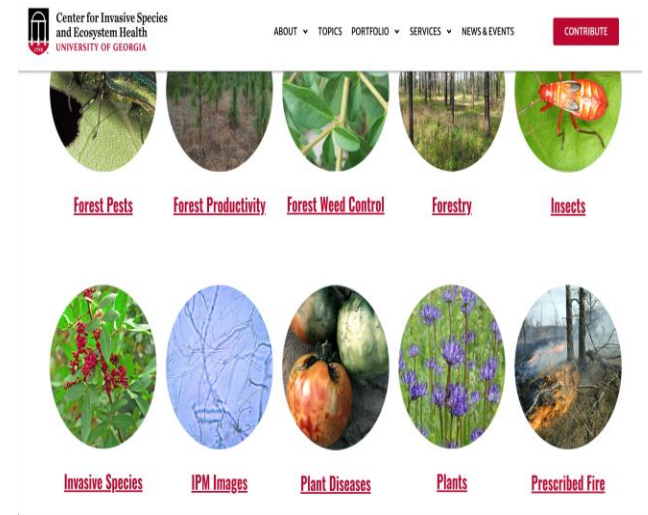
Photo: Green Flower Gardening Inc.



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Learning Objectives

- Conduct a comprehensive site assessment.
- Identify environmental factors that influence native plant establishment.
- Evaluate soil and drainage conditions.
- Recognize the importance of invasive species management.
- Apply best management practices for successful installation.
- Develop strategies that improve long-term planting success.



Why Native Plantings Usually Fail?

Common causes include:

- Poor drainage
- Soil compaction
- Existing invasive species
- Incorrect plant selection
- Improper planting depth
- Inadequate site preparation
- Insufficient establishment watering

Healthy plants require healthy sites.





Think Like a Detective

Before making changes, understand how the site functions.

Every landscape has unique:

- Soil characteristics
- Drainage patterns
- Sun and shade conditions
- Topography
- Existing vegetation/invasive species identification
- Wildlife interactions

The first step in any successful landscape project is conducting a thorough site inventory and evaluating existing conditions before developing a design.

COMPLETING THE SITE ASSESSMENT CHECKLIST

Suggested Tools and Materials

Cornell pH test kit and instructions	shovel and trowel
soil texture by feel instructions	plastic bags
wash bottle filled with water	wristwatch or timer
at least 4 gallon jugs of water	weed identification manual
paper towels	ornamental plant identification manual
measuring tape	hand pruners
yardstick	pencil/pen and extra paper
Optional tools: diameter tape, penetrometer, soil probe, vials containing alcohol for unknown insects, infrared thermometer	

1. Site Location

Note the address of the site. You may also wish to note the nearest cross streets and/or page and grid of the maps your firm uses.

2. Site Description

A brief overview of the site including: general use or function, approximate size, accessibility, general topography (steep hill, gentle slope, etc.)

3. Climate

a. USDA Hardiness Zone

Check the USDA hardiness zone of the site. If planting in containers above ground you may want to regard the site as a zone colder than listed, as trees in containers are more susceptible to cold winter temperatures than trees in the ground.

b. Microclimate Factors

Re-reflected heat load: Determine if the site, or some portion of it, has heat pockets due to reflected and reradiated heat loads from pavement, automobiles, buildings or other surfaces. This can cause a tree to heat up and lose water from its leaves at a faster than normal rate. These pockets are often south facing and have a tremendous amount of heat load. On sunny days, these areas will be noticeably warmer than nearby spots. Drought-resistant trees should be chosen in these situations.

Frost pocket: Frost pockets are often found in low areas at the bottom of a slope or bowl. Cooler air, being heavier, collects in these areas, lowering air temperatures.

Wind: Excessively windy sites will often place stress on trees, particularly those with large leaves which may result in leaf tatter. Also, trees in these sites may need supplemental watering to prevent them from drying out as quickly. Signs of excessive wind are trees leaning or growing in the same direction. Plants will have stunted growth on the side that faces the full force of the prevailing wind. Wind tunnels are common in urban areas where wind is funneled between tall buildings.

Other: Are there other factors that might affect the climate or precipitation levels? For example, are there wide rain shadows formed by the overhang of a building? Is the site located near a large body of water that may moderate the climate?

c. Sunlight Levels

Shady sites determined by the sun and shade patterns around buildings may limit the choice of trees. Consider that a site has full sun if it receives more than 6 hours of direct sunlight. Partial sun has direct sun (often morning sun) for less than 6 hours, or filtered light (as would be common under a tree with fine textured leaves) for most of the day. An area is considered shady if it receives little or no direct sunlight, or if it receives less than 6 hours of filtered light.

Drawing a Landscape Plan - Site Analysis | CAES Field Report



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Begin with a Site Inventory

Before selecting plants, evaluate:

- ✓ Soil type and condition
- ✓ Drainage patterns
- ✓ Topography
- ✓ Existing vegetation/challenging invasive plants
- ✓ Sun and shade exposure
- ✓ Utilities and structures
- ✓ Areas of erosion or compaction
- ✓ Existing native plants worth preserving

A thorough site inventory helps identify opportunities and limitations while guiding sustainable landscape decisions.

"Inventory before intervention."



Document Existing Site Conditions

Create a record of current site conditions.

Evaluate:

- Existing trees and shrubs, turfgrass, and native vegetation
- Water sources
- Utilities
- Buildings and fences
- Walkways and driveways
- Existing irrigation
- Areas of erosion
- Compacted soils

Take photographs from multiple viewpoints to document the site before work begins.



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Create a Base Map

A base map provides the framework for planning.

- Property boundaries
- Buildings
- Existing trees
- Utilities
- Water sources
- Drainage patterns
- Hardscape
- North arrow
- Scale

