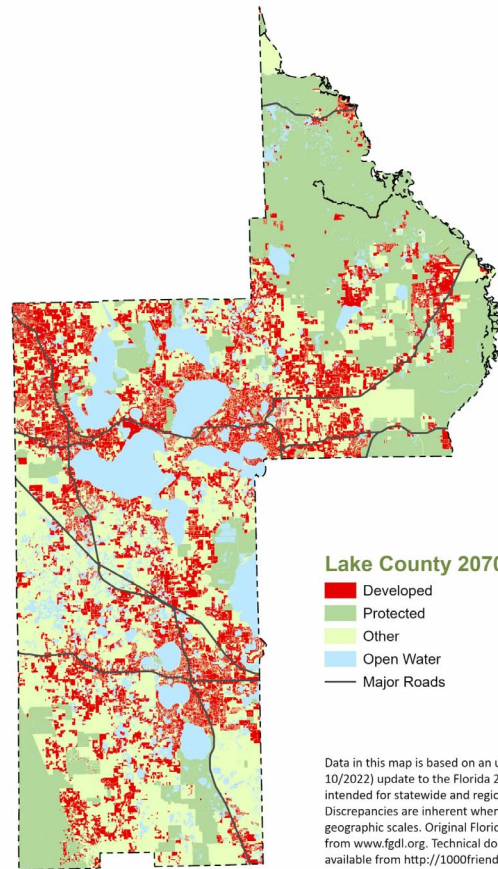




THE PATH TO WELLNESS WAY

Brooke Moffis
UF/IFAS Extension Lake County
Commercial Horticulture

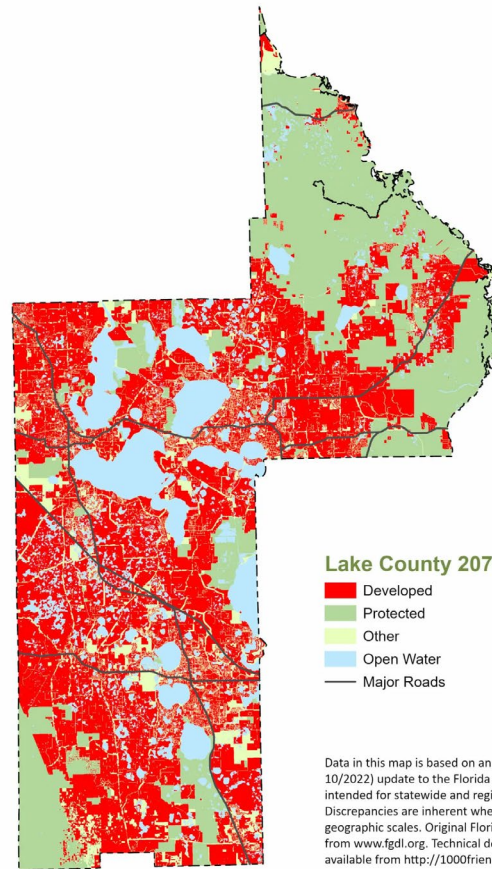
SITUATION - RAPID URBANIZATION AND RESOURCE PRESSURE



Lake County 2070 Baseline

- Developed
- Protected
- Other
- Open Water
- Major Roads

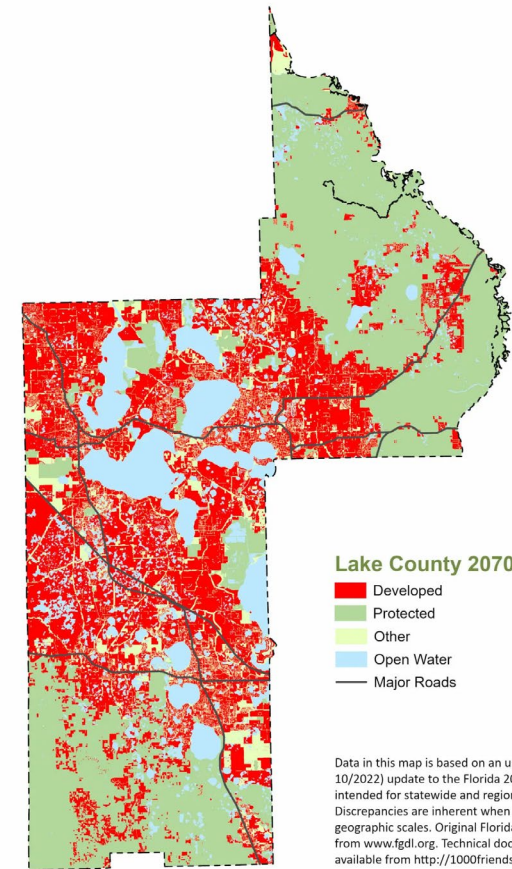
Data in this map is based on an unpublished (as of 10/2022) update to the Florida 2070 model, which is intended for statewide and regional use only. Discrepancies are inherent when used at smaller geographic scales. Original Florida 2070 data is available from www.fgdl.org. Technical documentation is available from <http://1000friendsofflorida.org/>



