

Dr. John M. DeGrove Webinar Series
Reducing the Footprint of Irrigated Landscapes in Florida's
Residential Developments

IMPORTANT!

Due to constraints on staff time,
we only apply for professional certification credits
and provide confirmation of attendance
for participants who attend the live webinar,
NOT those who view the recorded broadcast at a later date.



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Florida's leading nonprofit advocate for sustainable development

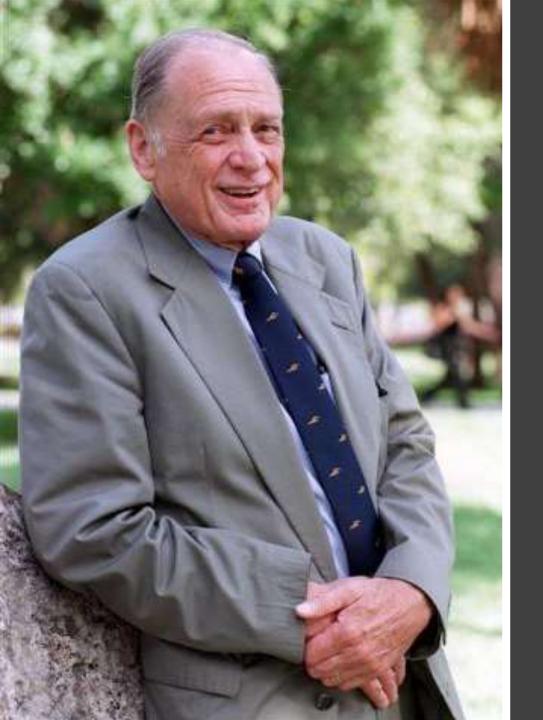
Work with citizens, community and state leaders, conservation and business groups

Educate, advocate and negotiate to protect Florida's high quality of life

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Dr. John M. DeGrove

May 4, 1924 – April 13, 2012

Icon of comprehensive planning both in Florida and across the nation

Co-founder of 1000 Friends of Florida

To find out more, please visit: www.1000friendsofflorida.org/dr-degrove/



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This webinar has been approved for:

1.5 AICP CM for planners (#9212157)

1 CEC for Certified Floodplain Managers

1 contact hour for Florida Environmental Health Professionals

1.5 credits for Florida landscape architects (DBPR Course #0012316, PVD #151)

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Follow up survey, certificate and credits:

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Florida Landscape Architects – 1000 Friends of Florida Provider #PVD151



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May 12 – 2021 Florida Legislative Wrap Up



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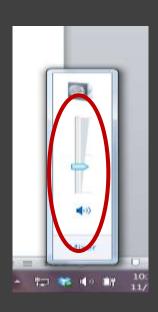
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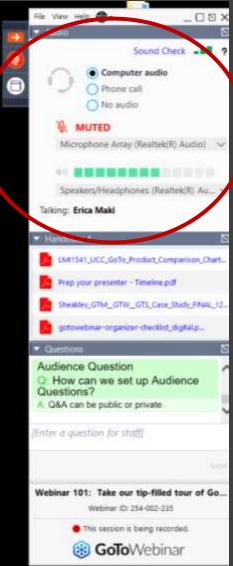
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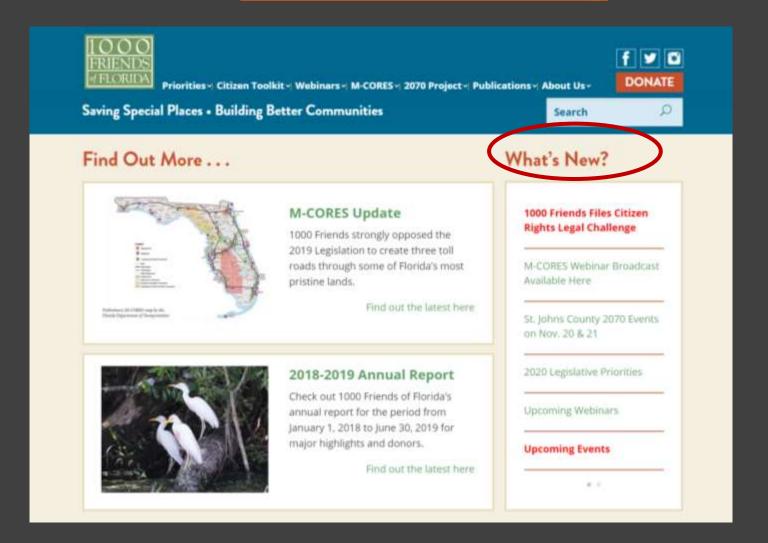






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The PowerPoint is posted under "What's New" at www.1000fof.org

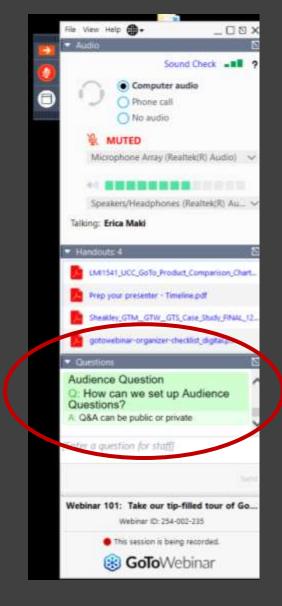




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Presenters



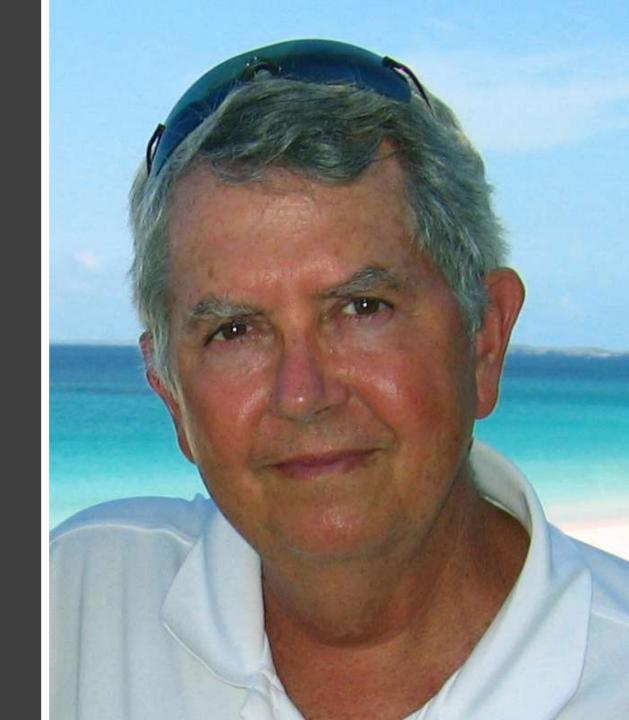
Pierce Jones, PhD

Professor at the University of Florida
Directs Program for Resource Efficient
Communities

An interdisciplinary group that promotes the adoption of "best design, construction and management practices" in master planned developments

Program directly participates in land development and building projects that adopt and demonstrate "green" practices

PhD in Mechanical Engineering from the University of Florida in 1980





Nick Taylor, PhD

Works with the Program for Resource Efficient Communities (PREC) as an IFAS State Specialized Extension Agent.

Research interests include utility data analysis to identify effective water and energy conservation measures and evaluation of land development impacts.

Leads the H2OSAV extension program, providing data analysis tools and data-driven insights that help regional utility providers, governmental agencies and extension agents optimize water conservation efforts.

Received his MS and PhD degrees in the College of Design, Construction and Planning at the University of Florida.

