

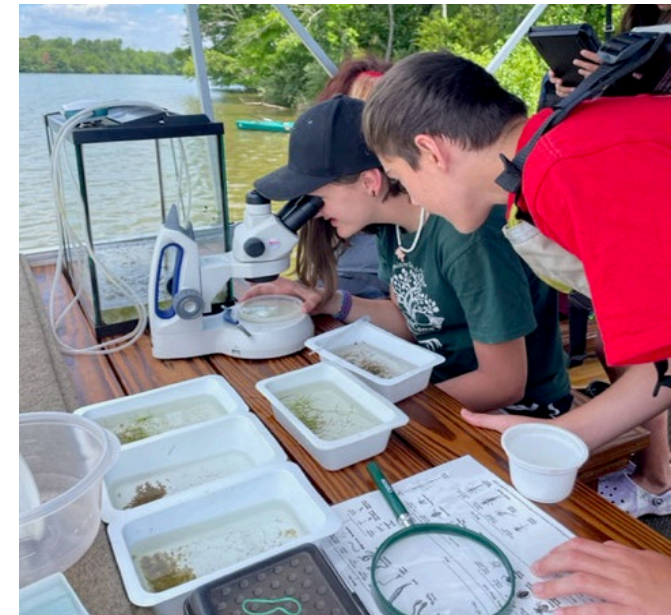


SKIPPACK TOWNSHIP LAWN TO NATIVE GARDEN WORKSHOP

Jessie Kemper
Director of Conservation
Perkiomen Watershed Conservancy

Perkiomen Watershed Conservancy

- Founded in 1964 with the goal of preserving and protecting the land and water resources of the Perkiomen Creek Watershed.
- The watershed is 362 square miles and encompasses 55 municipalities in 4 PA counties.
- Environmental conservation, education and outreach programs reach thousands of people each year!



What is a Native Plant?

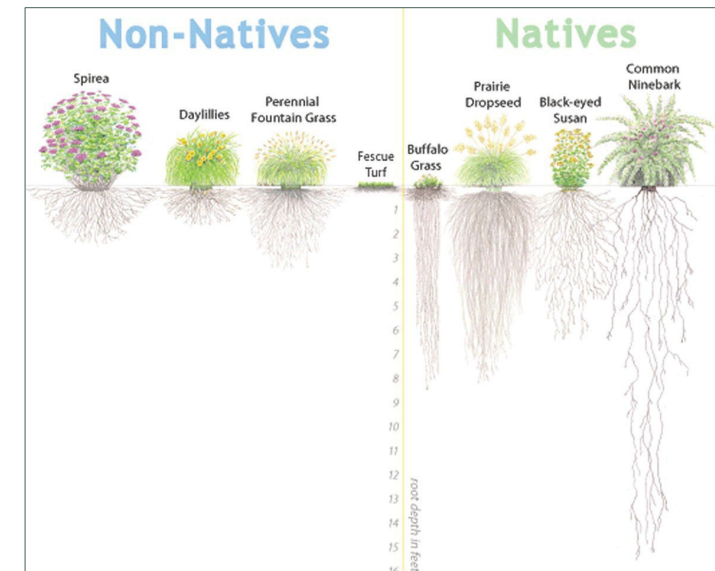
- Naturally grows in a particular region, ecosystem, or habitat without the aid of human intervention.
- Present in a particular region following the most recent glacial period and prior to European contact.
- ***The nutritional value of straight natives for wildlife is known!***



PA ecoregions - areas that have similar ecosystems and environmental resources.

Native Plant Benefits

- **Great for the Environment:**
 - ***Support wildlife and pollinators***
 - Heart of the food chain!
 - 90% of plant-eating insects can only eat the native plants they co-evolved with!
 - Provide seasonal blooms vital for pollinators.
 - ***Deep root systems build healthy soil***
 - Break up compacted soil.
 - Improve drainage.
 - Aid in water purification.
 - Provide organic matter.
 - Facilitate nutrient cycling.
 - ***Improve air quality***
 - Reduce concentration of CO₂ in atmosphere.
 - Deep root systems store significant amounts of carbon.
 - Require less maintenance than lawns including mowing and weed whacking.



