

Lightening the Water Footprint of Florida's New Residential Developments

The Sustainable Floridians Benchmarking & Monitoring Program (SF-BMP)



Jennison Kipp & Pierce Jones

UF/IFAS Program for Resource Efficient Communities



Beth Lewis & Lesley Bertolotti

The Nature Conservancy Florida

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Presentation Overview

1) Partnership Evolution



2) The Program (SF-BMP)



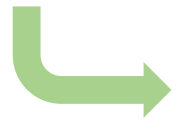
3) SF-BMP Pilot Projects



4) Take-Aways & Questions

“I wish for you... patience and persistence to find wise and thoughtful solutions to Florida’s complex water challenges...” – W. Kent Fuchs (2020 Symposium Keynote)

1) Partnership Evolution



2) The Program (SF-BMP)



3) SF-BMP Pilot Projects



4) Take-Aways & Questions

Partnership Evolution

UF/IFAS Program for Resource Efficient Communities (PREC)

We promote the adoption of best design, construction, and management practices that measurably reduce energy and water consumption and environmental degradation in Florida's master-planned residential community developments.



CLUE | CENTER FOR LAND USE EFFICIENCY

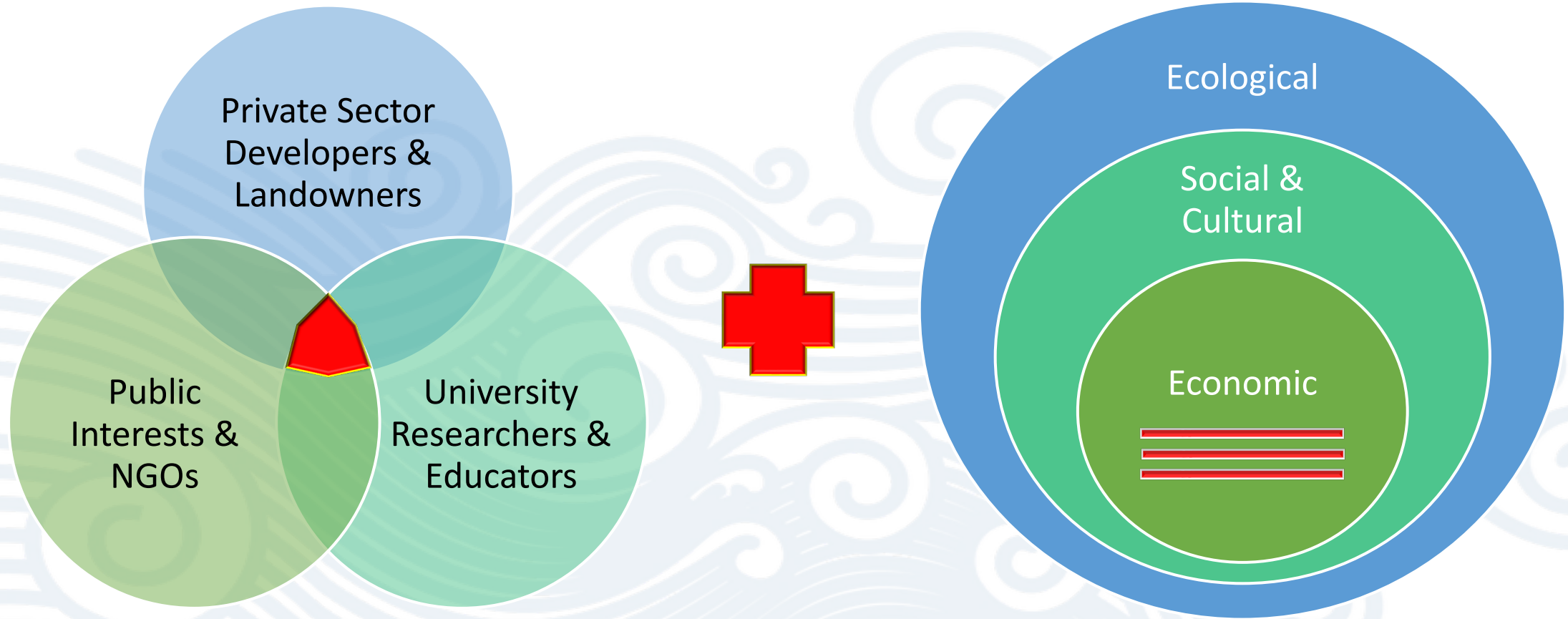
The Nature Conservancy, Florida

Our mission is to conserve the lands and waters on which all life depends.