Timothee Sallin

Actively involved in water conservation, sustainable landscaping and responsible agriculture in Florida over the past 15 years through role as President of Cherrylake

Cherrylake is a vertically integrated landscape company providing commercial landscape and irrigation construction and maintenance services and is the largest grower of ornamental trees, palms and shrubs in the State of Florida

Promotes environmental best practices across diverse industries through collaboration with industry associations

Graduate of New College in Sarasota Florida earning a degree in Economics and International Studies

Secretary for 1000 Friends of Florida Board of Directors



Pierce Jones, PhD & Nick Jones, PhD

Program for Resource Efficient Communities University of Florida



Reducing the Footprint of Irrigated Landscapes in Florida's Residential Developments

Pierce Jones, Nick Taylor & Jennison Kipp
UF Program for Resource Efficient Communities
and
Timothee Sallin
Cherrylake





Water-worried Vegas wants useless grass a thing of the past

By Sam Metz and Ken Ritter April 12, 2021

LAS VEGAS (AP) — A desert city built on a reputation for excess and indulgence wants to become a model for restraint and conservation with a first-in-thenation policy banning grass that nobody walks on.



(AP Photo/Ken Ritter)

Las Vegas-area water officials have spent two decades trying to get people to replace thirsty greenery with desert plants, and now they're asking the Nevada Legislature to outlaw roughly 40% of the turf that's left.



County calls watering restrictions a success

By Michael D. Bates Chronicle reporter Mar 29, 2021 Updated Mar 30, 2021

The county enacted restrictions in June 2020 in response to increased irrigation demands that resulted in groundwater withdrawals exceeding SWFWMD permitted amounts. March 2021 withdrawal figures are significantly less than they were in March 2020.



Jupiterimages

"Our Water Conservation and Florida Yards and Neighborhoods staff will continue to assist our customers to adjust their irrigation and landscaping practices to accommodate the one-day-per-week watering schedule," Citrus County Water Resources Director Ken Cheek said. Florida Land Development

Florida Land Development

Building Permits: Single-Family Detached

0		- y
• 2005	208,000	
• 2006	146,000	
• 2007	70,000	
• 2008	39,000	
• 2009	27,000	
•		
• 2019	99,831	
• 2020	115,782	
	 2005 2006 2007 2008 2009 2019 	 2005 208,000 2006 146,000 2007 70,000 2008 39,000 2009 27,000 2019 99,831

Florida Land Development Conventional Practice









Florida Land Development Conventional Practice









St. Petersburg Times

Man jailed for brown lawn gets help from neighbors

By Erin Sullivan, Times Staff Writer In print: Monday, October 13, 2008

BAYONET POINT — "He's in prison for God knows how long because we can't afford to sod the lawn," said his sobbing daughter, Jennifer Lehr.

Prudente has owned a home in the deed restricted community since 1998. The covenants require homeowners to keep their lawns covered with grass.



Free from jail, Joseph Prudente, 66, inspects his new lawn with pride Sunday. Prudente, who says he barely has enough to pay the mortgage, was jailed for having a brown lawn.

St. Petersburg Times

Tampa Bay Water makes last withdrawal from tapped out reservoir

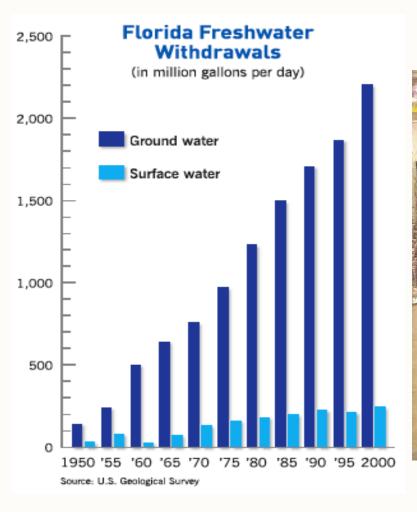
By Craig Pittman, Times Staff Writer In Print: Saturday, March 14, 2009

Get used to having a brown lawn for a while. As of this week, Tampa Bay Water has virtually drained its 15 billiongallon reservoir.



From now until the summer rainy season, it must rely on its two remaining sources of water: its sometimes troubled desalination plant and the dwindling supply in the underground aquifer. "It's going to be a long couple of months waiting for the rainy season," Tampa Bay Water spokeswoman Michelle Robinson said Friday.

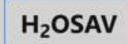
Florida Land Development Water Supply



Tampa Bay Water Desalinization Facility



Residential Landscape Irrigation Central Florida





Use Cases • Partners • Methods/Tools • Get Involved • About

[Login]

H₂OSAV - Water Savings, Analytics & Verification

H₂OSAV is an archive of multi-year, utility territory datasets that merge water meter, conservation program and property appraiser data coupled to analytical tools for evaluating water consumption patterns and the effectiveness of individual water conservation programs.

H₂OSAV also serves as a repository of measured and verified (M&V) conservation program water savings that extend over multi-year timeframes, allowing for more tangible, direct comparisons of retrofit programs, construction practices and land development policies focused on water conservation.

H₂OSAV is pronounced "H-2-oh save."

5-min video overview

14 utilities across several regions + Jacksonville FLORIDA Port St Lucie Palm Beac Mian Leaflet | OSM contributors, CC-BY-SA, Imagery OMapbox

Use Cases

What can I do with H₂OSAV? Evaluate the effectiveness of your conservation programs. Understand premise.

Partners

H₂OSAV is sponsored by the Florida Legislature in coordination with the Florida Department of Environmental Protection

Announcements

January 28, 2021: FSAWWA Webinar



1 gallon per day



55555



- All Homes (931,132 homes)
- •Indoor: 126 gpd (57%)
- Outdoor:
 94 gpd (43%)



How much POTABLE water do NEW Florida homes use for landscape irrigation?

- New Homes built since 2015 (38,811 homes)
- •Indoor: 118 gpd (45%)
- •Outdoor: 133 gpd (55%)



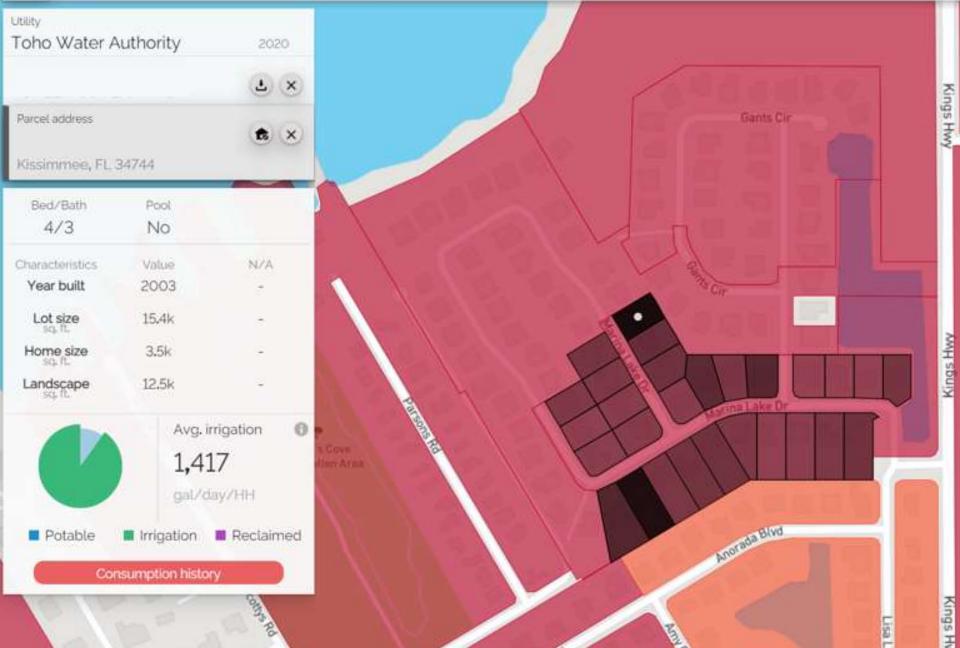
How much RECLAIMED water do Florida homes use for landscape irrigation?