Native Plant Benefits

- **Less Maintenance and Inputs:**
 - Adapted to local climate.
 - Little-to-no mowing needed.
 - Drought tolerant.
 - No need for fertilizers or pesticides.
 - Thrive in a variety of habitat conditions.
- **Saves Money:**
 - Greater survival rates and longevity compared to non-natives.
 - Tend not to grow or spread invasively.
 - Little to no watering once established.



Native Plant Benefits

- **They're Beautiful!**

- Provide seasonal blooms, fall color and winter interest in the garden.
- Thousands of unique PA native plant options!
- Create a sense of place and connection to the landscape.



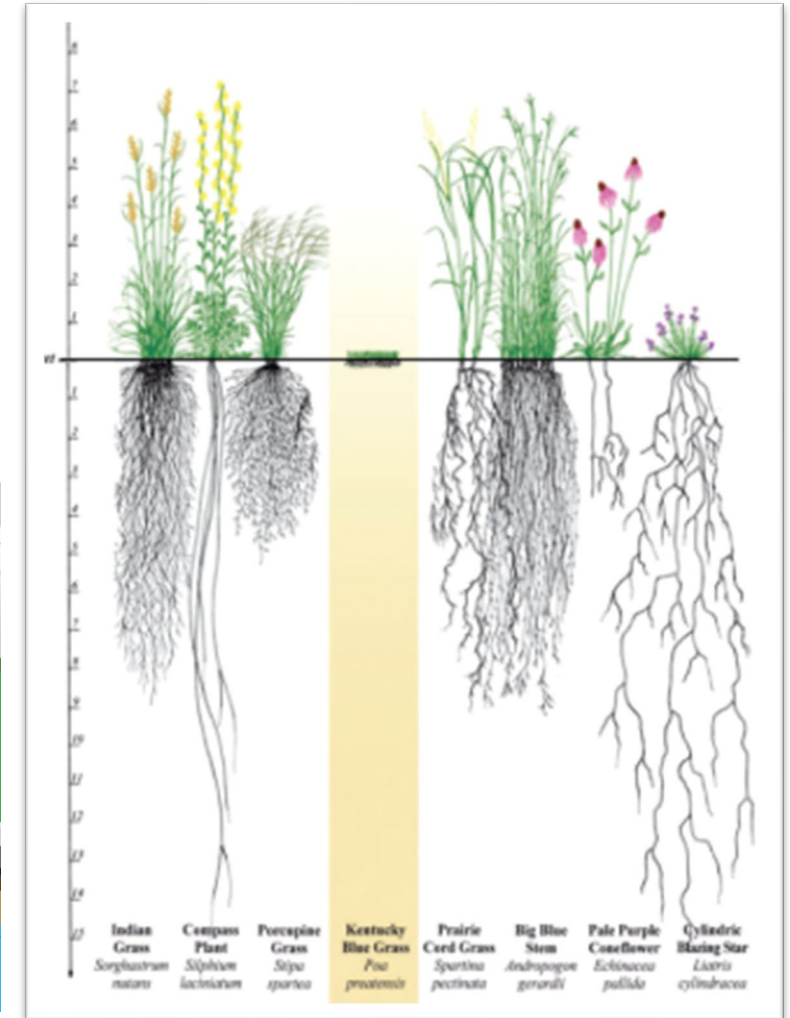
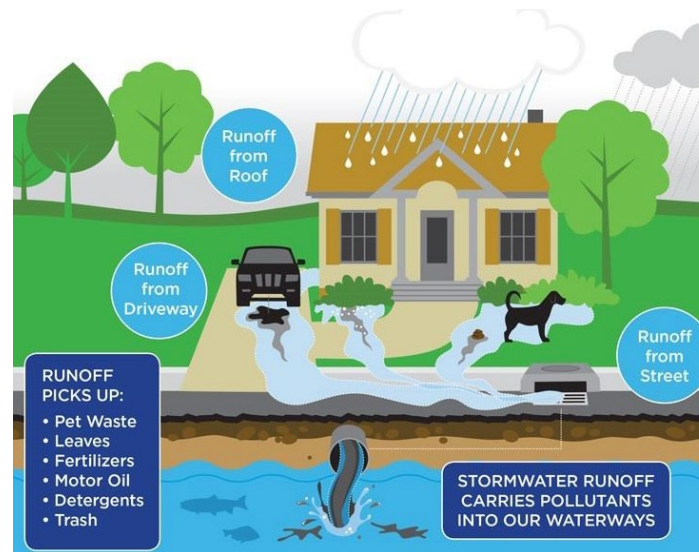
Naturalized, Non-native & Invasive

- **Naturalized:** Species that have established a sustaining population in a new environment and can spread without human intervention.
- **Non-native:** Species that have not existed historically in one area but have been introduced due to human activities.
- **Invasive:** Species that are able to establish on many sites, grow quickly, and spread to the point of disrupting plant communities or ecosystems.