Lake County 2070 Trend

- Developed
- Protected
- Other
- Open Water
- Major Roads

Data in this map is based on an unpublished (as of 10/2022) update to the Florida 2070 model, which is intended for statewide and regional use only. Discrepancies are inherent when used at smaller geographic scales. Original Florida 2070 data is available from www.fgdl.org. Technical documentation is available from <http://1000friendsofflorida.org/>



Lake County 2070 Alternate

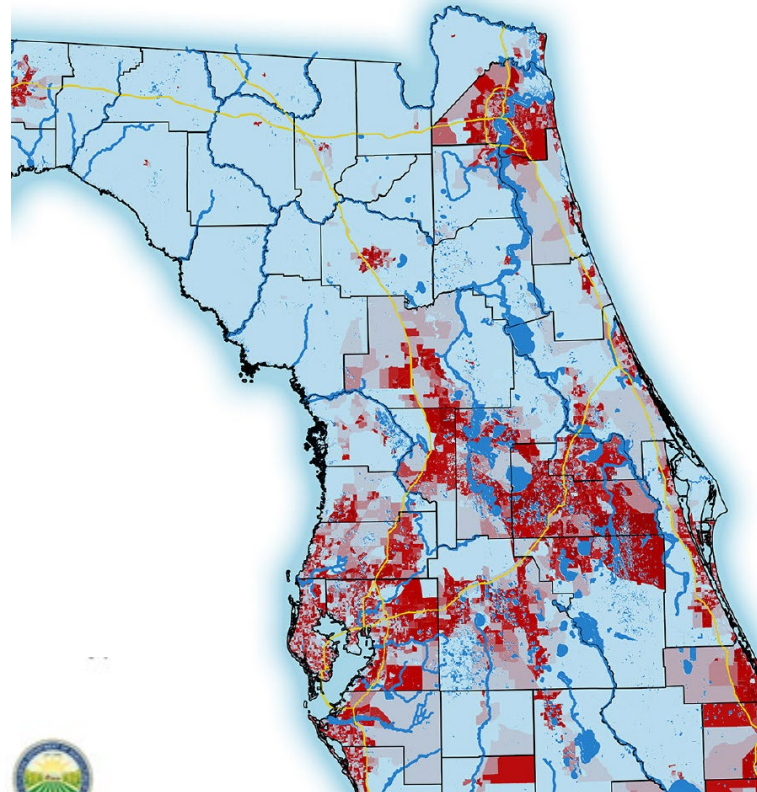
- Developed
- Protected
- Other
- Open Water
- Major Roads

Data in this map is based on an unpublished (as of 10/2022) update to the Florida 2070 model, which is intended for statewide and regional use only. Discrepancies are inherent when used at smaller geographic scales. Original Florida 2070 data is available from www.fgdl.org. Technical documentation is available from <http://1000friendsofflorida.org/>