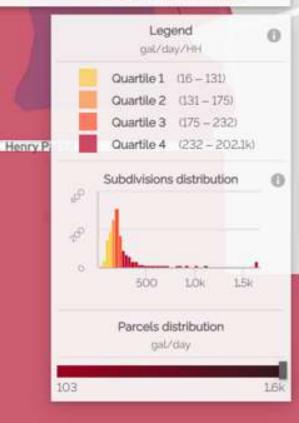
- Reclaimed Use (27,788 homes)
- •Indoor: 119 gpd
- •Outdoor: 274 gpd



KING George Dr

KING George Dr







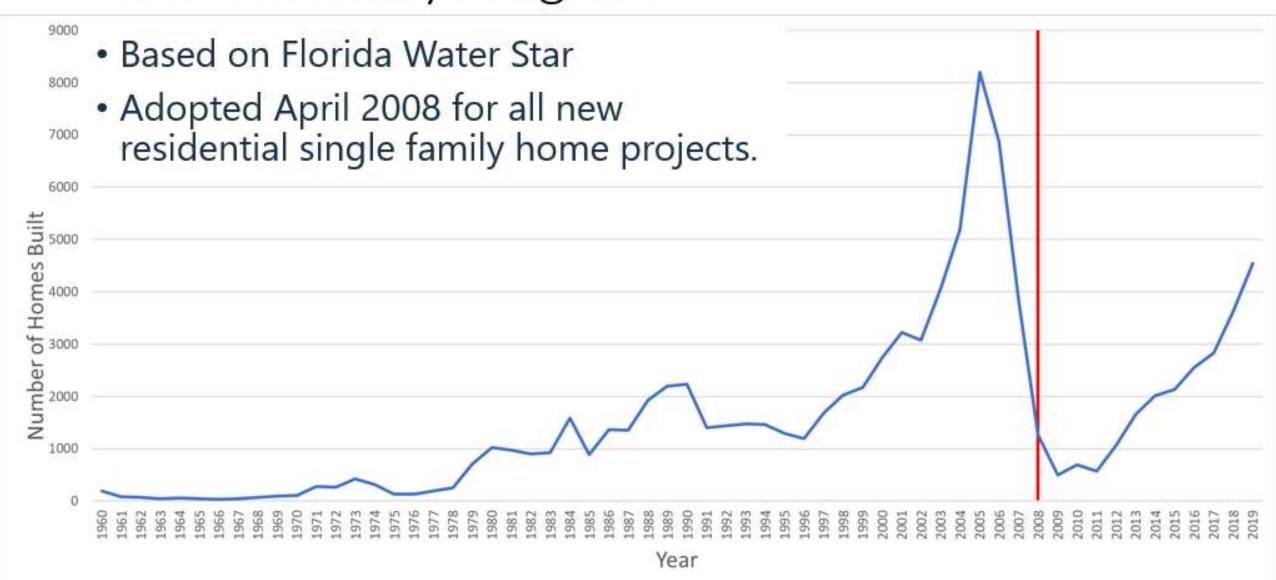








Toho Efficiency Program



2017

4.8k

2.1k

3.1k

Reclaimed 127

Corsair Ave

Avg. reclaimed

gal/day/HH

175

2016 - 2017

1.7k - 13.2k

1.5k - 3.4k

617.2 - 10.5k

List all parcels

Year built

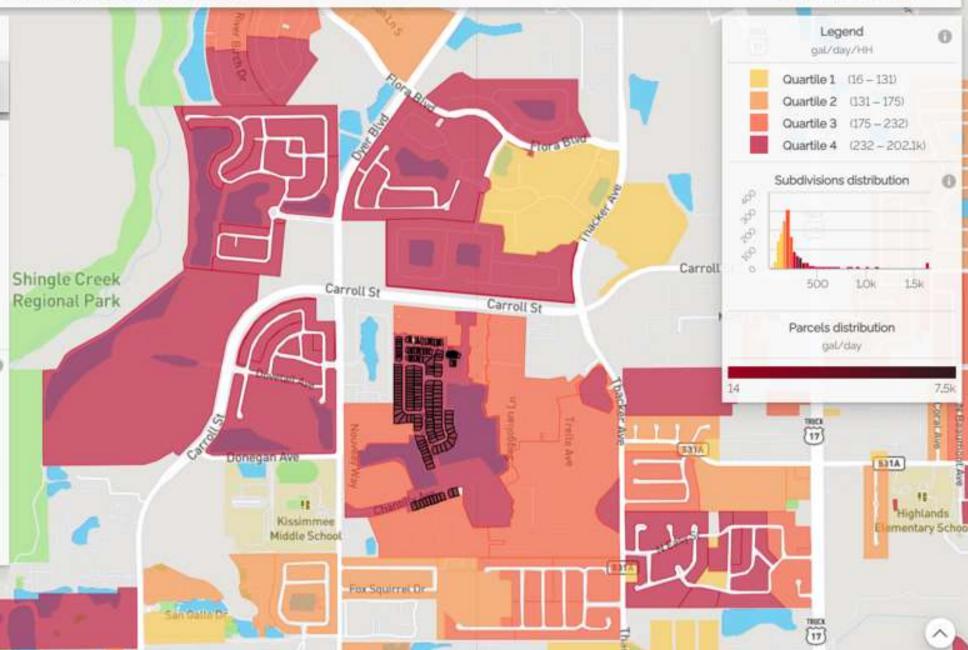
Lot size

Home size

Landscape sq. ft.