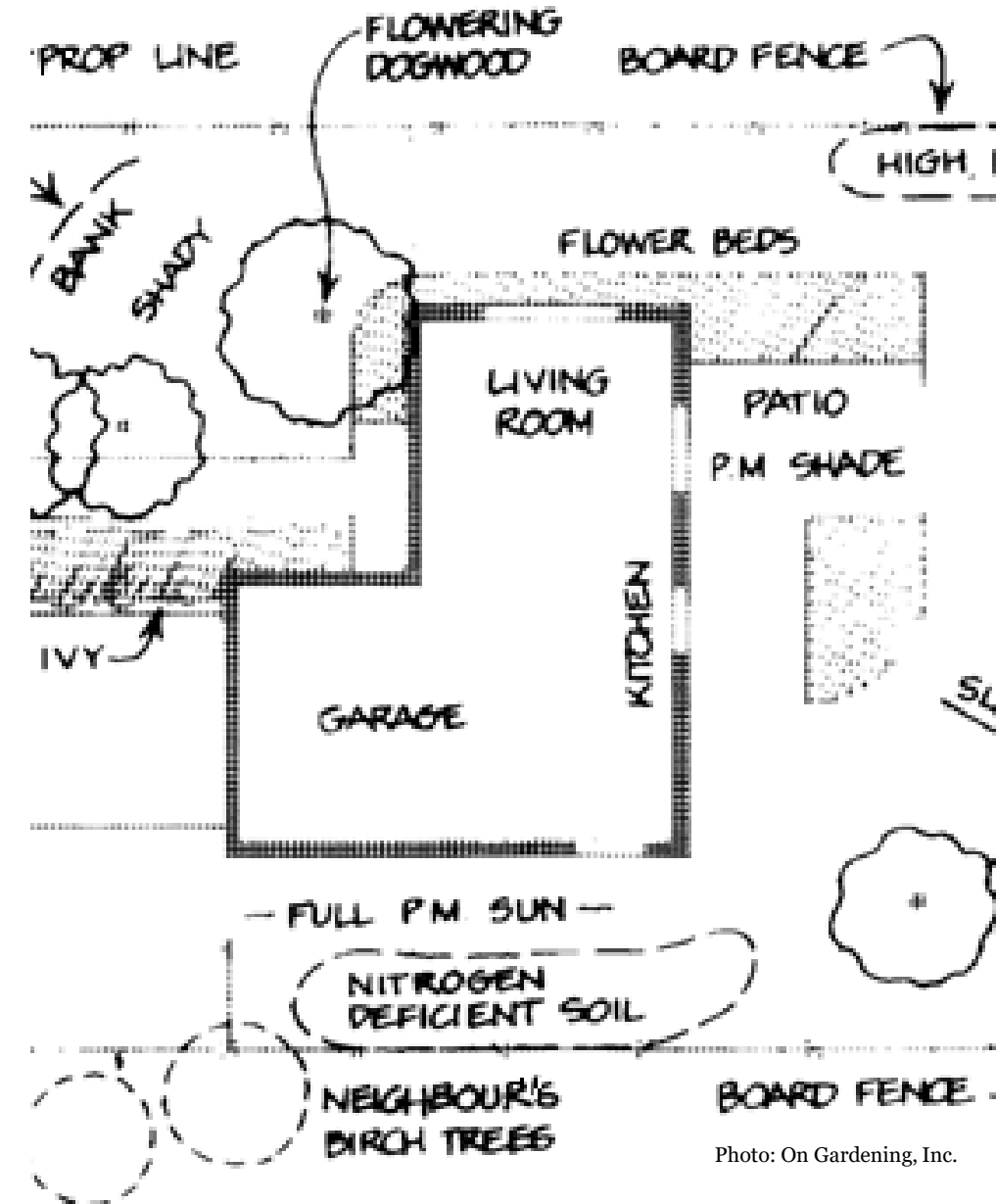


Photo: On Gardening, Inc.

Inventory Existing Vegetation

What is already on the property:

- Mature Trees
- Native Shrubs
- Existing herbaceous natives
- Groundcovers
- Existing invasive species
- Pollinator Habitat

Before removing plants, determine what should be preserved.



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Preserve Existing Natural Resources

Whenever possible, incorporate existing natural features into the design.

Benefits include:

- ✓ Reduced disturbance
- ✓ Less irrigation during establishment
- ✓ Improved wildlife habitat
- ✓ Ecosystem services
- ✓ Lower installation costs



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Understanding Topography

Topography influences nearly every aspect of plant establishment.

- Slopes
- Low areas
- High points
- Drainage swales
- Berms
- Erosion

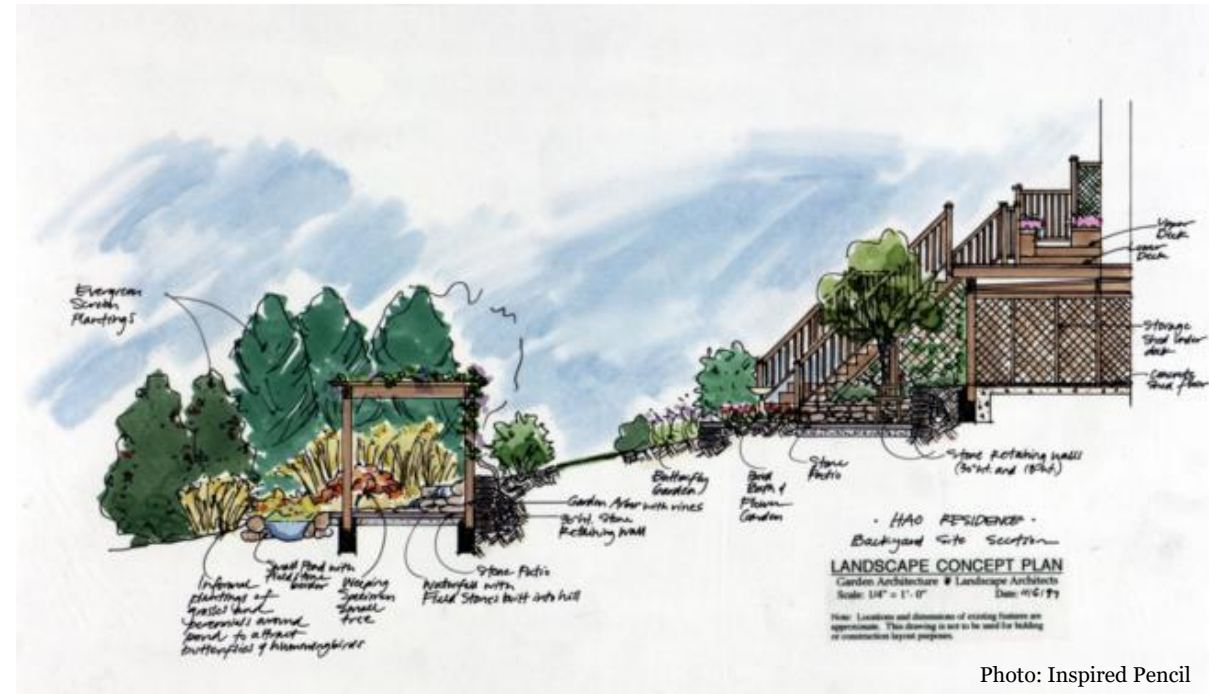


Photo: Inspired Pencil

Where does water collect? Where does it leave the site?



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Follow the Water

Water movement determines plant establishment and success.

Look for:

- Standing water
- Drainage channels
- Wet depressions
- Compacted areas
- Erosion

Observe the site after a rain whenever possible.



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Evaluate Sun and Shade Conditions



Photo: Plant Alley

Sun exposure changes throughout the day and across seasons.

Identify:

- Areas of Full sun, Partial shade, Full shade, Morning sun, Afternoon sun

Also consider:

- Shade from buildings
- Existing trees
- Future tree growth

A shaded landscape can be significantly cooler and lose less water than one in full sun.



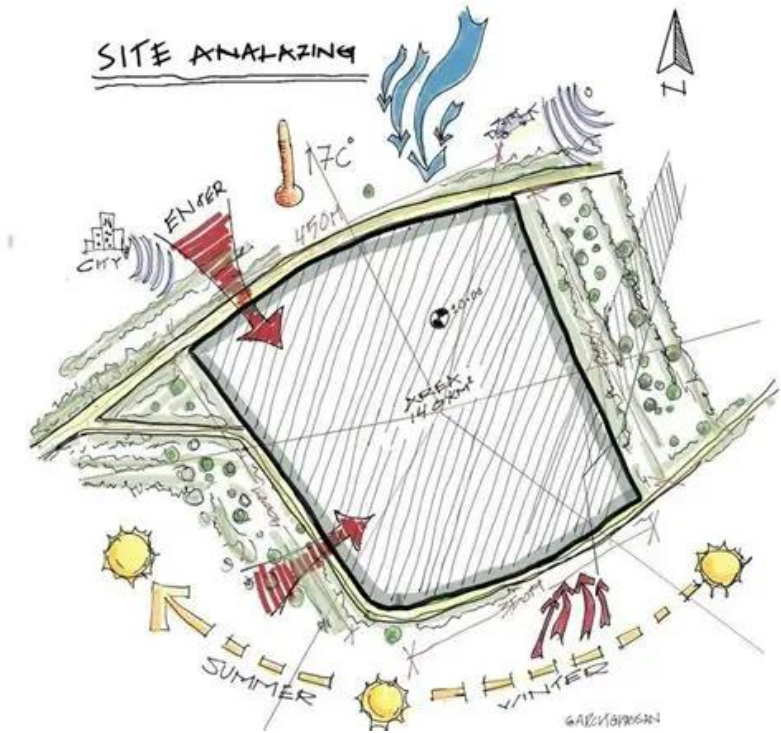
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Site Assessment Questions

Before selecting plants, ask yourself:

- ☐ Have I evaluated the soil?
- ☐ Do I understand drainage?
- ☐ Have I mapped sun and shade?
- ☐ Did I identify existing invasive plants for removal?
- ☐ Did I identify existing native plants?
- ☐ Have I documented invasive species?
- ☐ Do I know where utilities are located?
- ☐ Have I observed water movement?
- ☐ What natural resources should be preserved?

