Sustainable Landscaping at Home

Educational Workshop
Saturday, April 26, 2025
Tampa Palms

Pennoni

PARTNERS FOR WHAT'S POSSIBLE

Introduction

Jason Rinard, PLA

Principal Landscape Architect with over 30 years of experience.

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“Nature is not a luxury, but a necessity. We need the calming influence of green spaces to cleanse our souls and rejuvenate our spirits.”

~ Frederick Law Olmsted

Tracey Schneider, PLA

Senior Landscape Architect with over 20 years of experience.

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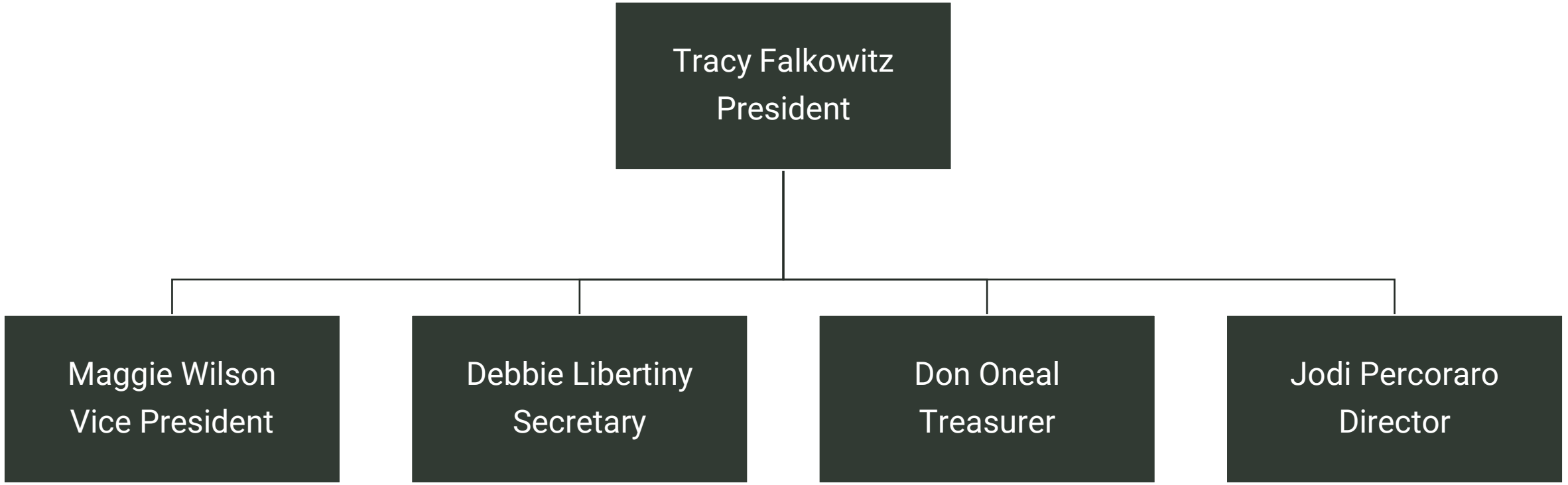
“I find the beauty in landscape lies in its ever-changing dynamics.”

Tampa Palms Owners Association

Board of Directors



Agenda Overview

Sustainability Practices in your home landscape:

- Tampa’s unique climate and ecosystem
- Florida-Friendly Landscaping
- Principles of FFL
- Review Examples of Implementation
- Invasives
- Natives
- Maintenance Practices
- Resources
- Questions mixed in and giveaways after the Q&A

LOCAL ENVIRONMENT

Local Environment

Climate:

Subtropical, humid, rainy summers, dry winters

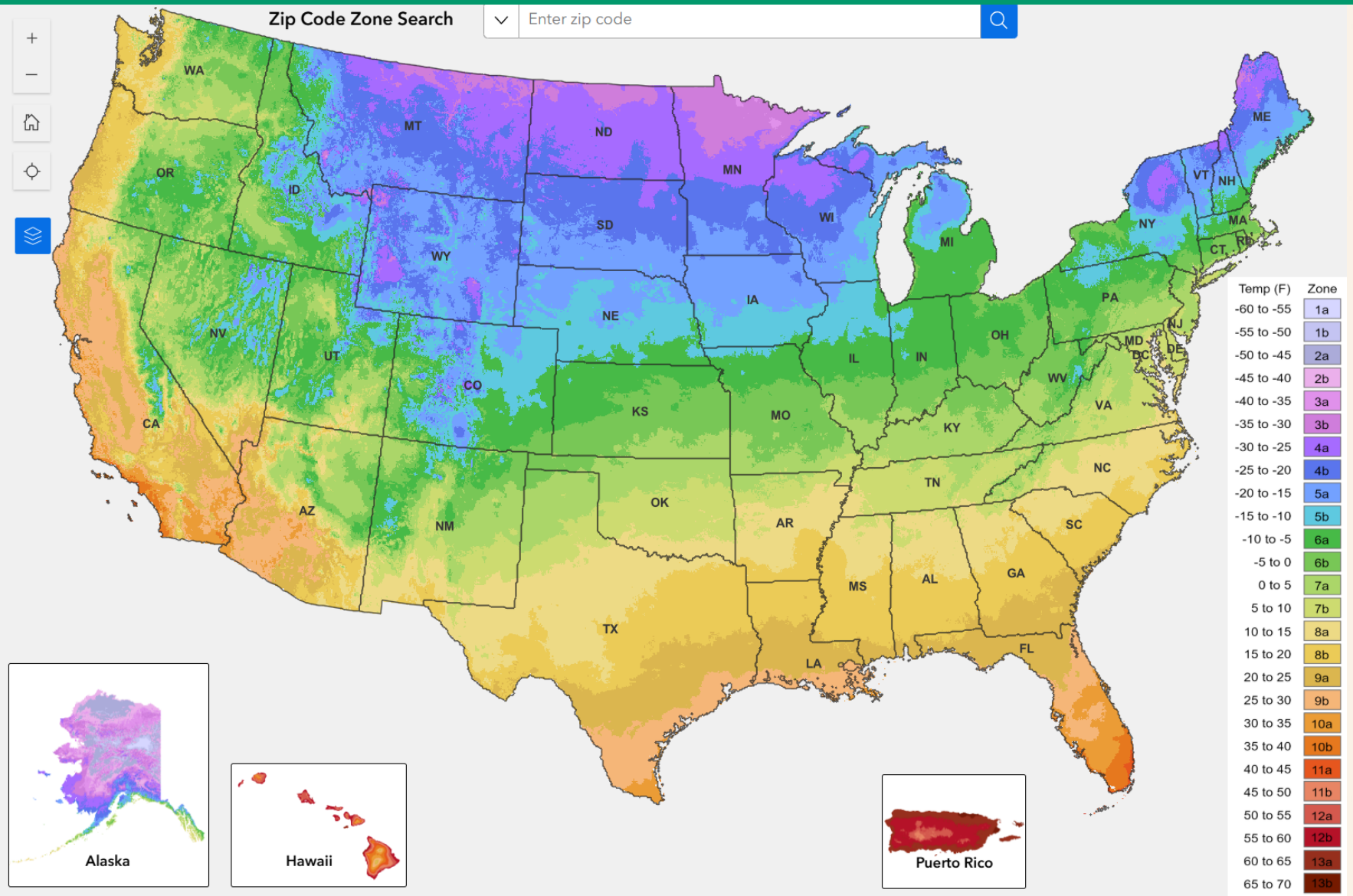
Soil types:

Sandy, well-drained but low in nutrients

Local Environment: Soil

- **Soil pH is a measure of the acidity or alkalinity of the soil.** Homeowners and gardeners alike are interested in soil pH because it affects the growth and quality of landscape plants. On the pH scale, a value of 7 is considered neutral, pH values less than 7 are acidic, and pH values greater than 7 are alkaline.
- **The median soil pH for Florida soils is 6.1**, which is characterized as slightly acidic. But Florida soils can vary widely in pH. Soils in pine woods can be quite acidic. Soils that were formed from calcium-rich materials, such as limestone or seashells, tend to be alkaline. This is particularly true of soils in coastal areas and South Florida. Building materials in the home landscape, including concrete and stucco, may create alkaline conditions as well.
- **Soil pH can affect the health of your landscape plants.** Plants may exhibit nutrient deficiency or toxicity symptoms as a result of soil pH. In acidic soils, the availability of nutrients such as potassium (K), calcium (Ca), and magnesium (Mg) is reduced, while the amount of potentially toxic elements such as aluminum (Al), iron (Fe), and zinc (Zn) is increased. In alkaline soils, iron, manganese (Mn), zinc, and boron (B) are commonly deficient.

Local Environment



Sources: Esri; U.S. Department of Commerce, Census Bureau; U.S. Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), National Geodetic Sur… Po

History of Plant Hardiness Zone Maps

1927 First known attempt at plant hardiness mapping published by Dr. Alfred Rehder of Harvard University using data from U.S. Weather Bureau stations.

1960 U.S. Department of Agriculture (USDA) releases its first official Plant Hardiness Zone Map, dividing the U.S, into zones based on average annual minimum temperatures.