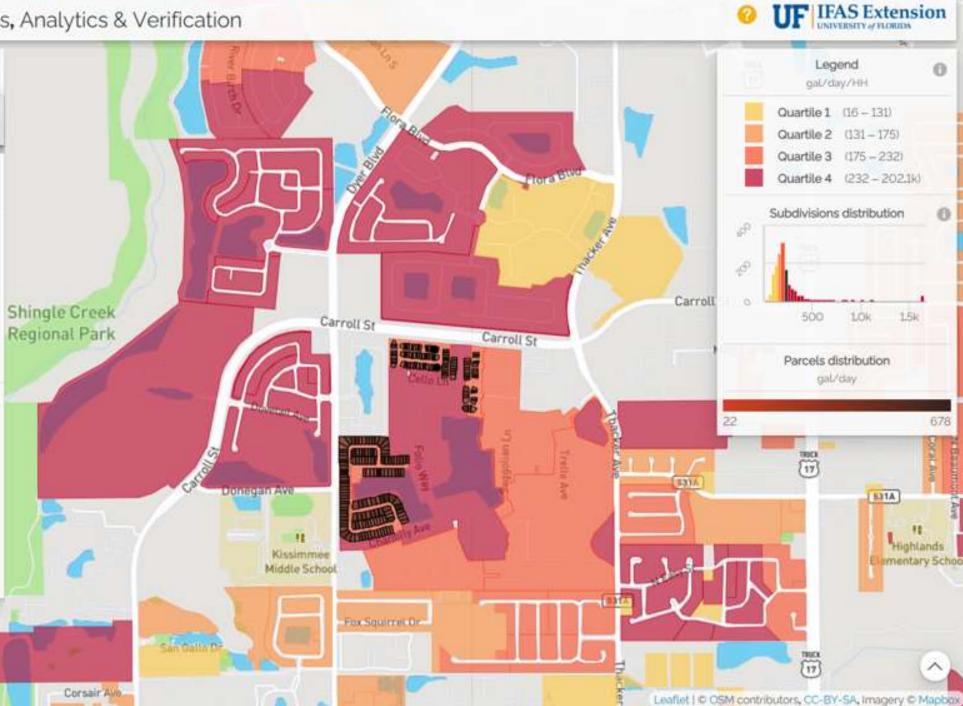
Potable

175



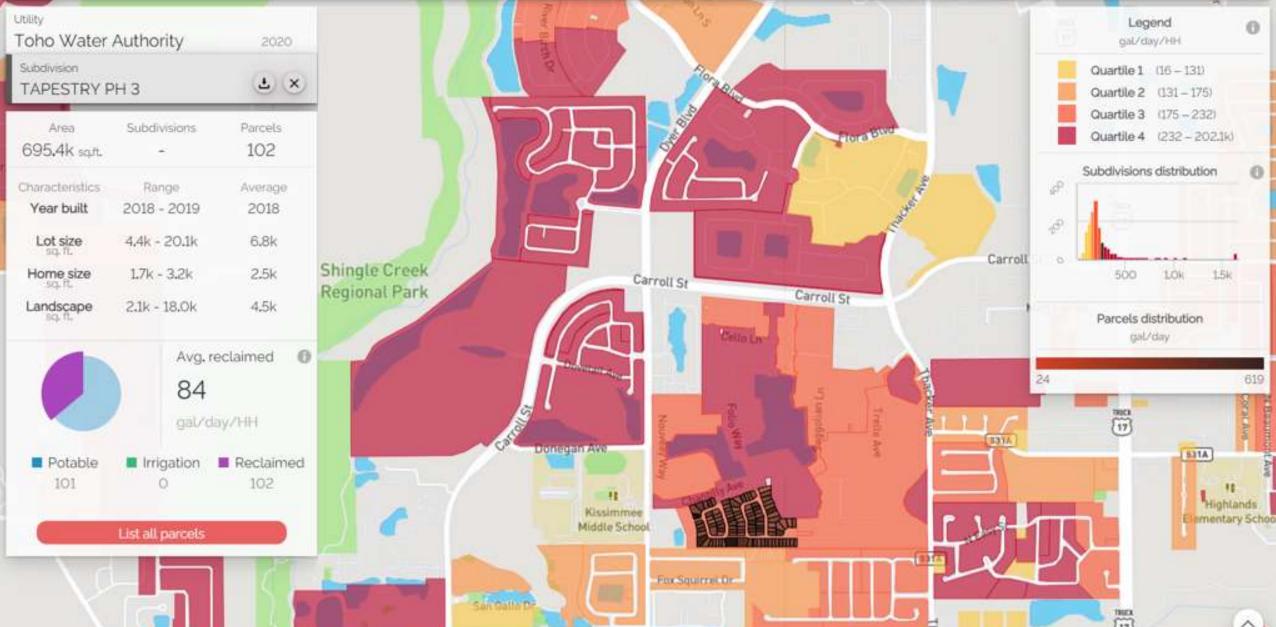
UF IFAS Extension







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Corsair Ave

4.7k

2.1k

2.9k

■ Reclaimed

136

Avg. reclaimed

gal/day/HH

91

Lot size

Home size

Landscape sq. ft.