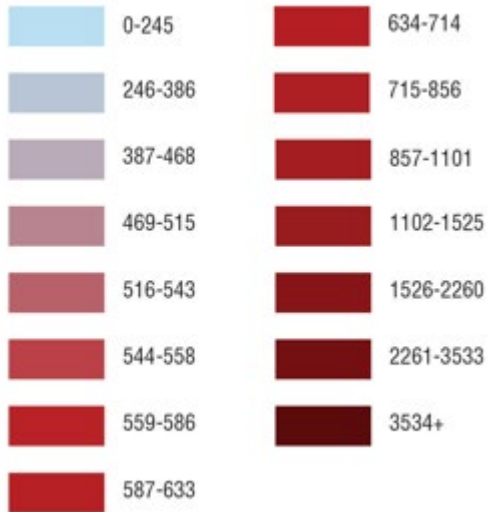
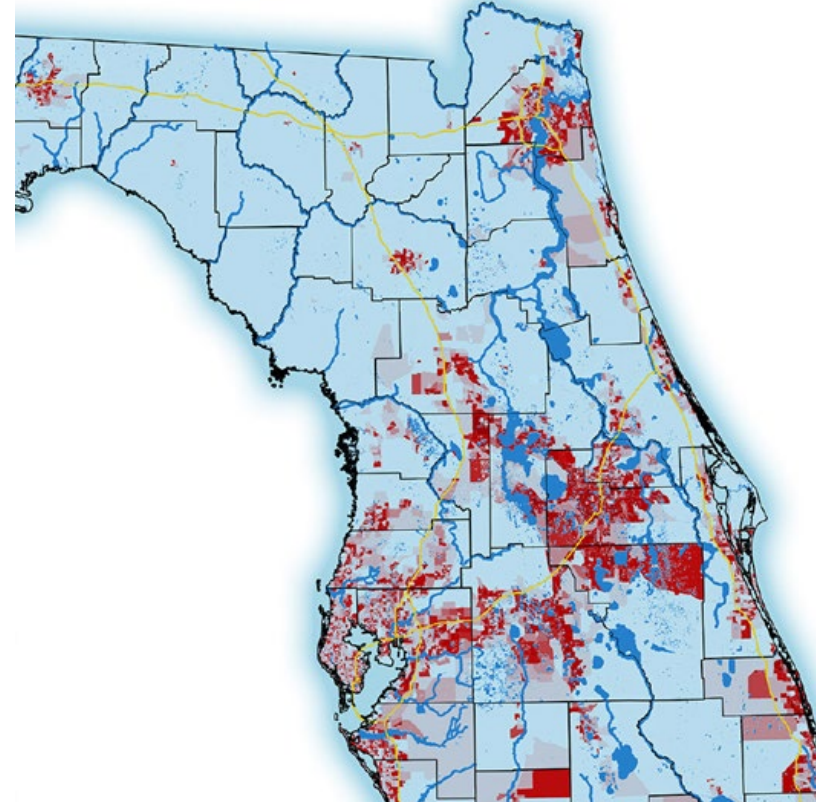


WATER USE CAUTION AREA

Statewide 2070 Trend



Statewide 2070 Alternative



(Total demand by census block in gallons per day per acre)

WATER
2070

A joint project of . . .