Ecological Impacts of Lawns

- Lawns are the largest irrigated monocrop in America! (over 40 million acres)
- Most are made up of non-native grasses.
- Gas powered lawn mowers make up %5 of the total air pollution in the US (higher #s in urban areas).
- A lush, green lawn requires inputs to maintain:
 - Water (1/3 of residential water consumption)
 - Synthetic fertilizers (pollutes waterways)
 - Mowing / weed whacking (emits CO₂ and compacts soil)
- Shallow root systems lead to increased flooding and runoff.



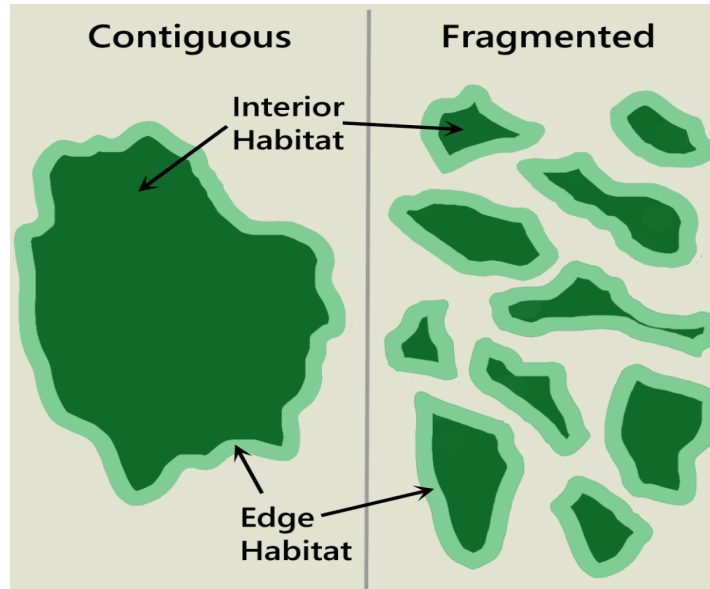
Lawn Culture and Suburban Landscapes

- First popularized among wealthy landowners in France and England in the 1700s.
- Lawns in the US became a symbol of homeownership, community and social standing.
- As a result, suburban landscapes consist of a small variety of alien ornamental plants that provide little-to-no value for wildlife.

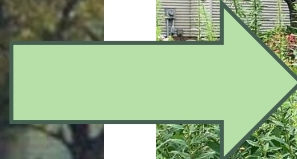


Habitat Fragmentation

- Lawn culture leads to habitat fragmentation.
- Fragmentation occurs when parts of habitat are destroyed leaving behind smaller, disconnected areas.
- Leads to reduction in habitat quality (the edge effect).
- Limits wildlife mobility, leading to loss of genetic diversity.



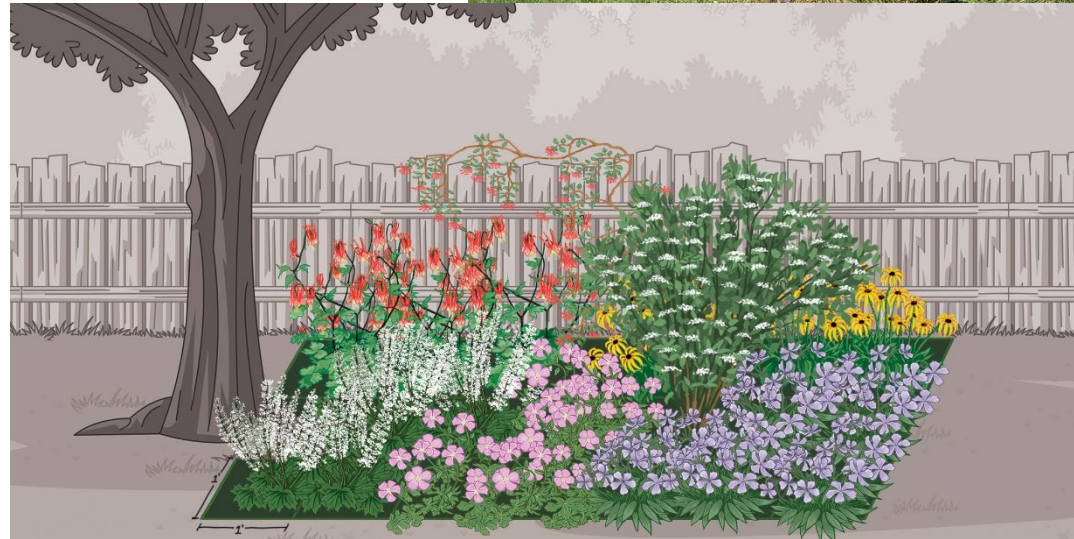
What Can We Do?