Potable

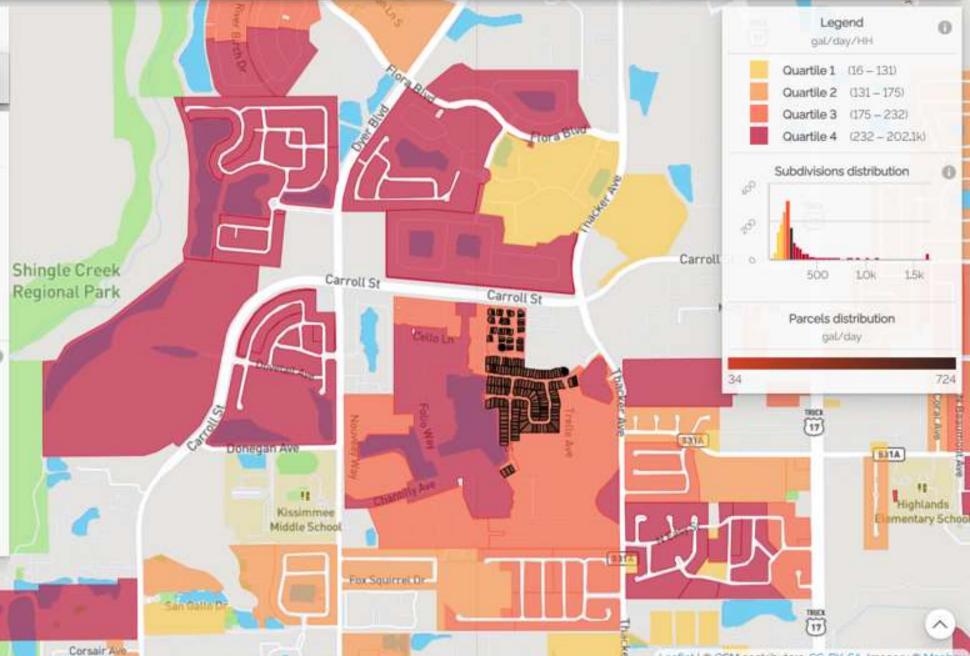
194

1.7k - 13.4k

1.5k - 3.2k

617.2 - 11.2k

List all parcels



UF IFAS Extension

Corsair Ave

Avg. reclaimed

gal/day/HH

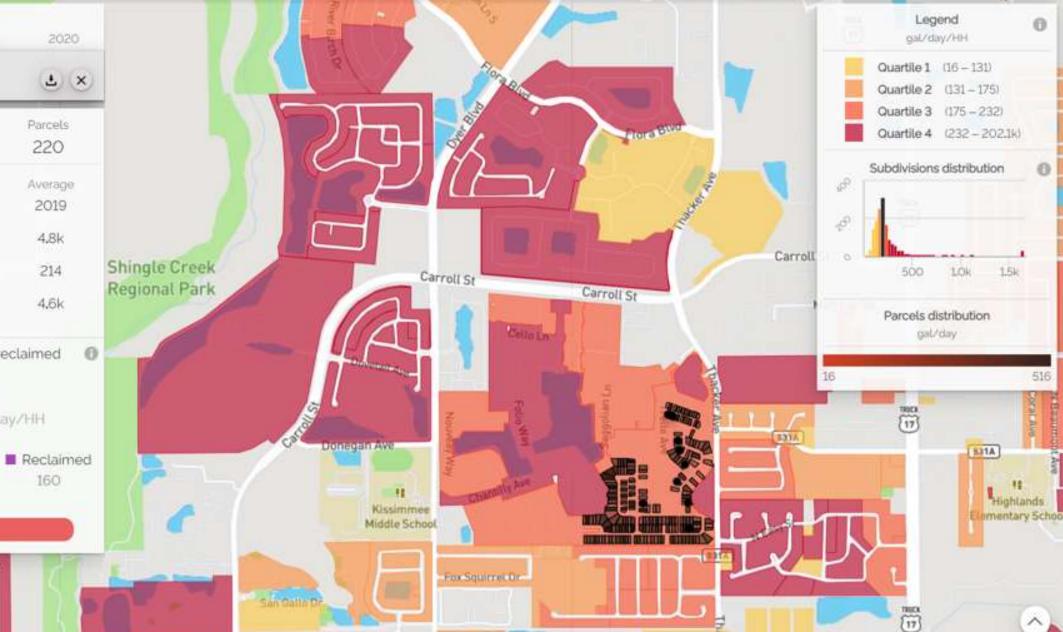
160

93

List all parcels

Potable

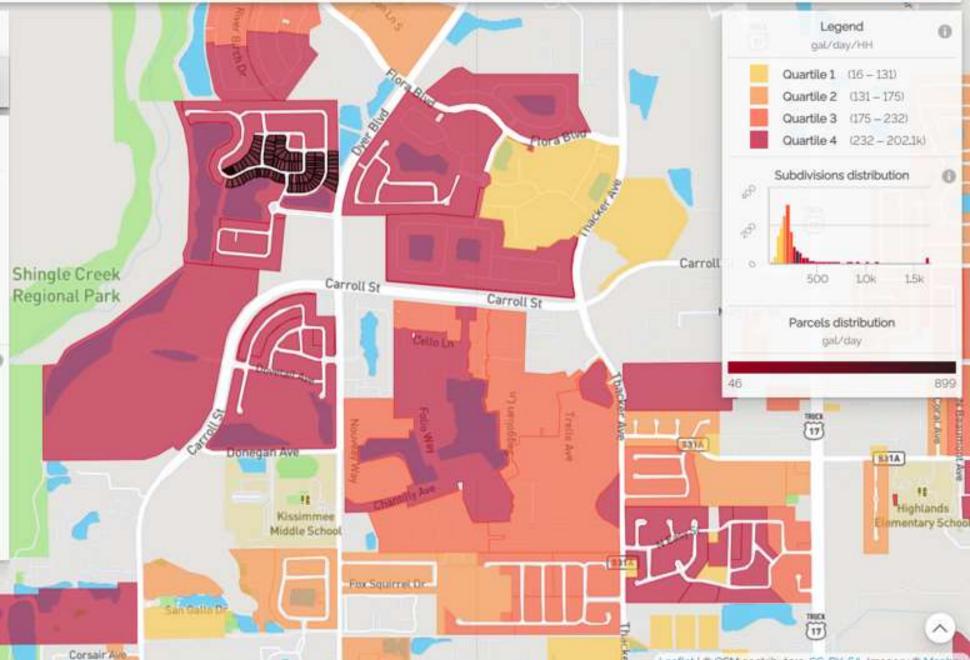
220



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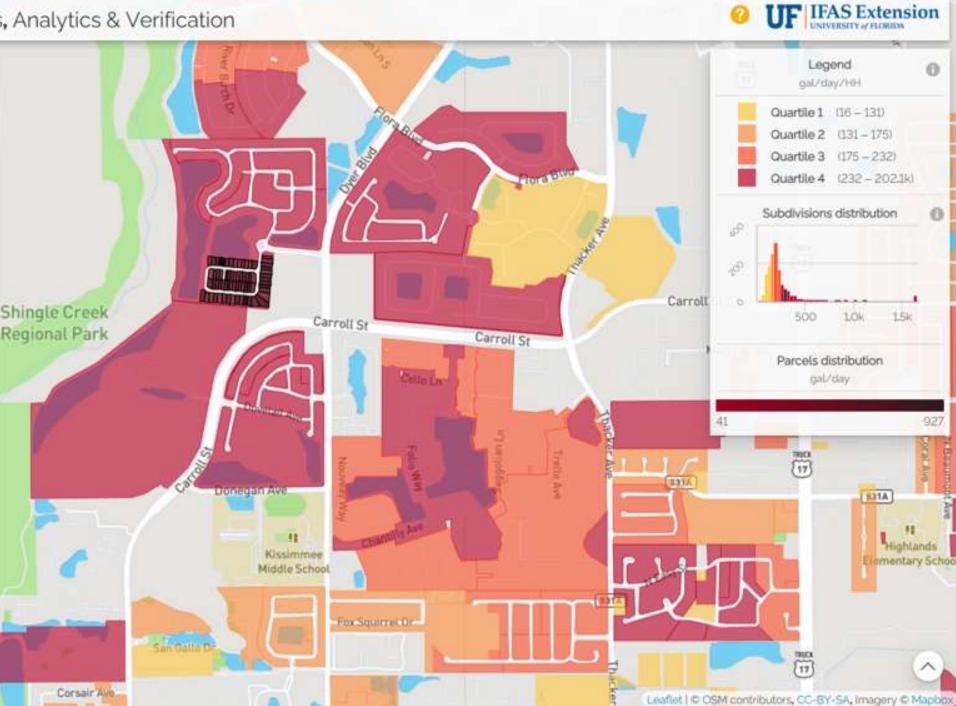






UF IFAS Extension





6.6k

2.5k

4.6k

143

Avg. reclaimed

gal/day/HH

88

Lot size

Home size

Landscape sq. ft.