UF GeoPlan Center



~ 40-60% household water is used for landscape irrigation in Central Florida

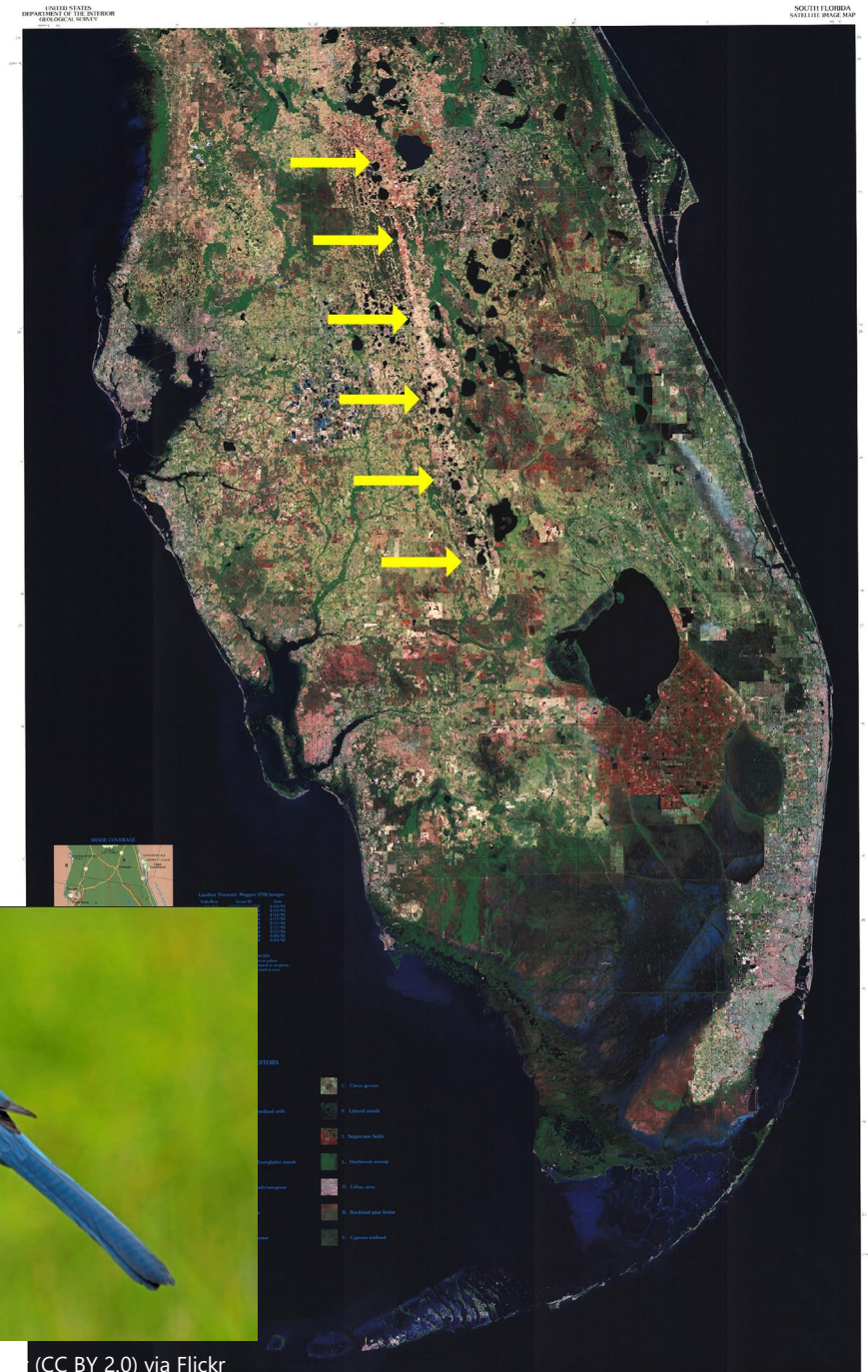


LAKE WALES RIDGE

- FL's most efficient water recharge area
- Elevation & quartz sand purify water
- Rare scrub ecosystems & federally listed plants and animals