Converting Lawn to Garden

Step 1: Choose the type of garden:

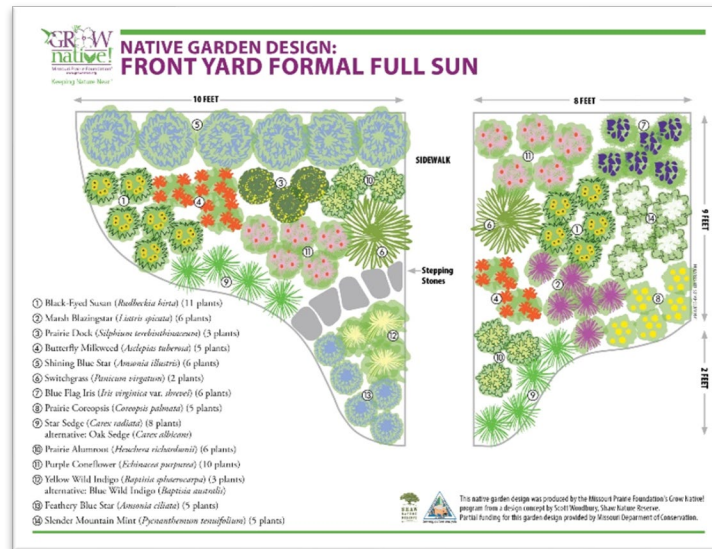
- What are the goals for your garden?
- Rain garden
- Pollinator garden
- Bird habitat garden
- Edible garden



Selecting Your Site

Step 2 – Site Selection:

- Think about size – start small!
- Location – front yard / backyard, near sidewalks / roads, wet areas, etc.
- Sunlight requirements
- Use marking paint or flags to map out garden size and placement.



Preparing Your Site

Step 3 – Get rid of the grass:

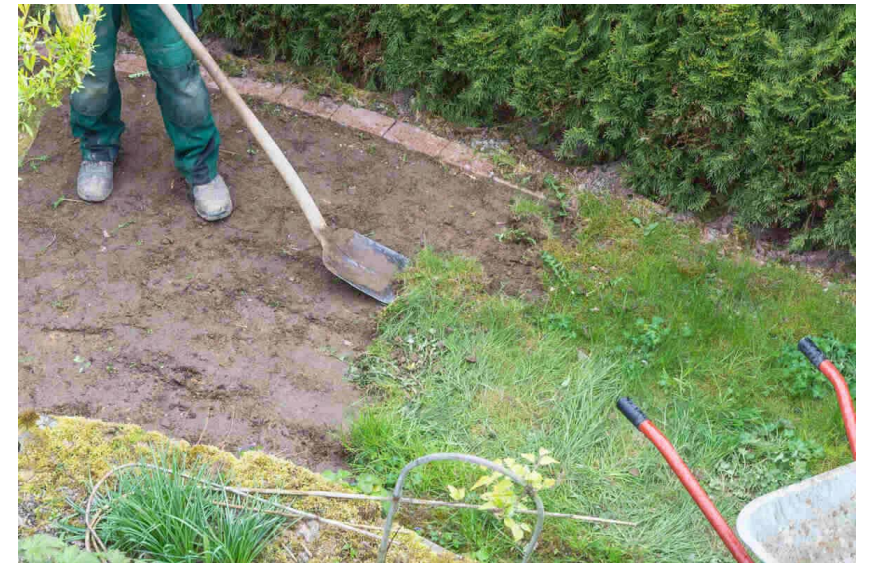
- Necessary step unless you are building raised beds.
- Call 811 beforehand.
- Set mower to lowest setting to scalp the grass.
- ***Chemical free ways to remove grass:***
 - Dig out grass by hand
 - Use motorized tools
 - Smother the grass
 - Solarize your lawn