The best native landscapes are designed around the site and not forced onto it.



From Site Inventory to Site Analysis

- After documenting existing conditions, the next step is to evaluate how those conditions will influence native plant establishment.

Questions to Ask

- What opportunities does this site offer?
- What limitations need to be addressed?
- Which areas are suitable for planting?
- What environmental conditions will influence plant selection?
- What management challenges can be prevented before planting?

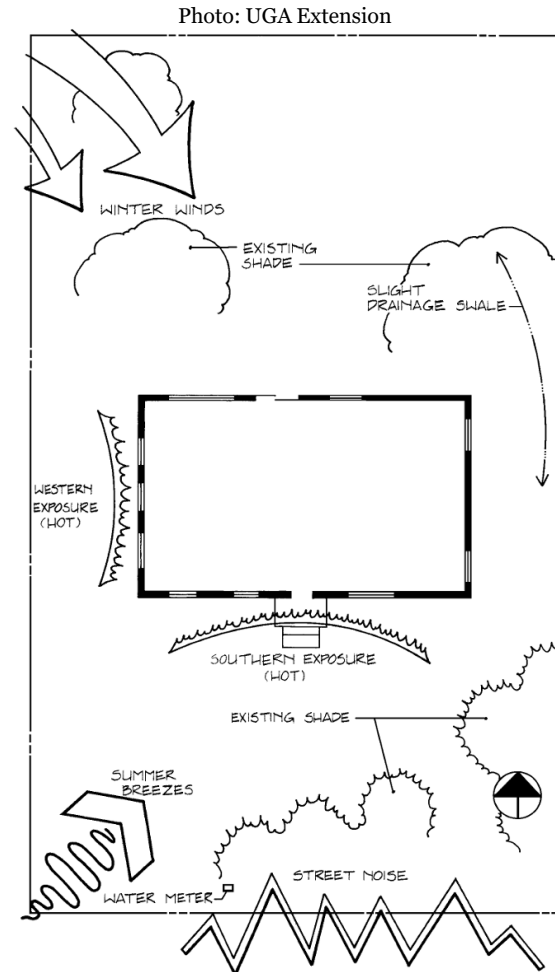


Figure I. Example of site map

**A site
inventory tells
you what is
there.**

**A site analysis
tells you what
it means.**



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Preparing the Site Begins with Existing Vegetation

Before You Plant...

- Ask these questions:
- What desirable vegetation should be preserved?
- Are invasive species present?
- Is vegetation competing for water and nutrients?
- Can existing native plants be incorporated into the design?

Not everything on a site should be removed. Protect healthy native vegetation whenever possible.



Photo: UGA Extension



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Why Invasive Plant Removal Matters

Invasive plants compete directly with native plant establishment.

- Reduce native plant diversity
- Alter wildlife habitat
- Change soil and hydrology
- Increase long-term maintenance
- Suppress seedling establishment



Knowing the Difference

Not Every Non-Native Plant is Invasive

Native

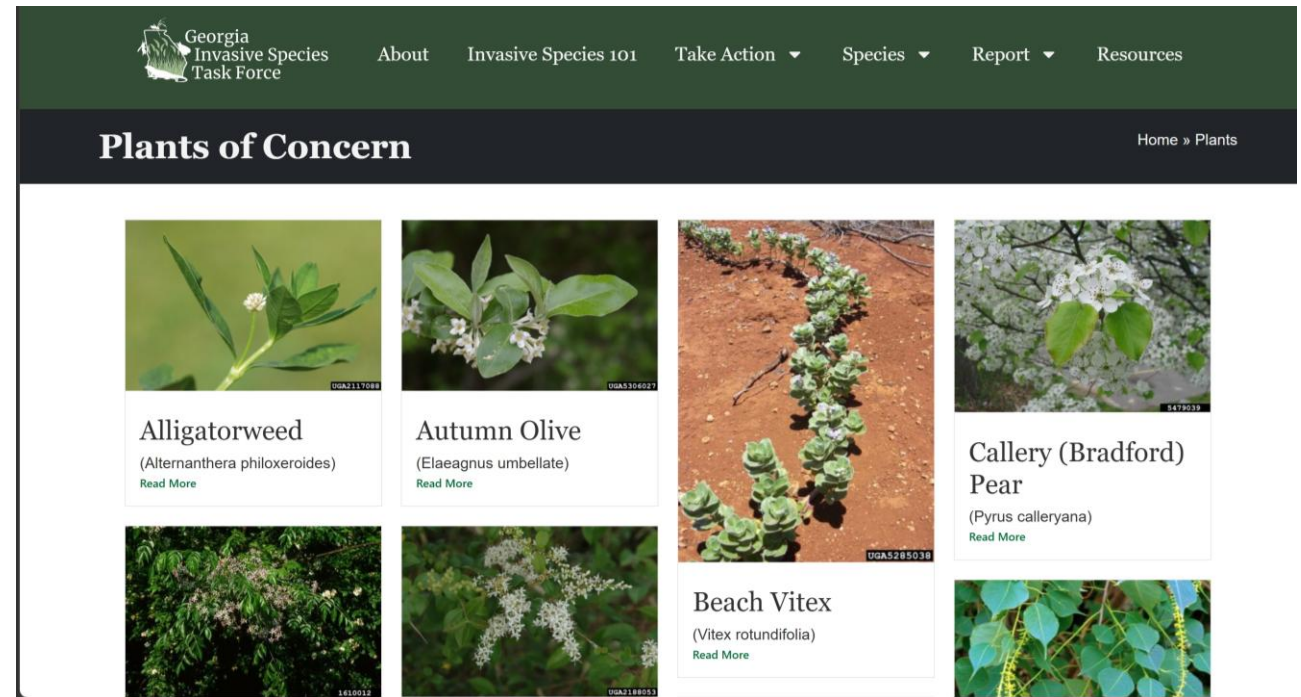
- Naturally occurs in the region

Non-native

- Introduced from another area
- May or may not become invasive

Invasive

- Spreads aggressively
- Escapes cultivation
- Causes ecological or economic harm
- Understanding the distinction leads to better management decisions.