Photo: Florida Scrub-Jay by Judy Gall





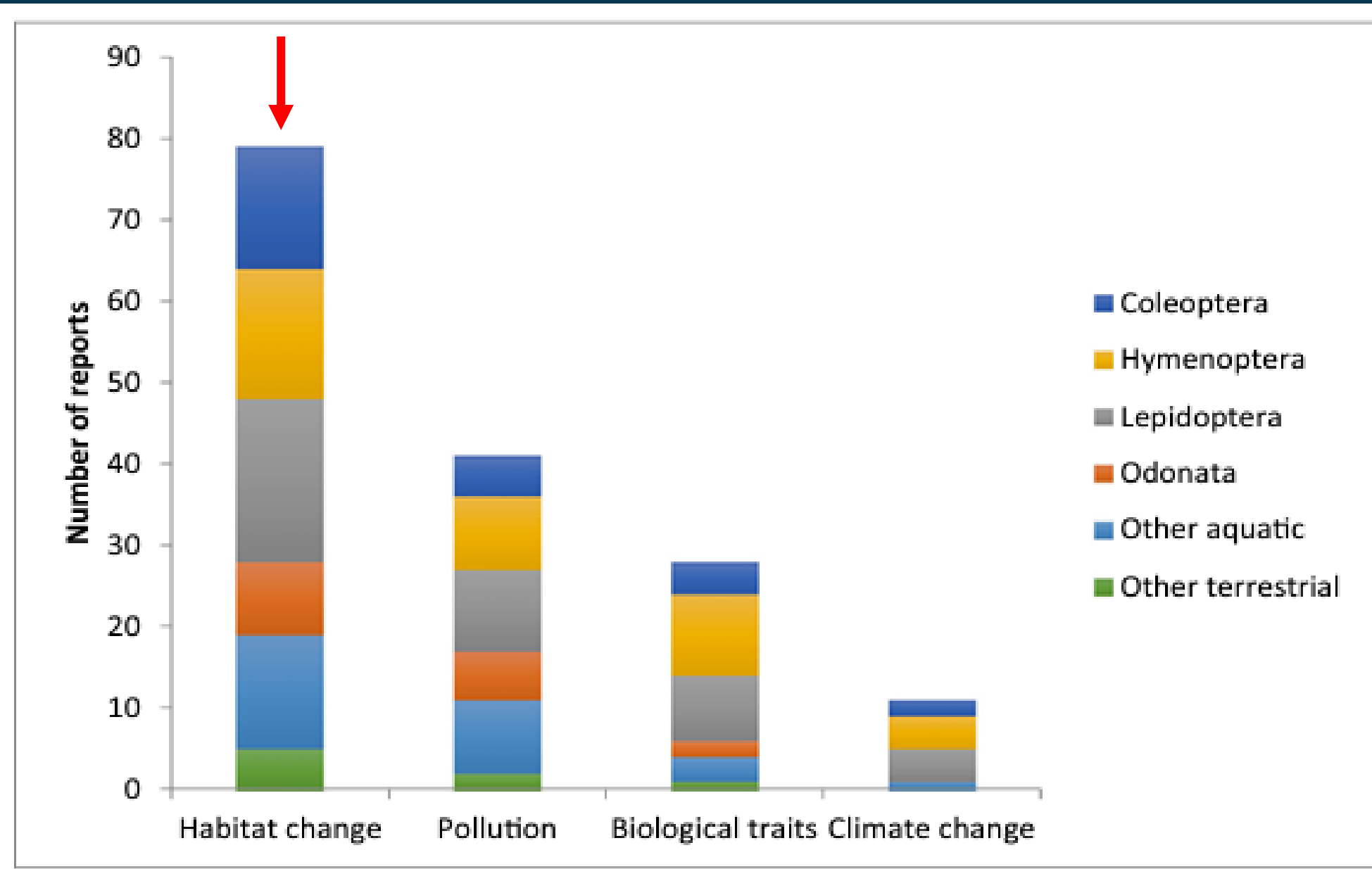
LAKE WALES RIDGE

- Excessively drained sand
- Little organic matter in the soil
- Reduced ability to hold water or nutrients



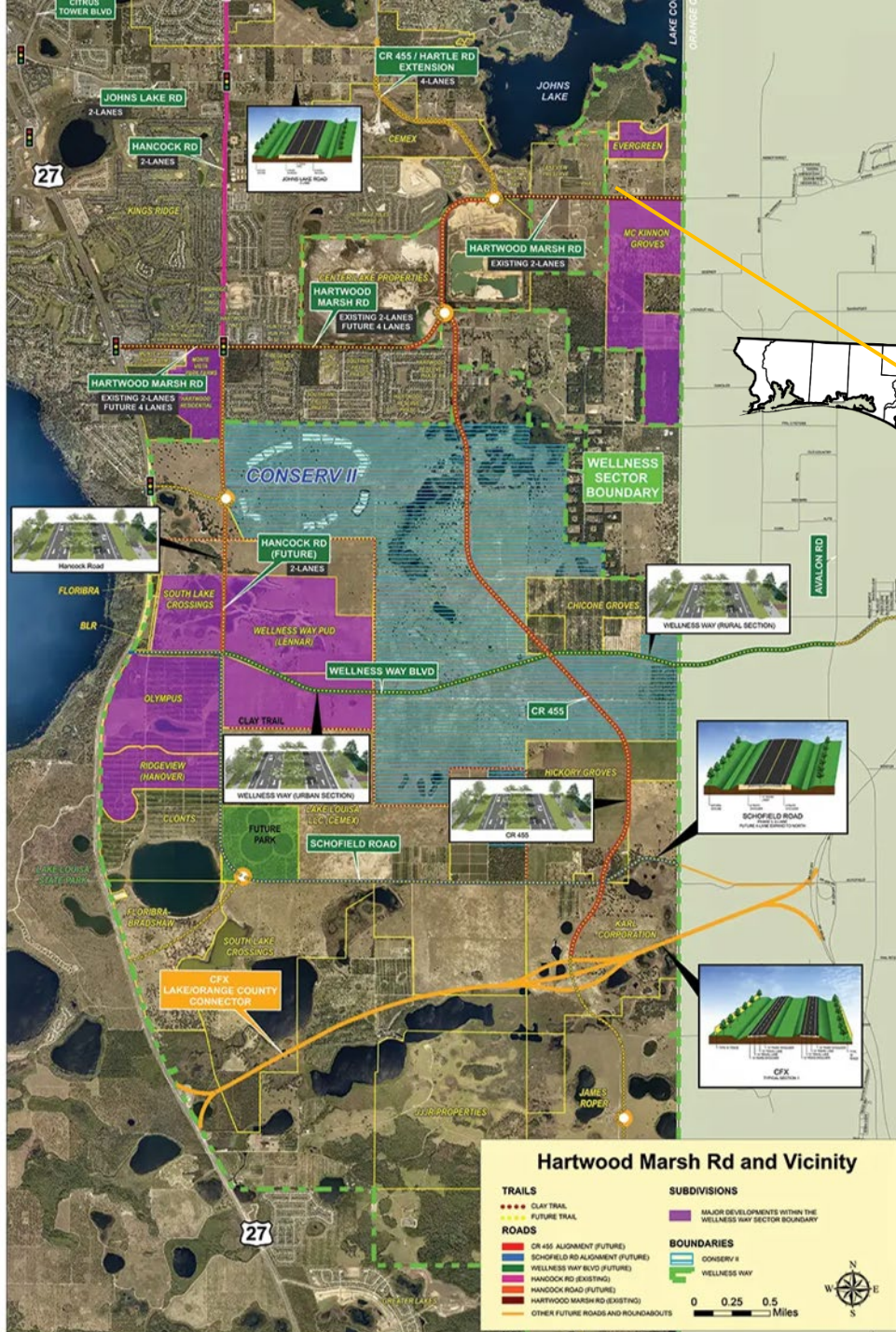
FWC - Lake Wales Ridge WEA Royce Unit

Major drivers insect decline



Source: Francisco Sánchez-Bayo and Kris A.G. Wyckhuys, 2019

WELLNESS WAY AREA PLAN



- Approximately 15,500 Acres
- 13,000 – 19,000 homes
- 12,000 Net buildable acres
- 3,000 Acres of conservation land
- Focus on human performance, sports medicine, nutrition, & health sciences
- Connects to the FL Wildlife Corridor



**Connecting
generations to
nature for
generations
...and beyond!**





Local governments are implementing landscape codes to manage water use and plant selection, balancing resources, ecology, and economics.