Potable

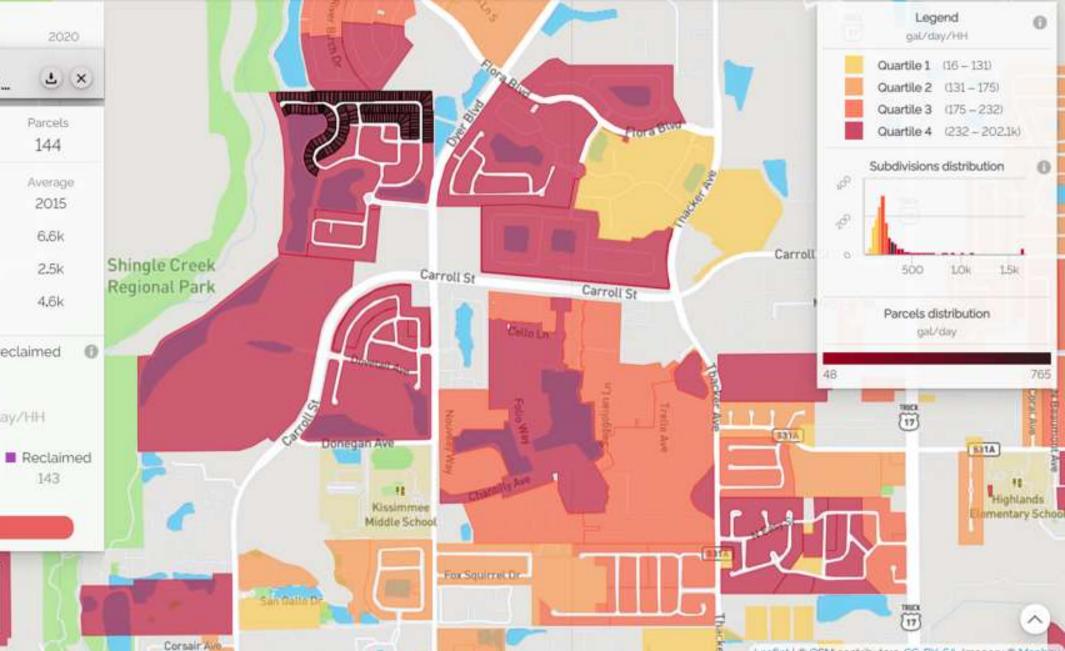
144

4.9k - 15.7k

1.6k - 3.5k

920 - 12.0k

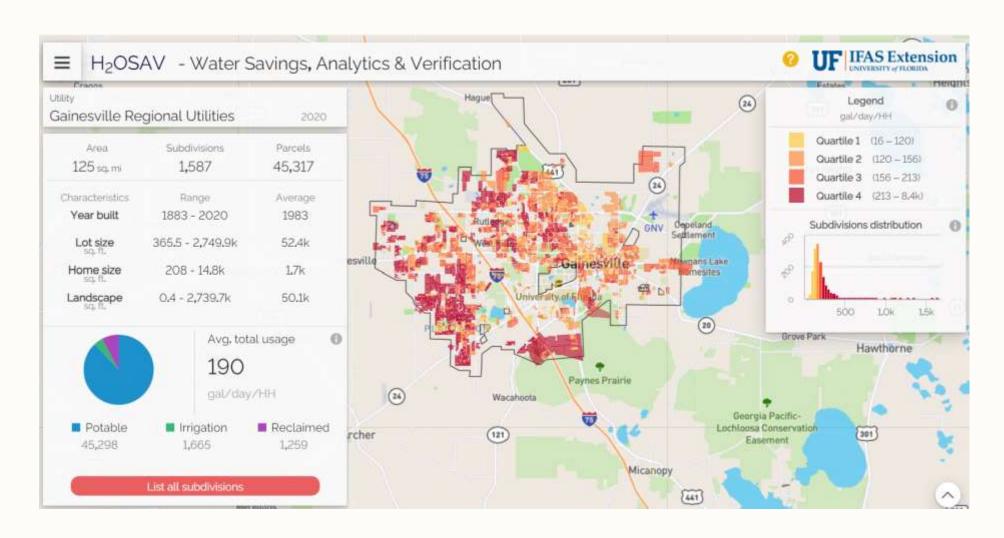
List all parcels



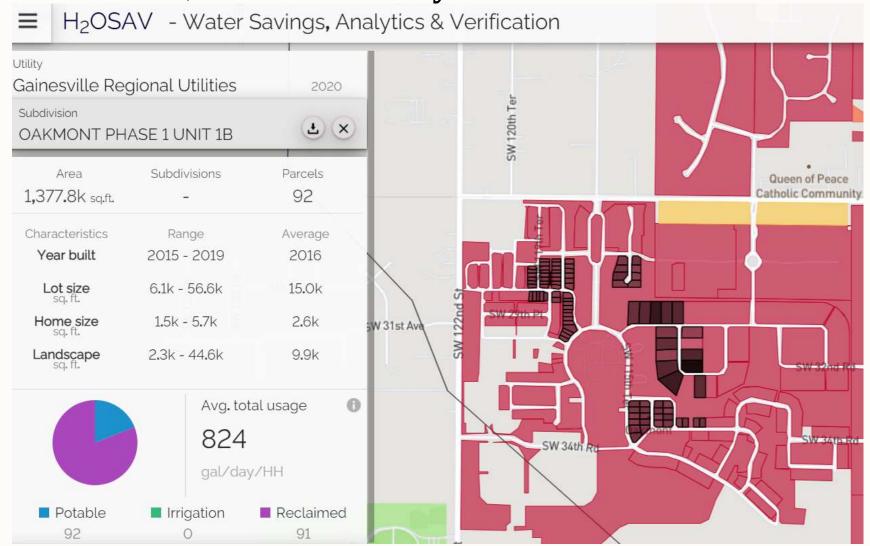
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Residential Landscape Irrigation Alachua County

Gainesville Regional Utilities, Alachua County



Oakmont, Alachua County





Alachua County

Evaluation of Irrigation-Free Residential Landscapes in Florida's Springs Region

- The Nature Conservancy (TNC)
- Fish & Wildlife Foundation of Florida (FWFF)
- Sustainable Floridians (UF/PREC)

Case studies in developments that are not installing inground irrigation:

- Madera
- Hidden Lake
- 88th Street Cottages

Madera 2004-2016

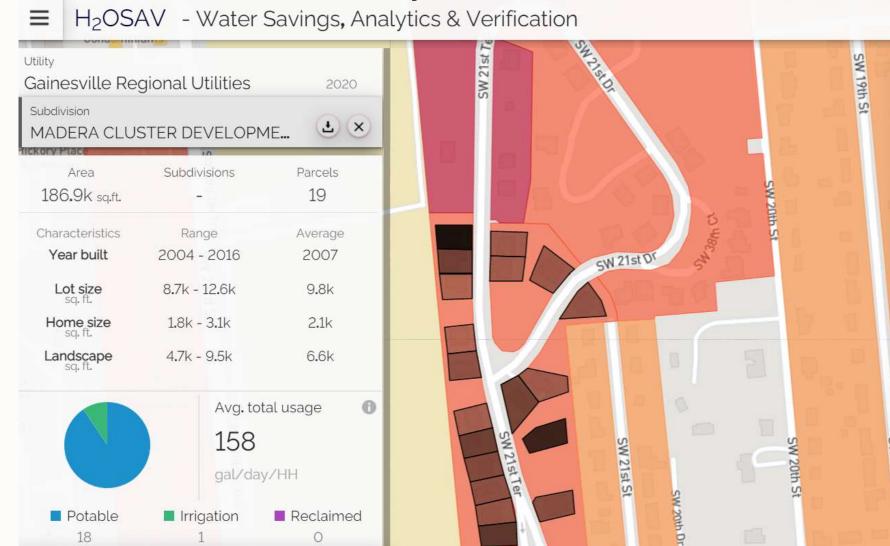
- 44 acres w/ 89 lots
- Single-family, detached
- No mass grading
- Irrigation systems discouraged







Madera, Alachua County





Hidden Lake 2017-2019

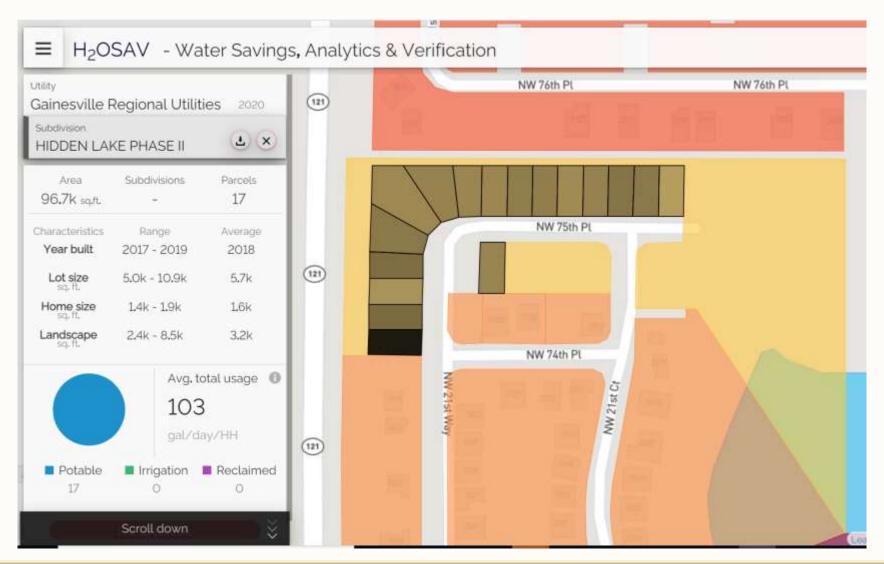
- Robinshore Homes
- 17 lots
- Bahia lawns
- No installed irrigation systems







Hidden Lake 2017-2019



Residential Landscape Irrigation 88th Street Cottages 2019-2020

- Robinshore Homes
- 3.8 acres w/ 27 rental units
- No individual irrigation systems
- Composted amended landscapes
- Well irrigated common "greens"







88th Street Cottages 2019-2020







Residential Landscape Irrigation Compost Amending Soils

Oakmont, Alachua County









Lifesoils Processing Facility, Sumter County



The Villages, Sumter County



On Top of the World, Marion County

Evaluation of Water Use & Water Quality Effects of Amending Soils & Lawns

Dr. Eban Z. Bean & Jovana Radovanovic

- Prior to landscaping lots were tilled, were compost amended and tilled or were left intact (control).
- At the start of the study, irrigation run times on all lots were reduced by 25% from standard practice.
- Homeowners were free to change irrigation run times.
- During 2020 homeowners on amended lots irrigated the least and were more likely to further reduce irrigation run times (up to a 55% reduction from conventional).
- Measurements of available water in the root zone suggests that irrigation could be reduced by 50% on amended lots.