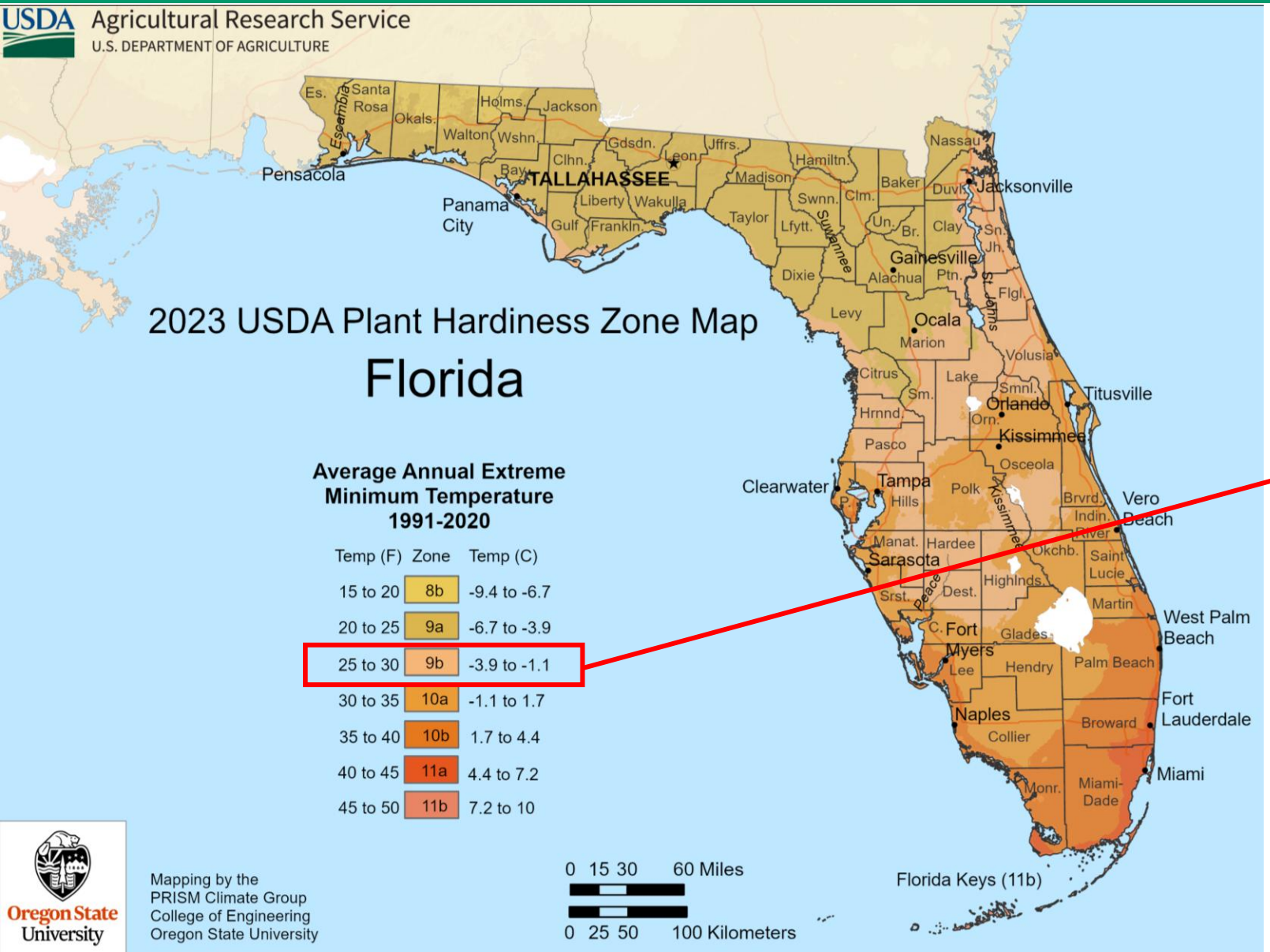
1965 First revision of the USDA map improves zone definitions and adds more detailed data.