Removing Grass

Digging out grass by hand:

- Most labor intensive option.
- Good option if you are short on time and have a small area.
- What you'll need: sharp spade / hoe, wheelbarrow, soil / compost.
- **Steps:**
 - Water the day before to soften the ground.
 - Use spade to cut out square foot sections about 1.5" – 3" deep.
 - Use hoe to peel the sod back and remove it.
 - Transport sod in wheelbarrow to compost or discard it.
 - Remove any remaining weeds.
 - Fill in any holes with soil.
 - Add in compost.
 - Plant!



Removing Grass

Using motorized tools:

- Quick option that is less labor intensive.
- Requires renting or buying a machine.
- What you'll need: marking paint, sod cutter/ rototiller, wheelbarrow.
- **Steps:**
 - Clear the lawn and mow.
 - Water up to 3 days before removing the grass to soften soil.
 - Mark out the area.
 - Test out the tool to make sure it is cutting deep enough.
 - Continue cutting strips of your turf grass.
 - Transport sod in the wheelbarrow.
 - Fill in empty spots with soil and compost.
 - Plant!



Removing Grass

Smothering the grass or other unwanted vegetation:

- Can take months to kill the grass.
- What you'll need: rake, mower, cardboard / old newspaper.
- **Steps:**
 - Mow lawn on the lowest setting.
 - Rake away any debris.
 - Remove any lingering weeds.
 - Cover area with cardboard (make sure to overlap).
 - Drench cardboard with water.
 - Add mulch.
 - Wait for grass to die.
 - Plant!



Removing Grass

Solarizing your lawn:

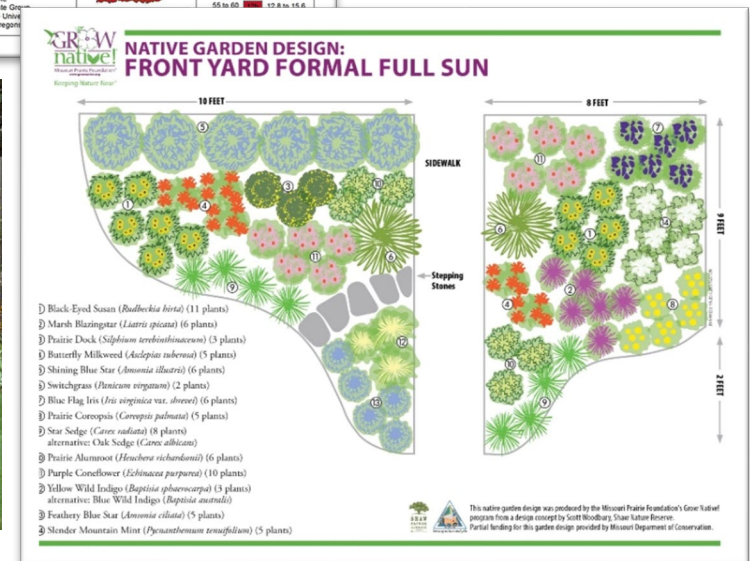
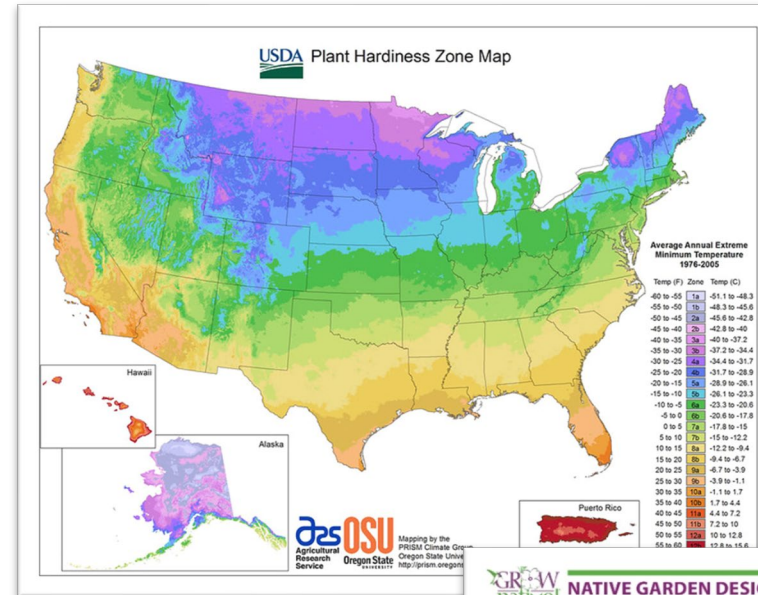
- Good option for weed-ridden lawns.
- Can take up to 12 weeks to work.
- What you'll need: clear / black plastic tarp, rake, bricks / rocks
- **Steps:**
 - Anchor tarp down in your desired area with rocks / bricks.
 - Leave for 4 – 12 weeks.
 - Rake away dead grass.
 - Add compost and soil.
 - Plant!