Summary of Ordinance

The purpose of this Ordinance is to amend Section 16.00.02, Lake County Code, Appendix E, Land Development Regulations (LDR), entitled *Wellness Way Development Standards*, for the following purposes:

- (1) To incorporate *The New Yard Pattern Book* as Section 16.00.04;
- (2) To integrate principles consistent with Florida-Friendly Landscaping™; and
- (3) To provide references to official websites for approved plant lists.

This Ordinance also amends LDR Chapter II to include Compost and Plant Bed definitions.

Changes are shown as follows: Strikethrough for deletions and Underline for additions to existing Code sections. The notation " * " shall mean that all preceding or subsequent text remains unchanged (excluding any renumbering or relettering that might be needed).

ORDINANCE NO. 2025-__

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF LAKE COUNTY, FLORIDA; REGARDING THE FOLLOWING SECTIONS OF THE LAKE COUNTY CODE, APPENDIX E, LAND DEVELOPMENT REGULATIONS: AMENDING SECTION 16.00.02, ENTITLED *WELLNESS WAY DEVELOPMENT STANDARDS*; INCORPORATING THE NEW YARD PATTERN BOOK AS AN OFFICIAL EXHIBIT; INTEGRATING PRINCIPLES CONSISTENT WITH FLORIDA-FRIENDLY LANDSCAPING™; PROVIDING REFERENCES TO OFFICIAL WEBSITES FOR APPROVED PLANT LISTS; AMENDING CHAPTER II, ENTITLED *DEFINITIONS*; CREATING SECTION 16.00.04, TO BE ENTITLED *THE NEW YARD PATTERN BOOK*; PROVIDING FOR SEVERABILITY; PROVIDING FOR INCLUSION IN THE CODE; PROVIDING FOR FILING WITH THE DEPARTMENT OF STATE; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Wellness Way Area Plan (WWAP) was adopted by the Board of County Commissioners (Board) in 2016, through Ordinance 2016-01, which created Goal I-8 of the Lake County Comprehensive Plan; and

WHEREAS, the intent of the WWAP, which is an Urban Service Area as defined under Section 3.3164(53), Florida Statutes, is to create a long-term master plan for the South Lake region which promotes significant economic development while encouraging fiscally efficient and well-balanced development patterns that minimize environmental impacts and leverage existing resources; and

WHEREAS, Objective I-8.1 states that the County shall develop a comprehensive economic development and branding strategy that achieves a target jobs-to-housing ratio by focusing on growth and target industries and the complimentary land uses and infrastructure needed to support them;



WELLNESS WAY AREA PLAN DEVELOPMENT STANDARDS LANDSCAPE & NATURAL RESOURCES

TIMELINE

Spring 2025

- Initial proposed ordinance advertised to builder/developer industry

March – June 2025

- Ordinance revised during 4 municipal staff meetings

July 2025

- Sent to landscape industry for comment 2 weeks prior to BCC meeting to inform

August 2025

- Ordinance presented to BCC

October 2025

- Workshop held with stakeholders to refine ordinance

November 2025

- Workshop held with stakeholders to refine ordinance

February 2026

- Revised ordinance presented to BCC
- Additional revision made
- Ordinance passed (3 in favor, 2 opposed)

5.1.3 IRRIGATION SYSTEM DESIGN

- Irrigation must follow FL Water Star Silver certification
- Irrigation plans required
- Irrigation smart controllers required



- Soil Moisture Sensor (SMS)
 - Measures soil moisture & irrigates only when needed.



- Weather-based controller
 - Adjusts watering based on weather/evaporation data.