1990 Major update to the USDA map incorporates data from 1974–1986; introduces 11 zones, each split into "a" and "b" subzones for more precision

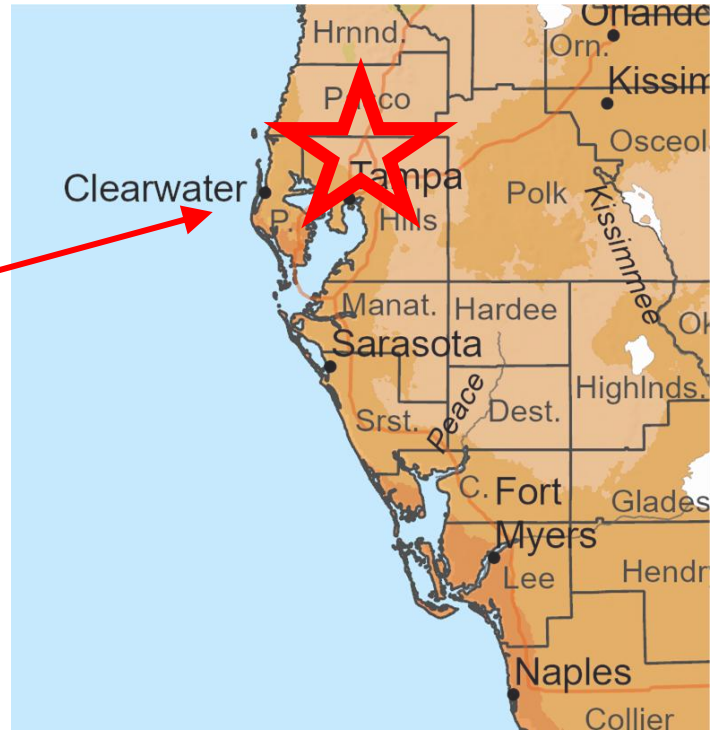
2003 American Horticuitural Society (AHS) proposes an alternative Heat Zone Map based on high temperatures to complement USDA zones

2022 Latest USDA Plant Hardiness Zone Map released using 30 years of data (1991–2020), showing warming trends and shifting zones across many parts of the U.S.

Local Environment



Zone: 33647 is Zone 9b.



QUESTION:

What year was the first Plant Hardiness Zone Map released?

a. 1927
b. 1945
c. 200 B.C.
d. 1971
e. 1960

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FLORIDA-FRIENDLY LANDSCAPING

Florida-Friendly Landscaping

What is the Florida-Friendly Landscaping Program?

Florida-Friendly Landscaping™ (FFL) is the state of Florida's premier Extension program that promotes sustainable alternatives to "conventional" landscaping, providing guidance on low-impact, environmentally friendly, science-based landscape practices that use less water and reduce pollutant loading to Florida waters. Since 1993, FFL has served Florida as a partnership between the University of Florida, Institute of Food and Agricultural Sciences Extension (UF/IFAS Extension) and the Florida Department of Environmental Protection (DEP)

Florida-Friendly Landscaping

What is the Florida-Friendly Landscaping approach?

‘A Florida-Friendly Landscape is a quality landscape that is designed, installed, and maintained according to the nine Florida-Friendly Landscaping™ principles. The nine principles seek to reduce environmental impact from landscaping by properly applying water, fertilizer, and pesticides, creating wildlife habitat, preventing erosion, recycling yard waste, and employing other practices based on University of Florida research. The right plant in the right place will require minimal watering and use of fertilizer or pesticides, saving you time and money.’

The 9 Principles of FFL

1. **Right Plant, Right Place:**
   How well your plants perform depends in great part on whether you choose the right plants for the right place.

   - Select Florida-Friendly plants and turfgrass that match a site's soil, light, water, and climatic conditions.
   - Buy quality plants that welcome wildlife.
   - Aim for a diversity of trees, shrubs, and groundcovers.
   - Look for low-maintenance plants.
   - Remove invasive species.

Right Plant, Right Place

What is the Right Plant, Right Place?

Native and non-native Florida-Friendly plants that are best suited to site-specific conditions:

Climate - Soil - Sun - Moisture - Space

Benefits:

- Minimizes maintenance and maintenance costs.
- Ensures long-term success as plants thrive in the proper environment and conditions.
- Plants will require minimal to no irrigation once established.
- Eliminate the need for fertilizers and insecticides.
- Reduces stress on plants, maintaining an acceptable appearance.

Right Plant, Right Place

Best Practices

- Choose plants recommended for your USDA Hardiness Zone.
- Choose plants appropriate to your sun/shade patterns (Full sun, partial shade, or shade). 
- Choose and group plants according to your site's water availability and soil conditions.
- Know the mature size, and do not overcrowd, as it causes disease and increased maintenance.
- Choose a diversity of plants as it helps with pests and diseases, and you'll provide a more diverse wildlife habitat with seasonal interest.
- Consider native groundcovers or hardscapes instead of turfgrass.

The 9 Principles of FFL

2. **Water Efficiently:**
   Conserves water and help to ensure fertilizer and pollution do not flow into water bodies.