Plant Selection

Step 4 – Choose your plants:

- What type of garden are you creating?
- Native perennials, trees and / or shrubs?
- Think about height, spread and bloom time.
- Figure out USDA hardiness zone
 - Zone 1 = coldest, zone 13 = hottest
 - Southeastern PA is zone 6a / 6b
- Determine sunlight levels and soil moisture.
- Other requirements or limitations?
- Create a planting plan!



Planting Your Garden

Step 5 – Plant and mulch your garden:

- Early spring / fall is the best time of year to plant!
- Make sure to provide proper spacing.
- Break-up the root ball.
- Water your plants, new plants usually need to be watered once or twice a week.
- Mulch with undyed organic material.
- Resources for native plants / planting plans:
 - Rain garden manual of NJ
 - Grow Native – Missouri Prairie Foundation
 - Prairie Moon Nursery
 - Perkiomen Watershed Conservancy



Maintenance is Key!

Step 7 – Maintain your garden:

- Weed and water
- Leave perennial tops on until spring.
- Rake leaf litter into your garden in the fall.
- Replant if necessary.
- Mulch every few years.



Managing Your Remaining Lawn

- Limit fertilizer and pesticide use.
- Switch to organic lawn treatments.
- Water in the early morning.
- Raise your mower height to at least 3".
- Leave grass clippings on lawn or use in compost.
- Mulch leaves into lawn or rake into garden beds.
- Switch to a clover or native grass lawn.



Creating Certified Wildlife Habitat

- You can register your yard as a Certified Wildlife Habitat with the National Wildlife Federation.
- Your yard needs the following to be certified:
 - Water – at least one source of water
 - Food – at least two food sources
 - Shelter – provide at least two sources of cover
 - Places to raise young – provide at least two places to mate and raise young
 - Sustainable practices – engage in at least two categories of sustainable practices
- Fill out certification form and pay \$20 application fee (<https://www.nwf.org/CertifiedWildlifeHabitat/Habitats/Information>)
- Can also purchase a sign to display in your yard.



Components for Backyard Habitat

Provide a water source:

- Bird bath – make sure to change water regularly
- Puddling dish – fill a shallow dish with water and add a few small rocks
- River, pond or rain garden



Provide three food sources:

- Plant native plants! (aim for at least 70%)
- Add a bird feeder – clean often to prevent diseases
- Other options – squirrel feeder, hummingbird feeder, butterfly feeder



Components for Backyard Habitat

Create two areas for wildlife shelter:

- Incorporate plants that provide cover
 - Evergreens
 - Wooded area
 - Dense shrubs
 - Tall grasses
 - Ground cover – not turf grass!
- Create shelter areas in your yard
 - Rock pile
 - Brush or log pile
 - Roosting box
 - Bat box



Components for Backyard Habitat

Provide at least two places to support young:

- Include natural areas
 - Large vegetated trees
 - Wetland area
 - Meadow area
 - Native host plants for caterpillars
- Add nesting boxes
 - Blue bird box
 - Wren home
 - Screech owl nesting box