Georgia Invasive Species Resources

Georgia Invasive Species Resources

- [University of Georgia Center for Invasive Species and Ecosystem Health](#)
- [Georgia Invasive Species Task Force \(GA-ISTF\)](#)
- [UGA Extension Publications](#)
- [EDDMapS \(Early Detection & Distribution Mapping System\)](#)
- Georgia Department of Natural Resources – Invasive Species
- [USDA National Invasive Species Information Center](#)
- USDA Forest Service – Invasive Species



Top Twelve Nonnative Invasive Plants
(Using Forest Inventory and Analysis Data in Acres)
2021 Dirty Dozen List

Rank	Species	2019 Acres	2017 Acres	2015 Acres	2015 - 2019 Average Acres	Trend
1	Non-native privet	716,930	644,317	718,311	693,186	Stable
2	Nepalese browntop	93,110	90,204	106,194	96,503	Stable
3	Chinaberry	54,990	47,757	58,064	53,604	Stable
4	Non-native lespedeza	47,870	35,862	44,175	42,636	Increasing
5	Kudzu	32,850	30,961	36,968	33,593	Stable
6	Chinese tallowtree	32,290	24,321	19,724	25,445	Increasing
7	Non-native olive	24,720	19,456	22,631	22,269	Increasing
8	Japanese climbing fern	20,280	19,978	19,724	19,994	Stable
9	English Ivy	16,680	12,981	12,744	14,135	Increasing
10	Wisteria	14,000	7,874	9,902	10,592	Increasing
11	Mimosa (Chinese silk tree)	10,170	11,647	15,180	12,332	Decreasing
12	Callery Pear (Bradford Pear)	10,040	5,400	1,623	5,688	Increasing



GISC Invasive Species List Purpose

The purpose of the GISC Invasive Species List is to identify and categorize organisms that pose threats to natural areas in Georgia. Natural areas are those areas that are managed to conserve or restore native biodiversity. For this list, invasive species do not include plants that are only problems in agricultural or pastoral systems. The list does not have regulatory authority; it is intended to aid in land management decisions and increase public awareness of invasive species.



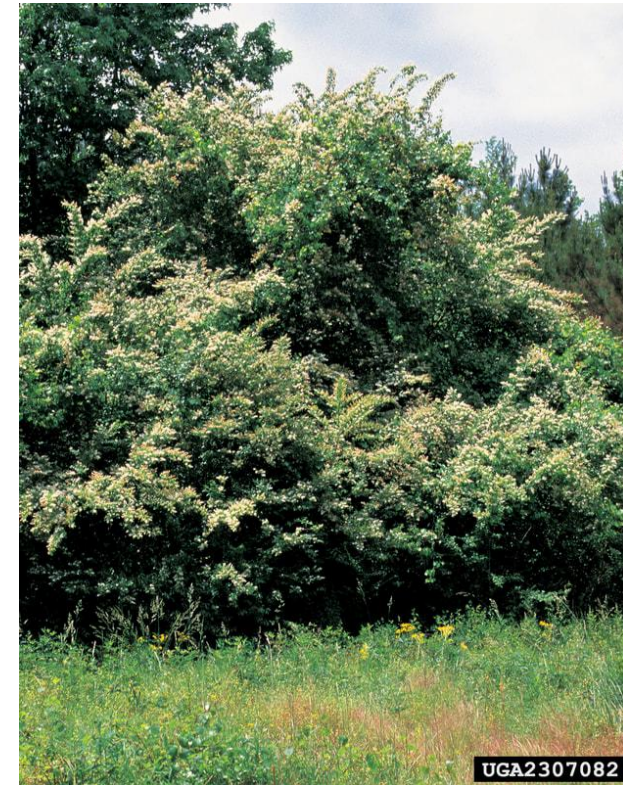
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Why are Invasive Plants Problematic in the Landscape?

Common Characteristics

- Produce large numbers of seeds
- Spread by rhizomes or runners
- Grow rapidly
- Tolerate poor soils
- Leaf out earlier than natives
- Shade native seedlings
- Have few natural enemies

These traits make establishment of native plants much more difficult.



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Think Beyond Removal: Think Replacement

Remove	Replace With
Chinese Privet	Arrowwood Viburnum, Blackhaw Viburnum, Spicebush
English Ivy	Green-and-Gold, Foamflower, Allegheny Spurge
Bradford Pear	Serviceberry, Dogwood, Redbud, Fringetree
Japanese Honeysuckle	Trumpet Honeysuckle, Carolina Jessamine
Monkey Grass	Pennsylvania Sedge, Cherokee Sedge



Invasive Tree and Shrub Native Alternatives

Invasive Landscape Plant

Callery Pear (*Pyrus calleryana*)

Tree-of-Heaven (*Ailanthus altissima*)

Mimosa (*Albizia julibrissin*)

Chinese Privet (*Ligustrum sinense*)

Glossy Privet (*Ligustrum lucidum*)

Autumn Olive (*Elaeagnus umbellata*)

Thorny Olive (*Elaeagnus pungens*)

Nandina (*Nandina domestica*)

Why It's a Concern

Escapes cultivation, forms dense thickets, displaces native vegetation

Aggressive root sprouts, allelopathic, host for spotted lanternfly

Rapid spread by seed, invades roadsides and disturbed sites

Forms dense understory thickets, suppresses native regeneration

Escapes cultivation, spreads into forests

Produces abundant seed, alters soil nitrogen, invades open habitats

Dense thorny growth, spreads into natural areas

Escapes cultivation, spreads by seed, invasive in woodlands

Native Alternative(s)

Serviceberry (*Amelanchier* spp.), White Fringetree (*Chionanthus virginicus*), Flowering Dogwood (*Cornus florida*)

Blackgum (*Nyssa sylvatica*), American Hornbeam (*Carpinus caroliniana*), Tulip Poplar (*Liriodendron tulipifera*)

Eastern Redbud (*Cercis canadensis*), Fringe Tree (*Chionanthus virginicus*)

Arrowwood Viburnum (*Viburnum dentatum*), Blackhaw Viburnum (*Viburnum prunifolium*), Spicebush (*Lindera benzoin*)

Wax Myrtle (*Morella cerifera*), Yaupon Holly (*Ilex vomitoria*)

American Beautyberry (*Callicarpa americana*), Chickasaw Plum (*Prunus angustifolia*)

Wax Myrtle (*Morella cerifera*), Virginia Sweetspire (*Itea virginica*)

Virginia Sweetspire (*Itea virginica*), American Beautyberry (*Callicarpa americana*), Oakleaf Hydrangea (*Hydrangea quercifolia*)



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Bradford Pear → Serviceberry



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Nandina domestica



Virginia Sweetspire



Photos: NC State Extension



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Glossy Privet



Wax Myrtle



Photos: NC State Extension



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Invasive Vine and Groundcover Native Alternatives

Invasive Landscape Plant

English Ivy (*Hedera helix*)

Periwinkle (*Vinca major*, *V. minor*)

Japanese Honeysuckle
(*Lonicera japonica*)

Chinese Wisteria (*Wisteria sinensis*)

Japanese Wisteria (*Wisteria floribunda*)

Wintercreeper (*Euonymus fortunei*)

Japanese Stiltgrass
(*Microstegium vimineum*)

Monkey Grass (Liriope)
(*Liriope spicata*)

Why It's a Concern

Escapes cultivation, smothers native vegetation, climbs trees, increases tree stress and storm damage

Forms dense mats that suppress native wildflowers and spreads into forests

Rapidly climbs and covers shrubs and trees, reducing light and native plant diversity

Aggressive woody vine that girdles trees and overwhelms native vegetation

Vigorous climbing vine that spreads beyond cultivation

Escapes groundcover plantings, climbs trees, forms dense mats in woodlands

Annual grass that invades shaded woodlands and disturbed areas, displacing native herbaceous plants