   - Follow Right Plant, Right Place by selecting and grouping native plants with similar needs
     Climate - Soil - Sun - Moisture - Space
   - Do not overwater, it stresses plants and invites fungal problems, disease, and pests.
   - Irrigate efficiently, use smart controllers, rain sensors, automatic shut-off devices, drip/ micro-sprays, and manual watering.
   - Mulch to a 2”-3” depth with (sustainable) mulch to retain moisture and reduce evaporation.
   - Use organic compost to increase water holding capacity in sandy soils.
   - Plant drought-tolerant plants for resiliency to water restrictions.
   - Reduce erosion and runoff that can pollute waterways.
   - Bonus: Lower utility bills and reduced maintenance costs.

The above methods are also known as **XERISCAPING** or **WATER-WISE LANDSCAPING**.

It is a design and management approach that minimizes water use without sacrificing aesthetics.

QUESTIONS:

How many days per week are you currently allowed to water?

Is watering permitted between 8am and 6pm on any day within the City of Tampa?

The 9 Principles of FFL

3. **Fertilize Appropriately:**
   Enhances growth, increases flowering or fruiting, and corrects nutritional deficiencies.

   - Do not overfertilizing, it can cause stress on plants and invite pests.
   - Select the appropriate fertilizer for your specific plant.
   - Keep fertilizer off of hard surfaces.
   - Keep fertilizer 10’ away from any body of water.
   - Watch the weather and refrain from fertilizing before heavy rain.
   - Follow the label and read all instructions before applying.

Seasonal ban dates for Florida:
No fertilizers containing nitrogen (N) or phosphorus (P) may be applied to landscapes between June 1 and September 30 unless exempted in Ordinance 21-42

The 9 Principles of FFL

4. **Mulch:**
   Mulch is an attractive way to help control weeds, protect plants, and retain soil moisture and temperature.

   - Consider mulch beds for hard to mow slopes and shady spots.
   - Use organic mulches as they can help improve soil structure.
   - Choose environmentally friendly mulch: melaleuca, eucalyptus, pine bark, or pine straw.
   - Avoid using cypress mulch, often harvested from delicate wetlands.
   - Use fallen leaves to create self-mulching areas.
   - Properly install mulch to reduce weeds and the need for chemicals.

The 9 Principles of FFL

5. **Attract Wildlife:**
   Plants with seeds, fruit, foliage, flowers, berries, and coverage invites local wildlife.

   - Provide food, water, cover, and space for local wildlife.
   - Add trees and plants to your yard that bear fruit, seeds, and flowers.
   - Protect your wildlife visitors by limiting pesticide use or using the least toxic products.
   - Attract wildlife to control certain landscape pests.
   - Attract beneficial insects to help pollinate your flowers.
   - Bonus: You and your community can observe various wildlife species.

The 9 Principles of FFL

6. **Manage Yard Pests Responsibly:**
   Healthy plants often tolerate pest attacks, and beneficial insects, birds, and other natural controls can help suppress insect pests.

   - Keep plants healthy; healthy plants can tolerate pest attacks.
   - Protect beneficial insects, birds, and use other natural controls to keep pests under control.
   - Use the least toxic products to help protect the environment.
   - Decrease pesticide use on your property, it is healthier for your family and pets too.
   - Spot-treat only, rather than blanket spraying.
   - Use selective chemicals rather than broad-spectrum insecticides.
   - Always read and follow insecticide label instructions.
   - Bonus: Reducing chemical use saves you money.

The 9 Principles of FFL

7. **Recycle Yard Waste:**
   Using yard waste for composting is a sustainable way of creating organic fertilizer.

   - Use decomposing organic matter to release nutrients back to the soil in a form that plants can easily use.
   - Use yard waste for composting.
   - Use compost to provide a source of rich organic fertilizer.
   - Rake leaves and pine needles to use as mulch, reducing cost.

The 9 Principles of FFL

8. **Reduce Stormwater Runoff:**
   Rainwater soaks into the ground and stays on site, helping protect Florida's waterways.

   - Retain stormwater onsite so it can be filtered through plants and soil, filtering pollutants and reducing erosion.
   - Add stormwater features like rain gardens, berms, and swales which can be beautiful.
   - Capture water to irrigate landscape plants and prevent erosion.
   - Utilize porous materials (mulch / permeable pavers) as they allow rain to soak into the ground.
   - Keep water on site by directing downspouts into landscape beds, planting rain gardens, and using rain barrels and cisterns.
   - Reduce runoff to help protect the quality of Florida's waters by reducing the amount of chemicals and pollutants introduced into the water.

The 9 Principles of FFL

9. **Protect the Waterfront:**
   With over 10,000 miles of rivers and streams, 7,800 lakes, more than 1,000 freshwater springs, and the U.S.'s second-longest coastline, protecting our water bodies is one of the most important steps in a Florida-Friendly Yard.