Components for Backyard Habitat

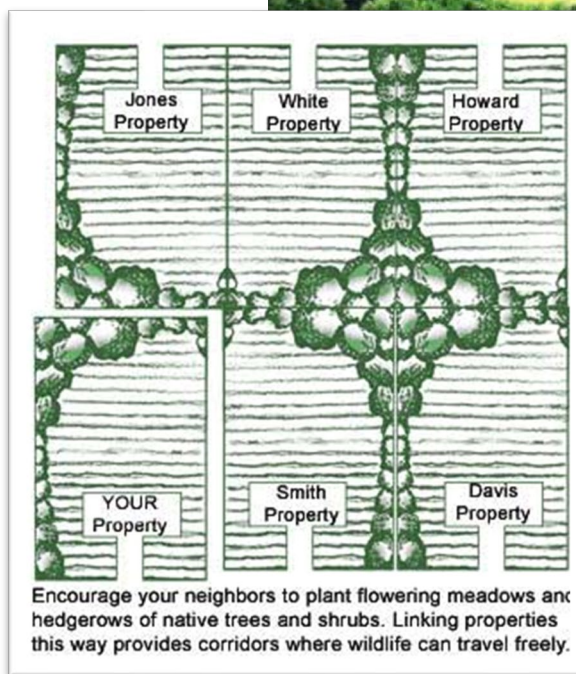
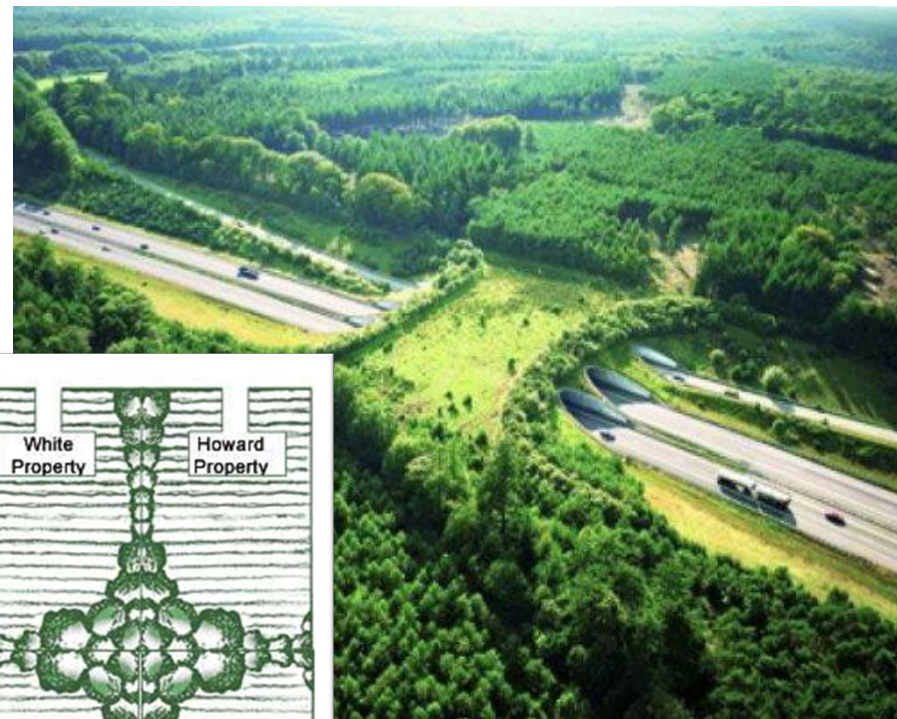
Engage in sustainable practices:

- Soil and water conservation
 - Using a rain barrel
 - Mulching your garden beds
 - Using drip irrigation
- Controlling exotic species
 - Removing non-native plants
 - Using native plants
 - Reducing non-native turf grass
- Organic practices
 - Composting
 - Eliminating pesticides
 - Eliminating herbicides



Creating Wildlife Corridors

- Native plants help reconnect fragmented habitats.
- Think of creating stepping stones for wildlife (aka wildlife corridors).
- These corridors are critical for helping wildlife find the resources they need.
- Creates larger, more complex, diverse and resilient ecosystems.
- Every backyard, no matter how small becomes a part of the solution!
- Small steps can make a big impact:
 - Select plants that support the most species.
 - Trees and shrubs give the biggest bang for your buck.
 - A single oak tree can support 2,300 different wildlife species!