Spreads aggressively by rhizomes and escapes into natural areas

Native Alternative(s)

Green-and-Gold (*Chrysogonum virginianum*), Allegheny Spurge (*Pachysandra procumbens*), Foamflower (*Tiarella cordifolia*)

Green-and-Gold (*Chrysogonum virginianum*), Woodland Phlox (*Phlox divaricata*), Wild Ginger (*Asarum canadense*)
Coral Honeysuckle (*Lonicera sempervirens*), Crossvine (*Bignonia capreolata*), Carolina Jessamine (*Gelsemium sempervirens*)

American Wisteria (*Wisteria frutescens*)

American Wisteria (*Wisteria frutescens*)

Allegheny Spurge (*Pachysandra procumbens*), Golden Ragwort (*Packera aurea*), Green-and-Gold (*Chrysogonum virginianum*)

Pennsylvania Sedge (*Carex pensylvanica*), Appalachian Sedge (*Carex appalachica*), River Oats (*Chasmanthium latifolium*)

Pennsylvania Sedge (*Carex pensylvanica*), Cherokee Sedge (*Carex cherokeensis*), Green-and-Gold (*Chrysogonum virginianum*)



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English Ivy → Green-and-Gold



Photos: NC State Extension



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Liriope spicata → Pennsylvania Sedge



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Invasive Herbaceous Plant Native Alternatives

Invasive Herbaceous Plant

Japanese Stiltgrass (*Microstegium vimineum*)

Cogongrass (*Imperata cylindrica*)

Chinese Silvergrass (Miscanthus)
(*Miscanthus sinensis*)

Mexican Petunia (*Ruellia simplex*)

Yellow Flag Iris (*Iris pseudacorus*)

Yellow Archangel (*Lamiastrum galeobdolon*)

Bamboo (Running Species)
(*Phyllostachys* spp.)

Why It's a Concern

Rapidly invades shaded woodlands, suppresses native wildflowers and tree seedlings

Aggressive rhizomes, difficult to eradicate, increases wildfire risk

Escapes cultivation, spreads by seed into roadsides and natural areas

Escapes gardens and invades wetlands and streambanks

Invades wetlands, ponds, and stream edges, displacing native wetland plants

Forms dense mats in shaded landscapes and woodlands

Spreads aggressively by rhizomes, difficult to contain

Native Alternative(s)

Pennsylvania Sedge (*Carex pensylvanica*), Appalachian Sedge (*Carex appalachica*), River Oats (*Chasmanthium latifolium*)

Little Bluestem (*Schizachyrium scoparium*), Broomsedge (*Andropogon virginicus*)

Pink Muhly Grass (*Muhlenbergia capillaris*), Switchgrass (*Panicum virgatum*), River Oats (*Chasmanthium latifolium*)

Wild Petunia (*Ruellia humilis*), Blue Mistflower (*Conoclinium coelestinum*), Cardinal Flower (*Lobelia cardinalis*)

Southern Blue Flag Iris (*Iris virginica*), Dwarf Crested Iris (*Iris cristata*)

Golden Ragwort (*Packera aurea*), Green-and-Gold (*Chrysogonum virginianum*)

River Cane (*Arundinaria gigantea*), Switchgrass (*Panicum virgatum*)



Yellow Flag Iris → Southern Blue Flag Iris



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Cogongrass



Little Bluestem



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Just Because It's for Sale Doesn't Mean It's the Best Choice

Many Landscape Plants with Invasive Potential Are Still Available in the Nursery Trade

Commonly Sold Landscape Plant

Callery (Bradford) Pear

Chinese Privet

Nandina

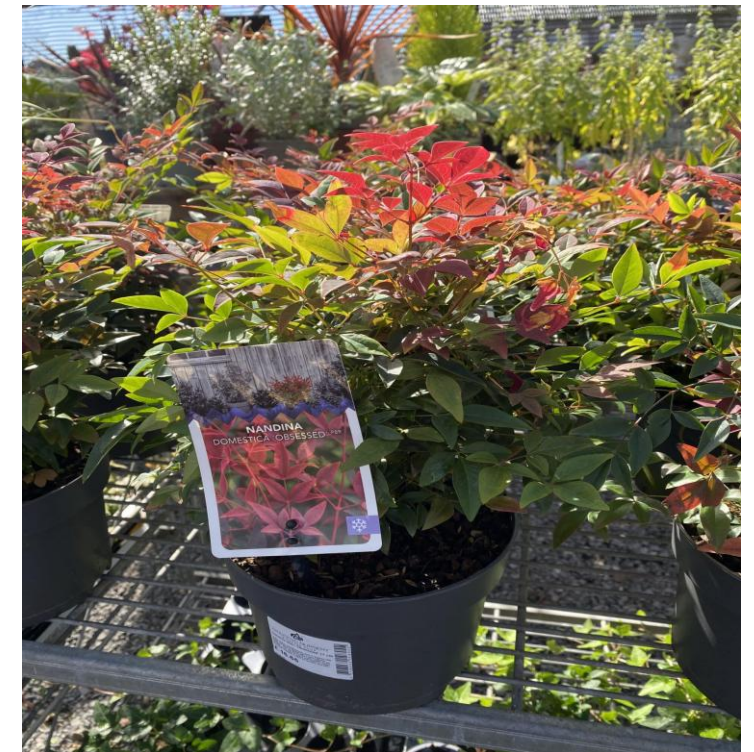
English Ivy

Periwinkle (Vinca)

Chinese Wisteria

Japanese Honeysuckle

Monkey Grass (*Liriope spicata*)

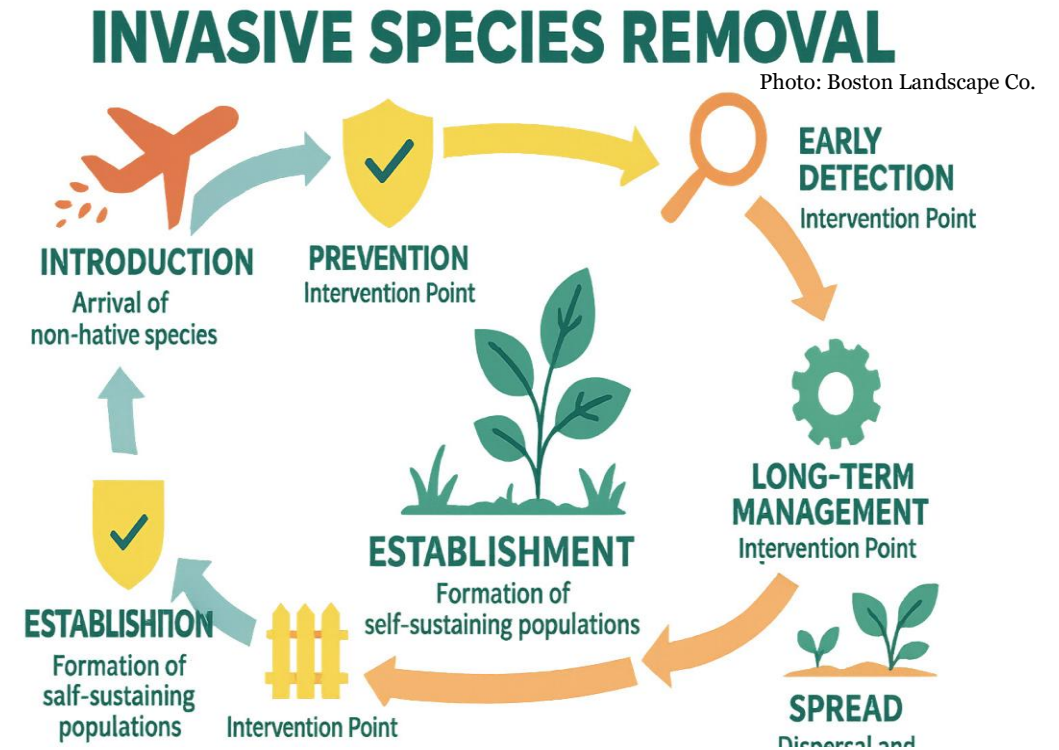


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Invasive Species Removal and Management