IRRIGATION CONTROLLER RESEARCH

Water Savings

Soil Moisture Sensors & Evapotranspiration Controllers (Weather-based)

- 17 studies reviewed across climates and soil types (Dukes, 2020)
 - 51% average savings in research plots
 - 30% average savings in single-family homes
- In FL, savings are typically greater in wet season than dry season
- Must be installed correctly

5.1.4 - SOIL AMENDMENTS

- Requires compost installation
- Certified by the U.S. Composting Council's (UCC) Seal of Testing Assurance (STA) Program
- Receipt showing UCC STA required upon inspection



COMPOST RESEARCH

In turfgrass, irrigation could be reduced

- 50% of recommended rates (Fisher, 2023)
- 50% in maintenance run-times (Radovanovic, 2020)
- 50% reduction in irrigation for the first 2 years (Singh et al., 2025)



COMPOST N LEACHING

Studies in FL focused on turfgrass applications via incorporation or topdressing.

- Compared to traditional turfgrass landscapes, irrigation can be reduced by approximately 50% through the incorporation of compost while not increasing nutrient leaching over the long term.
- There is an initial flush of some available N during the first month before turfgrass roots have established.
- N leaching is similar between traditional turfgrass landscapes under conventional irrigation and compost-amended turfgrass landscapes with reduced irrigation.

5.1.5 - LANDSCAPE DESIGN STANDARDS

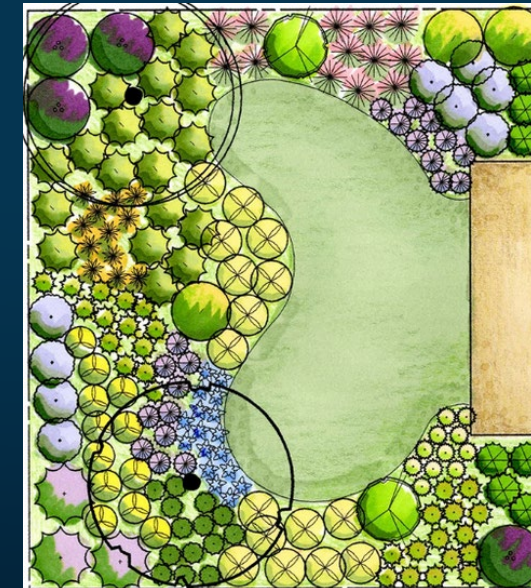
- Maximum 35% irrigated turfgrass
- 60% native plants from FL Native Plant Society (FNPS) plant list
- 40% Florida-Friendly Landscaping (FFL) from the FFL plant list
- Minimum 8 species single-family



Two years after planting, the plant beds in the Florida-Friendly back yard of Plot 2 are doing well with little irrigation.

Experiment Design Details:

- Each landscape = 4,900 ft²
- Traditional: 75% turf, minimal shrubs, irrigated with single-zone, rotor sprinklers
- FFL: 25% turf, increased groundcover & mulched ornamental beds, irrigated with zoned micro-irrigation & smart controllers





RESEARCH RESULTS

75% FFL & 25% TURF

Water Use Comparison:

- FFL design used 69.7% less irrigation water than traditional turf-dominated landscapes during the 12-month establishment period.
- Over the 34-month post-establishment period, FFL design used 83.9% less water than traditional landscape design.
- Major water savings were achieved by turning off micro-irrigation to ornamental beds & visually monitoring for drought stress.
(Clem, et al. 2021)



RESEARCH RESULTS

NATIVE PLANTS & NON-NATIVE PLANTS

Meta-analysis of 165 scientific papers

- Overwhelming evidence shows native plants outperform non-native plants in faunal abundance & diversity. (Tartaglia & Aronson, 2024)
- Limited studies yielded mixed results regarding the performance & fitness of native versus non-native plants. (Tartaglia & Aronson, 2024)
- A lack of comprehensive studies examining the tolerance & performance of native plants in urban conditions. (Tartaglia & Aronson, 2024; Wang et al., 2021)
- Lack of research to define the percentage of native to non-native