Compost – Topdressing

On Top of the World, Marion County





Soils Management Publications

 GUIDANCE FOR AMENDING URBAN SOILS WITH ORGANIC AMENDMENTS (10/2020) - Dr. E. Z. Bean, L. Jarrett, B. Haldeman, J. Searcy & P. Jones

https://floridadep.gov/dear/water-quality-restoration/content/statewide-best-management-practice-bmp-efficiencies

EXAMPLE ORDINANCE FOR AMENDING POST
 CONSTRUCTION SOILS WITH COMPOST IN URBAN
 LANDSCAPING - Dr. E. Z. Bean & UF Conservation Law
 Clinic

ezbean@ufl.edu

Compost Amending Soils

Massey Soils Conditioning Program



Sustainable Floridians Benchmarking & Measurement Program Built Environment Professionals

Compost Amending Soils

Sunbridge, Osceola County



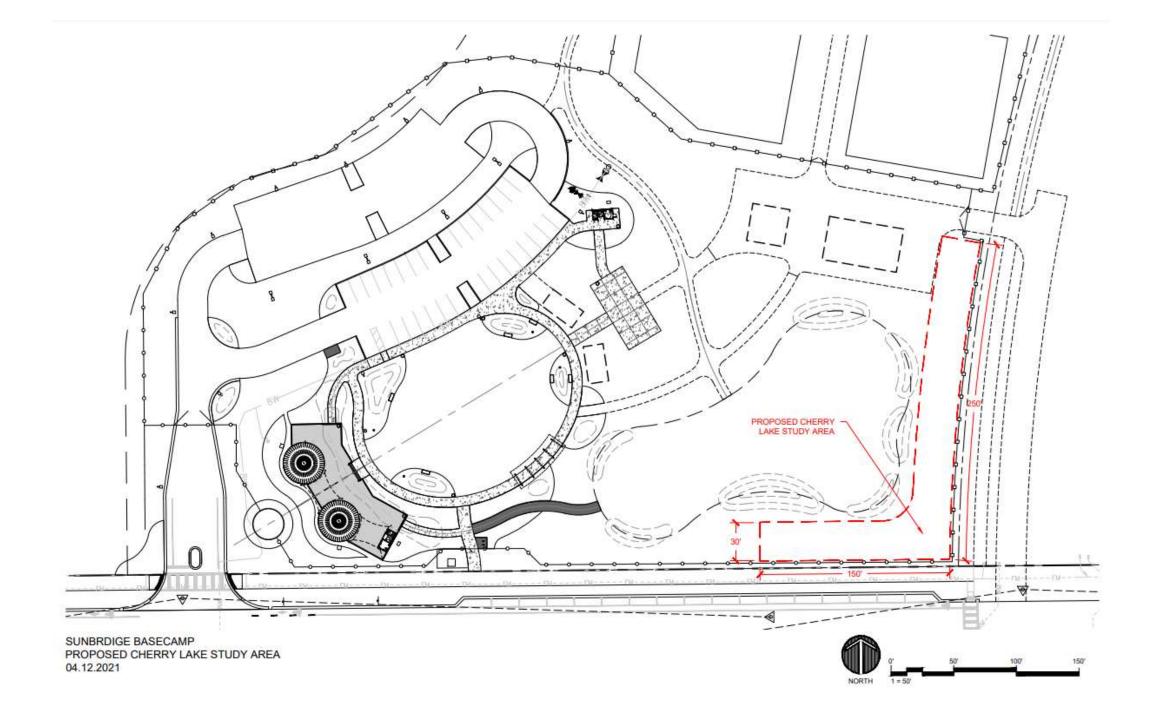


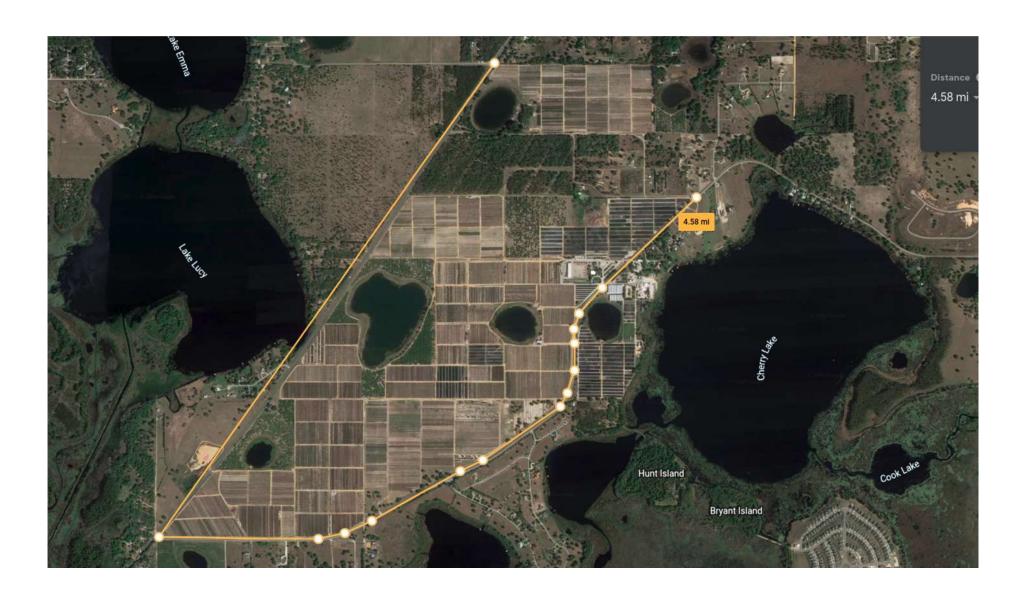


Timothee Sallin

President, Cherrylake Secretary, 1000 Friends of Florida



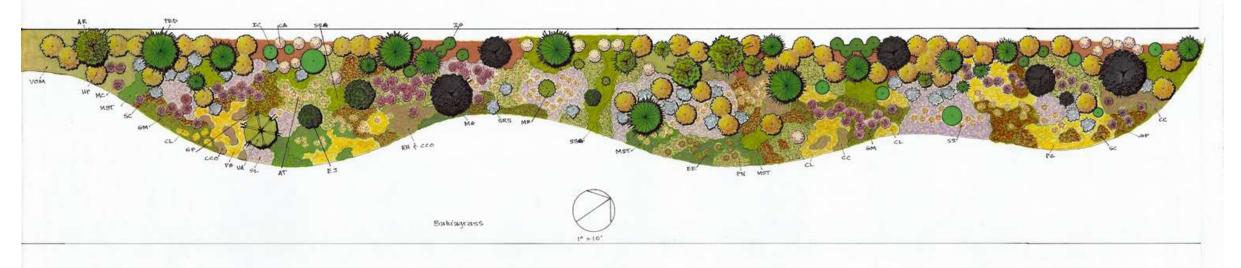






THE EDGE at CHERRYLAKE

NATURALISTIC

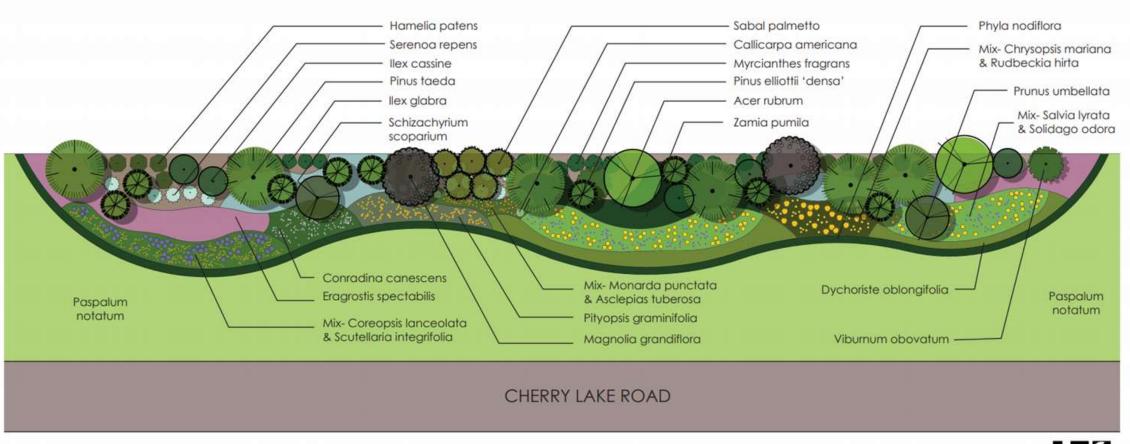


Cherry take Road



THE EDGE at CHERRYLAKE

FORMAL



THE EDGE at CHERRYLAKE

PLANT LIST

Garberia heterophylla	Dyschoriste humistrata 'Swamp Twinflower'
Hamelia patens 'Calusa'	Dyschoriste oblongifolia 'Oblongleaf Snakeherb'
Ilex glabra 'Galberry'	Gaillardia pulchella 'Blanket Flower'
Viburnum obovatum 'Walters'	Glandularia maritima
Viburnum obovatum 'Mrs. Schiller's Delight'	Lantana 'New Gold'
Zamia pumila	Monarda punctata
Andropogon ternarius	Mimosa strigilosa
Eragrostis spectabilis 'Purple Lovegrass'	Phyla nodiflora 'Turkey Tangle Frogfruit'
Muhlenbergia capillaris	Pityopsis graminifolia
Schizachyrium scoparium	Rudbeckia hirta 'Black Eyed Susan'
Asclepias tuberosa	Salvia coccinea 'Sage'
	Hamelia patens 'Calusa' Ilex glabra 'Galberry' Viburnum obovatum 'Walters' Viburnum obovatum 'Mrs. Schiller's Delight' Zamia pumila Andropogon ternarius Eragrostis spectabilis 'Purple Lovegrass' Muhlenbergia capillaris Schizachyrium scoparium