Successful Management Starts with a Plan

- **Prevention** – Stop new introductions whenever possible.
- **Early Detection** – Find new infestations while they are small.
- **Rapid Response** – Remove invasive plants before they spread.
- **Long-Term Monitoring** – Continue evaluating sites after treatment.
- **Successful management requires persistence.**



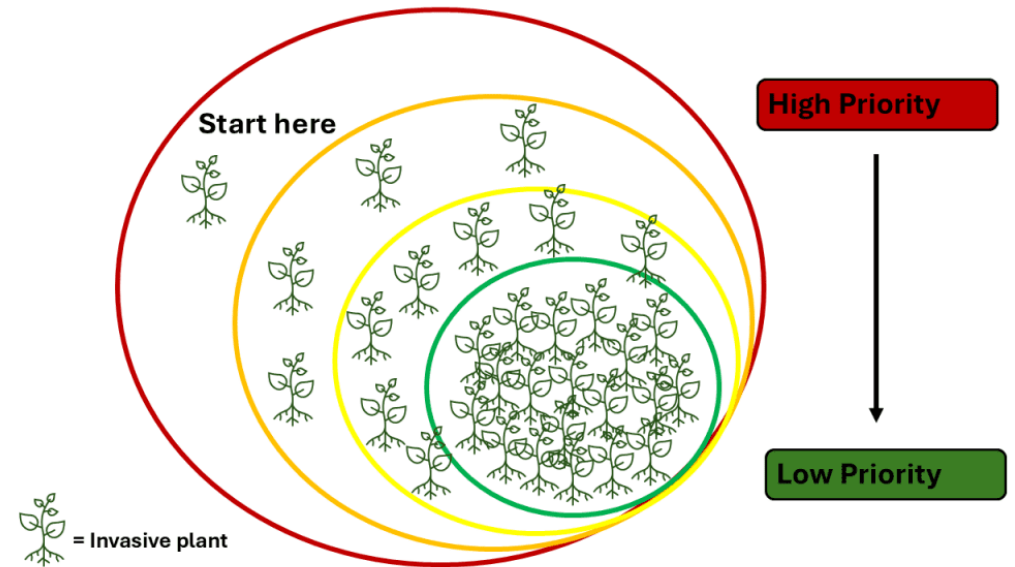
Prioritize Your Management Efforts

Highest Priority

- Small, isolated populations
- Newly established infestations
- Seed-producing plants
- Areas adjacent to high-quality native habitats

Lower Priority

- Large, well-established infestations requiring long-term restoration



Mechanical Removal of Invasives

Removing Plants Without Herbicides

- Hand pulling seedlings
- Digging roots and crowns
- Cutting woody stems
- Mowing repeated growth
- Girdling large trees
- Weed wrench or shrub pullers

Best Used For

Small infestations, Young plants, Sensitive natural areas, areas near desirable native vegetation

Advantages

- ✓ No chemical exposure

Limitations

- ✗ Labor intensive
- ✗ Often requires repeated treatments
- ✗ Disturbs soil if not done carefully



Chemical Control As a Last Resort...But May Be Necessary

Herbicides Are Often Necessary for Established Infestations

Foliar Spray

- Best for dense herbaceous growth
- Treat actively growing foliage



Cut-Stump Treatment

- Cut stem near ground level
- Apply herbicide immediately to stump (glyphosate or triclopyr)

Basal Bark Treatment

- Spray lower 12–18 inches of woody stem
- Useful for shrubs and small trees

Hack-and-Squirt

- Large woody trees
- Herbicide applied directly into cuts

THE LABEL IS LAW!



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Timing Matters

Many woody invasive species are most effectively controlled in the fall when carbohydrates move to the roots.

Season	Best Management Activities
Spring	Control emerging herbaceous invasives
Summer	Monitor regrowth and retreat as needed
Fall	Excellent time for woody plant herbicide applications
Winter	Locate evergreen invasives and plan treatments



**Apply the Right Treatment at
the Right Time**

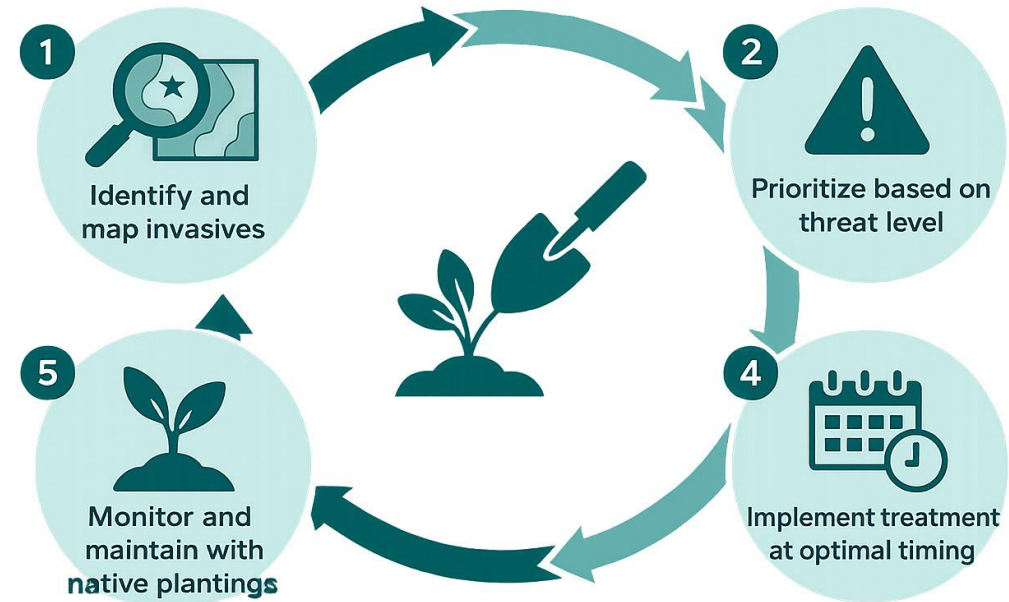
Integrated Pest Management (IPM) for Invasive Plants

Use Multiple Strategies Together

- Prevention
- Monitoring
- Mechanical removal
- Targeted herbicide applications
- Native plant restoration
- Continued follow-up

INVASIVE SPECIES REMOVAL

Photo: Boston Landscape Co.



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Prevent Re-Establishment of Invasives



Photo: UGA Public Service and Outreach

Successful restoration requires:

- Monitoring for seedlings
- Removing resprouts quickly
- Minimizing soil disturbance
- Maintaining mulch
- Establishing competitive native vegetation



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Restoration Using Native Plants

Healthy native plant communities:

- Occupy available growing space
- Shade the soil surface
- Reduce opportunities for invasive seedlings
- Support pollinators and wildlife
- Improve ecosystem services



Before Planting and Replacing with Natives

- ☐ Correctly identify the invasive species
- ☐ Select the appropriate management method
- ☐ Treat at the proper time of year
- ☐ Monitor for regrowth
- ☐ Replant with native species
- ☐ Continue long-term maintenance

Native plant establishment begins with effective invasive plant management.