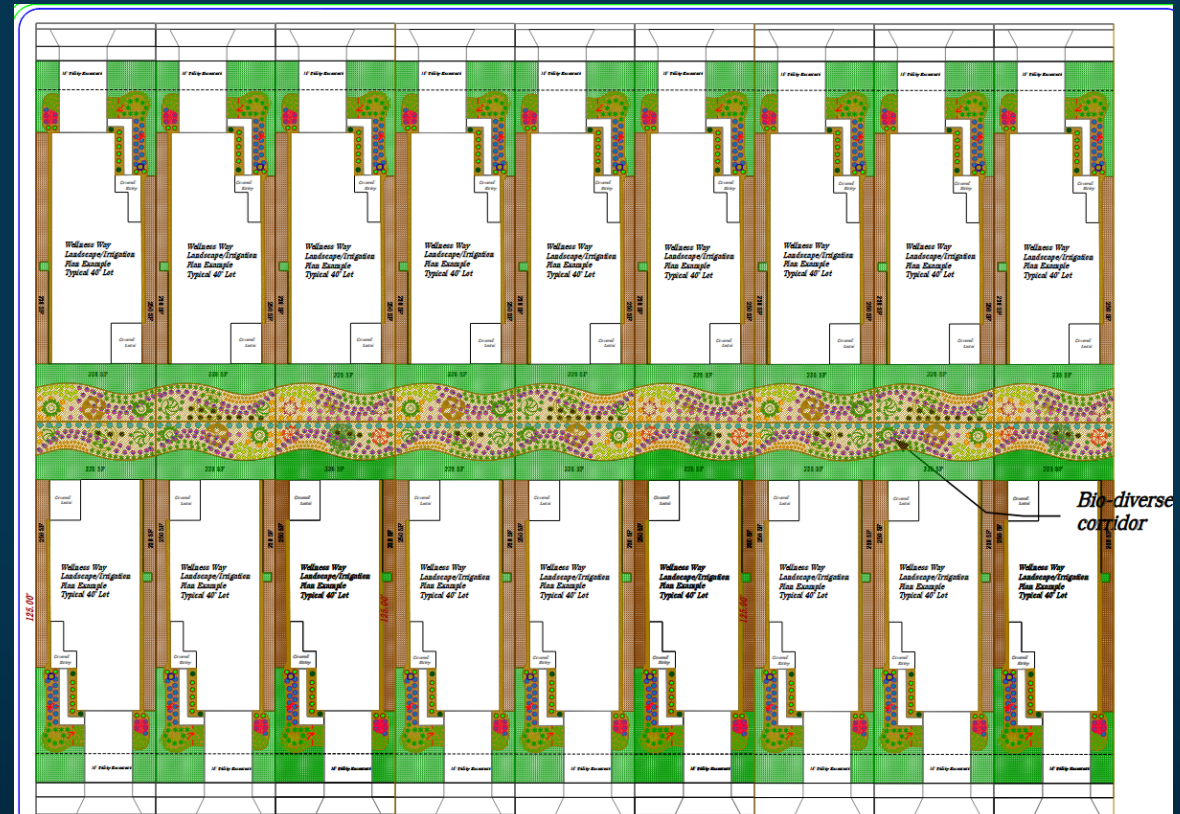
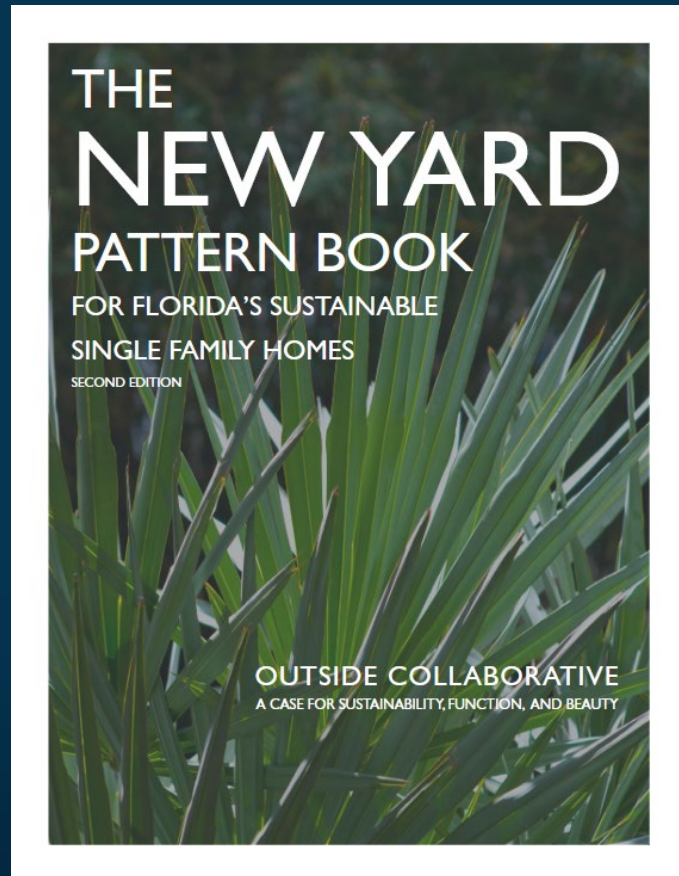


- New homeowner handbook
- Annual, in-person educational meeting for homeowners
- 3 educational kiosk per neighborhood



ILLUSTRATIVE RESOURCES

- Sole purpose of being illustrative & are not requirements





- Partner & train local code enforcement
 - Compare ordinances for impacts
 - City of Clermont
 - Wellness Way – Lake County
 - City of Groveland?
 - Quantify - Are we meeting our water & biodiversity goals?
-

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