Promote the adoption of sustainable landscape practices in Florida







2021 OUTSIDE COLLAB GOALS



- **Promote** A Statewide Collaboration Around Sustainable Landscape Practices
- **Increase** Nursery Supply and Market Demand of Florida Native And Florida Resilient Plants
- **Grow** Industry Competencies In Sustainable Landscape Maintenance
- **Support** Local Governments To Evaluate Landscape Codes For Effectiveness
- Collaborate With State Agencies To Encourage Green Infrastructure Projects
- **Quantify** Economic Impacts And Ecosystem Services
- Partner With Development Community To Implement Sustainable Landscapes Holistically
- Partner With Existing Developments (HOA's) To Retrofit Sustainable Landscapes Holistically
- **Develop** A Holistic Sustainable Approach To The Landscape Transect From Design To Implementation To Maintenance.

UPCOMING EVENTS











Botanical Life, Natural Lands Management, + Sustainability at UNF Tour

May 7, 2021 Jacksonville, FL

Residential Native Place Landscapes Inside a Managed Community Tour

May 21, 2021 Villages, FL

OUTSIDE Collab 2021

October 2021

Keynote Speaker: Doug Tallamy

OUTSIDE Collab 2022

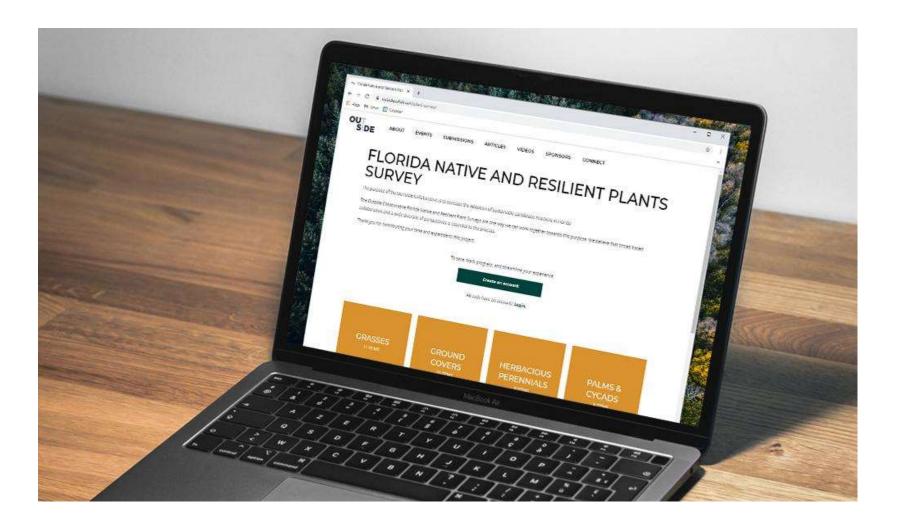
Spring 2022

Keynote Speaker: Thomas Rainer

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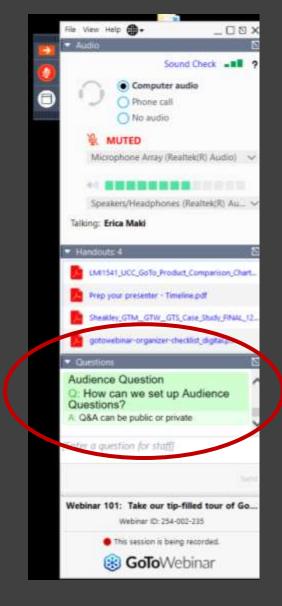
Questions and Answers



Please ask questions!

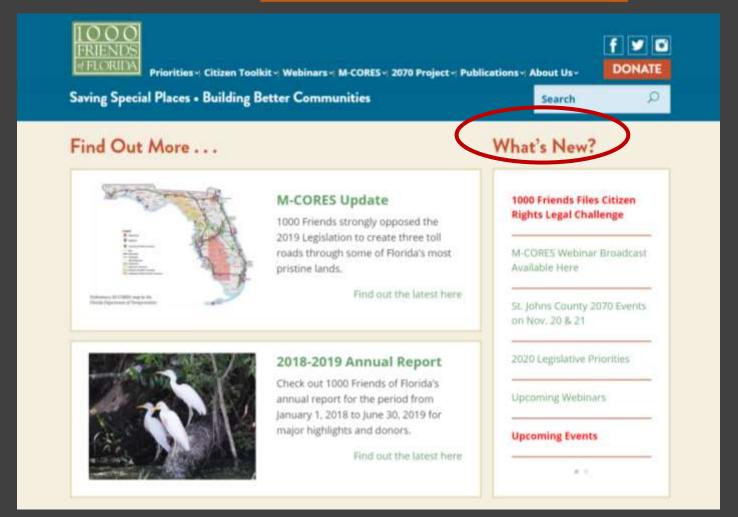
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May 12 – 2021 Florida Legislative Wrap Up



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The Perkins Charitable Foundation Mr. Robert M. Rhodes

Ms. Susan Trevarthen



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