   - Protect a minimum of 10 feet of waterside with a "maintenance-free zone," meaning no mowing, fertilizing, or using pesticides.
   - Flood-tolerant plants along the water's edge to help reduce contaminants in the water.
   - Protect native aquatic plants and remove invasive exotic species.
   - Providing a diversity of plants enhances the beauty of the waterfront.

QUESTION:

Which shrubs do not attract butterflies?

a. Walter's Viburnum
b. Yaupon Holly
c. Simpson's Stopper
d. Wild Coffee
e. Firebush

FFL Examples

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FFL Examples

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FFL Examples

Before and After Examples

Before and After Examples

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Before and After Examples

INVASIVES

Invasives

Most Troublesome Plants in Our Region

Brazilian pepper*
Air potato*
Melaleuca Tree*
Australian pine tree*
Mexican petunia*
Torpedo grass*
Kudzu vine
Chinaberry tree
Carrotwood tree
Chinese tallow tree
Cogon grass
Guinea grass
Japanese climbing fern
Lead tree
Mexican bluebell
Rosary Pea
Skunk vine
Tropical soda apple

Brazilian Pepper

Australian Pine Tree

Air Potato

Mexican petunia

Melaleuca Tree

Torpedo Grass

QUESTION:

Which is not considered a Florida native?

a. Sword Fern (Nephrolepis exaltata/ biserrata)
b. Cabbage Palm / Sabal Palm (Sabal palmetto)
c. Your presenter today
d. Armadillo
e. Gopher Tortoise

NATIVE PLANTINGS

Native Plantings

What are they?

Plants that naturally grow in an area and have evolved to adapt to the local climate, soil, and wildlife over thousands of years.

Benefits:

- Require less water and maintenance since they're adapted to the local environment
- Support local pollinators and wildlife, including bees, butterflies, birds, and mammals
- Are generally more resistant to local pests and diseases, reducing the need for pesticides, fertilizers, and irrigation
- Help to reduce the spread of invasive species

Recommended Native Species

Trees

- 🌳 ***Live Oak (Quercus virginiana)***
  - Iconic southern tree
  - Large shady canopy
  - Drought-tolerant
  - Long lived tree
  - Supports wildlife birds, pollinators, and mammals
  - TIPS: Needs plenty of room, plant away from structures.

Recommended Native Species

Trees

- 🌳 ***Southern Magnolia (Magnolia grandiflora)***
  - Evergreen
  - Large shade canopy
  - Large glossy leaves and fragrant flowers
  - Supports wildlife birds, pollinators, and mammals
  - Smaller cultivars available
  - TIPS: Messy, plant away from walks and driveways

Recommended Native Species

Trees

- **Bald Cypress (*Taxodium distichum*)**
  - Deciduous tall conifer
  - Great for wet or flood–prone areas with a tolerance for a wide range of conditions
  - Beautiful fall color with unique leaves and bark
  - Supports wildlife birds and aquatic life
  - TIPS: Planted throughout Tampa Palms as pictured.

Recommended Native Species

Trees

🌳 **Florida Maple (*Acer floridanum*)**

- Beautiful fall colors of red, yellow, and orange
- Large shade canopy
- Tolerates a range of conditions
- Supports wildlife birds, insects, and mammals
- Great for erosion control
- Low maintenance
- TIPS: For the best colors, plant in full sun to partial shade in well-drained soil and save pruning for late winter/ spring.

Recommended Native Species

Trees

🌳 **Slash Pine (*Pinus elliottii*)**

- Fast growing and tall
- Drought-tolerant and fire-resistant
- Supports wildlife birds and mammals
- Great for erosion control
- Low maintenance
- TIPS: Great tree for attracting birds, but plant in full sun.

Recommended Native Species

Trees

- **Southern Red Cedar (*Juniperus virginiana var. silicicola*)**
  - Evergreen with beautiful color and texture
  - Great for windbreak and privacy
  - Supports wildlife birds and mammals
  - Drought and wind tolerant
  - Great for erosion control; mild-moderate slopes
  - TIPS: Natural air filter that takes well to pruning.

Recommended Native Species

Trees

- **Simpson’s Stopper (*Myrcianthes fragrans*)**
  - Evergreen tree with glossy leaves and flashy berries
  - Lightly fragrant
  - High attraction for pollinators and birds
  - Compact and versatile, small tree or large shrub
  - Can be very low maintenance
  - TIPS: Use as a specimen tree or prune and maintain as a formal hedge.