Photo: UGA Public Service and Outreach



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Soil Preparation Comes Next

Once invasive plants are removed:

- Evaluate soil condition
- Check drainage
- Identify compaction
- Perform soil testing
- Healthy soils are the foundation for successful establishment.



Soil Testing Before Planting



A soil test determines:

- pH
- Nutrient levels
- Lime recommendations
- Fertility needs

Don't guess. Test first.



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Prepare the Entire Planting Area

Instead of improving only the planting hole:

- Deep cultivate where appropriate
- Break compaction



- Improve drainage
- Incorporate compost into planting beds (when appropriate)



Organic Matter: More Is Not Always Better

Compost and other organic amendments can be useful but they should be added to solve a specific problem.



Organic matter can help:

- Improve soil structure
- Support soil biological activity
- Increase water-holding capacity in sandy soils
- Improve aggregation and workability
- Contribute to nutrient cycling



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Protect the Soil During Installation

Site preparation continues while the native plants are being installed.

- Driving equipment repeatedly across planting areas
- Stockpiling materials over root zones
- Working wet soils
- Unnecessary foot traffic
- Mixing subsoil and topsoil during construction

Compaction created during installation can remain long after the project is finished.



Plant Selection at the Nursery



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Evaluating Trees at the Nursery for Root Defects

- Roots circling close to the trunk
- Kinked roots
- Loose root ball
- Descending (diving, plunging) roots
- Many roots on the outside edge of the ball
- Root ball too small for the tree
- Too few roots in root ball
- Tree planted too deep in container or field root ball

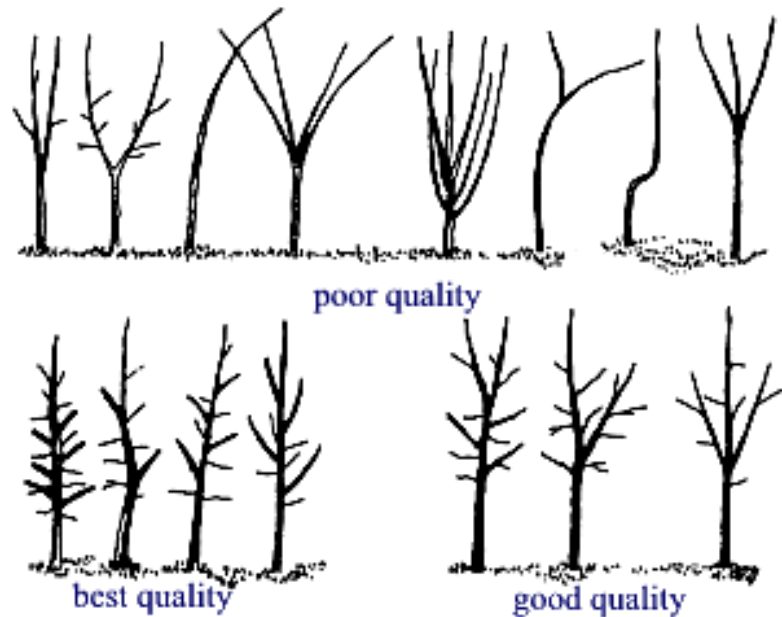


Tree Selection at the Nursery



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Evaluating Trees at the Nursery for Stem and Branch Structure

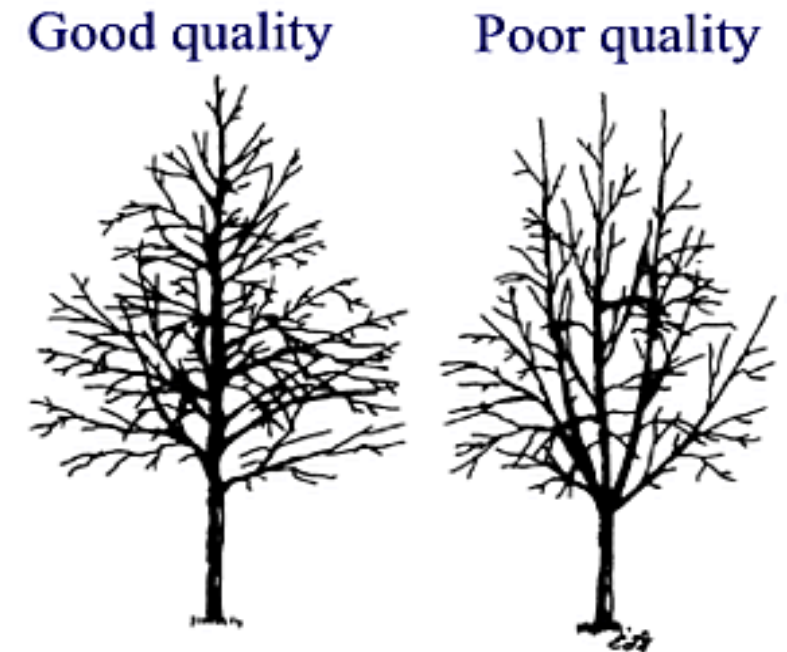


Trunk Structure= Dominant or
central leader



No cracking or splitting

Photos: (UF Extension)



Branch Structure= all branches less
than about two-thirds the trunk
diameter

Ready to Plant? Take These Steps

Good installation protects the investment you have already made in site preparation.

- Confirm plant locations and spacing.
- Keep roots moist and protected.
- Inspect plants for damage or root problems.
- Have irrigation or water available.
- Plant as soon as possible after plants arrive.

Good plants can still fail when they are planted poorly.



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Water Immediately After Planting

**Native does not mean
drought tolerant on Day 1.**

**Even drought-adapted
native plants need
adequate moisture while
roots become established.**

Watering at installation:

- Provides moisture to the root ball
- Helps begin root establishment



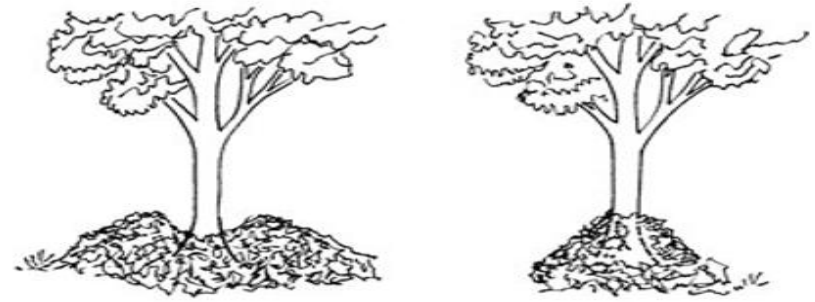
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Mulch: Supporting Establishment

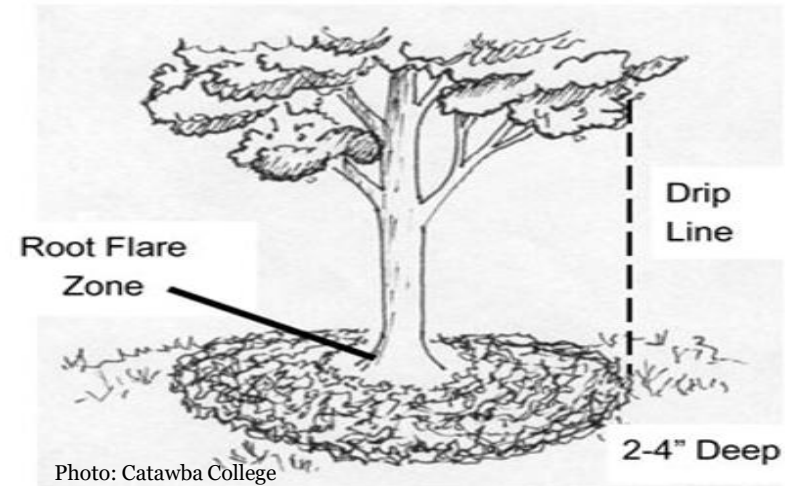
Think donut—not volcano.