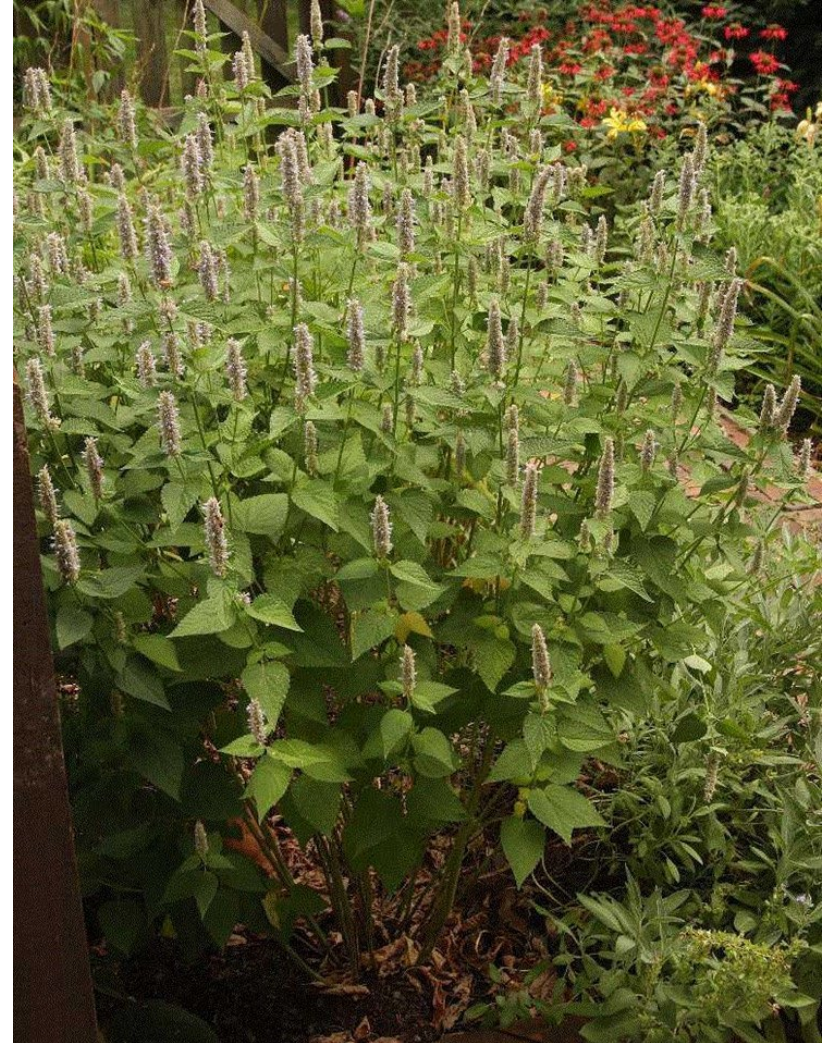
About Your Native Plants

- Blue False Indigo (*Baptisia australis*)
 - Height: 3 – 4 ft.
 - Spread: 3 – 4 ft.
 - Sun: Full sun to part shade
 - Water: Dry to average
 - Attracts: Butterflies
 - Bloom Time: Purple / blueish , lupine-like flowers in upright clusters appear from May to June. Flowers give way to charcoal black seed pods which provide good winter interest.



About Your Native Plants

- Anise Hysopp (*Agastache foeniculum*)
 - Height: 2 – 4 ft.
 - Spread: 1.5 – 3 ft.
 - Sun: Full sun to part shade
 - Water: Dry to average
 - Attracts: Hummingbirds and butterflies
 - Bloom Time: Lavender to purple blooms from June – September with fragrant, anise scented leaves. Deer and drought resistant.



About Your Native Plants

- Silver Bluestem (*Andropogon ternarius*)
 - Height: 3 – 4 ft.
 - Spread: 1 – 2 ft.
 - Sun: Full sun
 - Water: Dry to average
 - Attracts: Birds
 - Bloom Time: Clump forming grass with silvery white to pale tawny color in late summer through the fall. Provides good winter interest and is tolerant of drought and clay soil.



Caring for Your New Plants

- **Plant your perennials as soon as possible.** It is best to plant on a cloudy, mild day or in the evening if it is a hot day.
- **Make sure to break up the root balls prior to planting.** This is an essential step to ensure proper establishment and long-term health.
- **Water your plants immediately after planting.** Give your plant a good drink after planting. Make sure your new perennials get at least an inch of water a week until going dormant in the fall.
- **If not planting right away, be sure to water regularly and store your plant outdoors in the right spot.** For example, if the plant likes shade, do not keep it in a full sun location.