Recommended Native Species

Palms

- 🌳 ***Saw Palmetto (Serenoa repens)***
  - Drought tolerant and fire resistant
  - Excellent in extreme weather
  - Supports wildlife birds, pollinators, and mammals
  - Very low maintenance
  - Adds great textural contrast
  - Silver variety is very showy
  - TIPS: Pairs well with specimen grasses, firebush, beautyberry, and slash pines.

Recommended Native Species

Palms

- 🌳 ***Needle Palm (Rhapidophyllum hystrix)***
  - Drought-tolerant and fire-resistant
  - Extremely hardy
  - Great for shade or partial shade area
  - Supports wildlife birds, pollinators, and mammals
  - Very low maintenance
  - Adds great textural contrast
  - TIPS: Pairs well with beautyberry, coontie, or wild coffee for a lush, low-maintenance garden or use as a specimen… but beware of the “needles”.

Recommended Native Species

Grasses

- **Muhly Grass** (*Muhlenbergia capillaris*)
- **Fakahatchee Grass** (*Tripsacum dactyloides*)
- **Dwarf Fakahatchee Grass** (*Tripsacum floridanum*)
- **Wiregrass** (*Aristida stricta*)
- **Lovegrass** (*Eragrostis spp.*)
- **Purpletop** (*Tridens flavus*)
- **Sand Cordgrass** *(Spartina bakeri)*

Muhly Grass

Lovegrass

Recommended Native Species

Shrubs

- **Firebush** (*Hamelia patens*)
- **Beautyberry** (*Callicarpa americana*)
- **Walter's Viburnum** (*Viburnum obovatum*)
- **Yaupon Holly** (*Ilex vomitoria*)
- **Wax Myrtle** (*Morella cerifera*)
- **Buttonbush** (*Cephalanthus occidentalis*)
- **Wild Coffee** (*Psychotria nervosa*)
- **Seagrape** (*Cocoloba uvifera*)
- **Simpson's Stopper** (*Myrcianthes fragrans*)

Firebush

Sea Grape

Recommended Native Species

Groundcovers

- **Frog Fruit** (*Phyla nodiflora*)
- **Moonflower** (*Ipomoea spp.*)
- **Coontie** (*Zamia integrifolia*)
- **Golden Creeper** (*Ernodea littoralis*)
- **Beach Sunflower** (*Helianthus debilis*)
- **Tampa Vervain** (*Glandularia tampensis*)
- **Sunshine Mimosa** (*Fabaceae spp.*)
- **Inkberry** (*Aquifoliaceae*)
- **Sword Fern** (*Nephrolepis exaltata*)
- **Simpson's Stopper** (*Myrcianthes fragrans*)

Frog Fruit

Coontie

QUESTION:

Which is not considered a grass?

a. Sabal Palm
b. Bahiagrass
c. Fakahatchee Grass
d. Perennial Peanut
e. St. Augustine

MAINTENANCE PRACTICES

Maintenance Practices

- Pruning
- Mulch and compost
- Integrated pest management (IPM)
- Seasonal adjustments
- Daily weather monitoring

RESOURCES

Credits and Resources

Florida-Friendly Landscaping™ Program

Florida-Friendly Landscaping™ Plant Guide

Find the right plant for the right place... get details and photos of over 400 Florida-friendly plants.

Comprehensive data from expert sources

- Light, soil, water requirements, and much more.
- Plant characteristics such as shape, color, and size.
- Beautiful color photographs of trees, shrubs, palms, groundcovers, vines, ferns, annuals, perennials and ornamental grasses.

Quick and convenient searching

- App can be downloaded for **iOS** or **Android**, or used with any **internet browser**.
- Search by plant name, type, shape, light requirements, native status, and more.
- Filter to show only plants for your zone.
- Print or download details for your selected plants

*This free app is available for **iOS** and **Android**, or can be used with any **internet browser**.*

Credits and Resources

UF/IFAS Center for Aquatic and Invasive Plants - Searchable database of invasive plants. The site provides photos, characteristics, environmental impacts, and methods of controlling.

https://plant-directory.ifas.ufl.edu/plant-directory/

Plant Real Florida - Site has a searchable database with an interactive map for retail native plant nurseries. The user can search by hardiness zone, plant type, wildlife usage, supplier type and more!

https://www.plantrealflorida.org/

https://www.plantrealflorida.org/plants/

Credits and Resources

Florida Native Plant Society - Easily search for native plants based on your location, site conditions, goals, type of plant, and attraction to butterflies or wildlife

https://www.fnps.org/

Florida-Friendly Landscaping™ Program (UF/IFAS) - Dive into extensive research and resources, including how to achieve a Florida-Friendly Landscape recognition. Recipients receive a yard flag to display and a certificate for the recognition at Silver, Gold, or FFL Natural level.