- Conserves soil moisture
- Moderates soil temperature
- Reduces competition from annual weeds
- Protects soil from erosion
- Reduces soil compaction and surface crusting
- Adds organic matter as organic mulch decomposes

General guideline: Apply about 2–3 inches of organic mulch in landscape beds.



Incorrect Mulching



Proper Mulching Method



Native Does Not Mean Maintenance-Free

Long-term management may include:

- Monitoring for invasive plants
- Selective weeding
- Pruning when appropriate
- Managing aggressive spreaders
- Maintaining paths and edges
- Leaving stems and seed heads when appropriate
- Replacing plants that consistently struggle

Shift from intensive establishment care to strategic, lower-input management.



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Evaluate, Adjust, and Replant

- Some species may not be well suited to the site.
- Weather extremes can affect establishment.
- Individual plants may fail even when others perform well.
- Repeated failure of the same species may indicate a mismatch with site conditions.
- Use losses as information when making future planting decisions.



Plan for Seasonal Change

- A native landscape will look different throughout the year.
- Help clients and visitors understand that seasonal change is part of the design and not a sign of neglect.

Spring: emerging growth and early blooms

Summer: dense vegetation and peak flowering

Fall: seed, fruit, grasses, and late blooms

Winter: stems, seed heads, bark, and structure



Educate Your Clientele

Set expectations for what a native landscape looks like over time.

Help clients understand:

- Native landscapes change with the seasons.
- Newly planted landscapes need time to grow and establish.
- Some reseeding and spreading is expected.
- Native does not mean maintenance-free.
- Seed heads, stems, and leaf litter can serve a purpose.
- Long-term management may look different from traditional landscape maintenance.

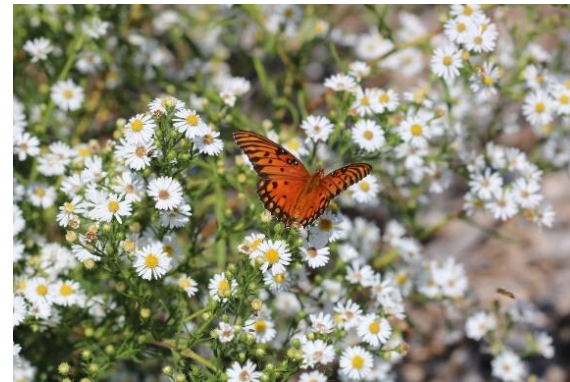


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Set the Stage for Success

- **Start with the site.**
Understand what you are working with.
- **Manage what competes.**
Stay ahead of invasive plants and weeds.
- **Protect what you have.**
Preserve healthy soil and desirable vegetation.
- **Choose wisely.**
Put the right native plants in the right places.
- **Support establishment.**
Water, mulch, monitor, and adjust.

Successful native landscapes are built over time. Good preparation gets them started and good management is necessary for long-term establishment.



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Monitoring and Scouting

Regular scouting is one of the simplest long-term management tools.

Watch for:

- New invasive plants
- Invasive regrowth
- Developing weed populations
- Plant decline
- Erosion or drainage changes
- Areas of excessive or inadequate moisture



Plant at the Right Depth

One of the most common planting mistakes is planting too deep.

For trees and shrubs:

- Locate the root flare.
- The root flare should be visible at or slightly above the soil surface.
- Do not assume the top of the container is the correct planting depth.
- Remove excess soil covering the root flare before planting.

For herbaceous plants:

- Keep the crown near the original growing depth.
- Avoid burying stems and crowns.



Photo: (UF Extension)



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Proper Planting Hole Preparation

Research shows:

- Dig holes 2–3 times wider than the root ball
- Plant at the proper depth
- Backfill with native soil
- Avoid heavily amending individual planting holes
- Large planting holes encourage faster root establishment.

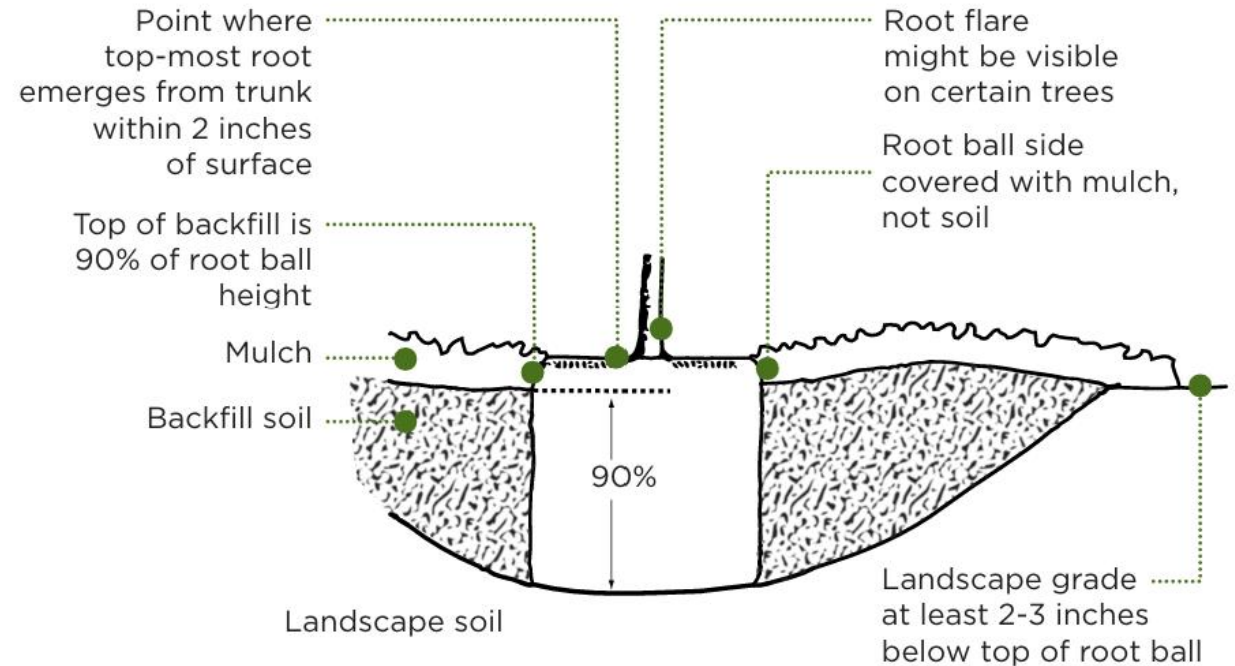


Photo: (UF Extension)



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Irrigation Beyond Establishment

Consider:

- Plant species and maturity
- Soil type and drainage
- Rooting depth
- Sun and heat exposure
- Seasonal rainfall
- Extended drought
- Newly added or transplanted plants

Once native plants are established, supplemental irrigation can often be reduced, but long-term water needs depend on the plant and site.



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