https://ffl.ifas.ufl.edu

Credits and Resources

Hillsborough County Extension Service - An educational service provided by University of Florida's Institute of Food and Agricultural Sciences (IFAS) and Hillsborough County.

https://hcfl.gov/departments/extension

OUTSIDE Collab | Sustainable Landscape Collaborative - A non-profit organization whose vision is to create a sustainable future for Florida's landscapes.

https://outsidecollab.com/

Credits and Resources

South Florida Water Management District - The Florida-Friendly Landscaping Guide to Plant Selection & Landscape Design – Downloadable resource including FFL plant images and their conditional requirements separated by plant type.

https://www.sfwmd.gov/community-residents/florida-friendly-landscaping-guide

https://www.sfwmd.gov/sites/default/files/fynplantguide-web.pdf

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The New Yard Pattern Book - For Florida's Sustainable Single-Family Homes - A helpful and easy to understand downloadable guidebook with colorful visuals and graphics.

https://outsidecollab.com/patternbook.pdf

Little Red Wagon Native Nursery - A local native plant nursery where our plant giveaways were obtained. Located at 4113 Henderson Blvd, Tampa 33629.

https://littleredwagonnativenursery.com/

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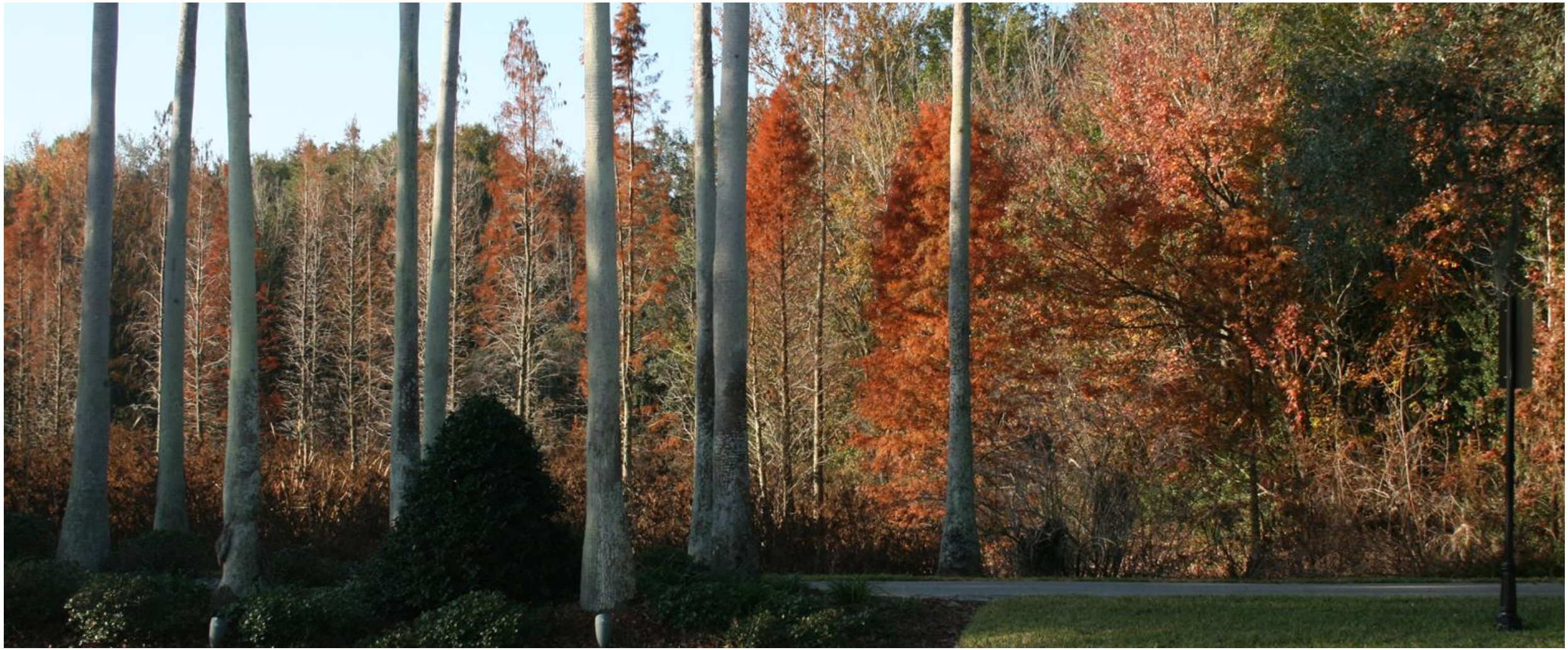
Q + A
& GIVEAWAY



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