The Nature
Conservancy



Public-Private Partnerships for Systems Change



Formalizing Sustainable Floridians Benchmarking and Monitoring Program (SF-BMP) Partnership



Memorandum of Understanding between The Nature Conservancy and the University of Florida Board of Trustees

This Memorandum of Understanding (“MOU”) is entered into this 15th day of September, 2021, between the University of Florida Board of Trustees on behalf of the Program for Resource Efficient Communities (“Partner”), a public university, established under the laws of Florida with its principal place of business at 207 Grinter Hall, PO Box 115500, Gainesville, FL 32611-5500, United States, and The Nature Conservancy (“TNC”), Florida Chapter, a non-profit corporation with its principal place of business in Maitland, Florida, USA. Partner and TNC are collectively referred to as the “Collaborators”.

Formalizing Sustainable Floridians Benchmarking and Monitoring Program (SF-BMP) Partnership

MOU Collaborators working jointly to:

- **Develop shared Program objectives**, goals, guiding principles, key components, and expectations,
- **Identify potential Program partners** who are aligned with the objectives and goals of the Program,
- **Collaborate with Program participants** to negotiate incentives and develop site specific frameworks,
- **Secure Program funding** through grants to advance the Program objectives and goals, and ensure grant requirements are met, and
- **Develop Program documents** and marketing materials.



The Program: SF-BMP

Sustainable Floridians Benchmarking & Monitoring Program: Our strategic “niche”

- Make the business case for low-impact, resource-efficient, replenishing, restorative, and resilient new communities
- Embrace a holistic, performance-based, collaborative approach – for the long haul
- Create “living laboratories” for applied research and outreach/Extension projects
- Build on promising opportunities and incentives, document lessons learned, and iteratively adapt
- Scale, replicate, and shift the status quo



SF-BMP Guiding Principles

1. Target *master-planned communities in Florida* from concept to build-out.
2. Work within *strategic water, energy, and nutrient budgets*.
3. Focus on *measurable, performance-based outcomes* supplemented by prescriptive practices.
4. *Enshrine conservation and efficiency incentives* in communities' legal documents.
5. Follow a *phased and iterative* performance benchmarking, monitoring, and verification process.
6. Require *annual renewal* of Program participation commitments and standards until a community is “built-out”.
7. Be *completely voluntary* and operated on a fee-for-service/task order basis.
8. *Publish the results* periodically in professional, academic, and popular literature.

Process: SF-BMP 'Water Conservation' Element

Planning

- “Beyond-code” design goals with quantitative baselines
- Comprehensive water budgets and use limits

Construction

- Metered water use relative to conventional/status quo
- Document infrastructure and materials expenditures

Post-Occupancy

- Track market data and property values
- Measure persistence of water savings over time

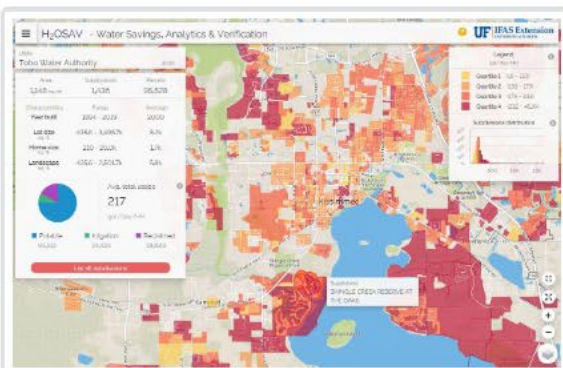
Measurement & Verification: H₂OSAV

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



H₂OSAV Tools

In addition to our suite of easy-to-use web-tools (shown below), we can rapidly compose prototypes and special-purpose tools to explore those "I wonder if..." scenarios.



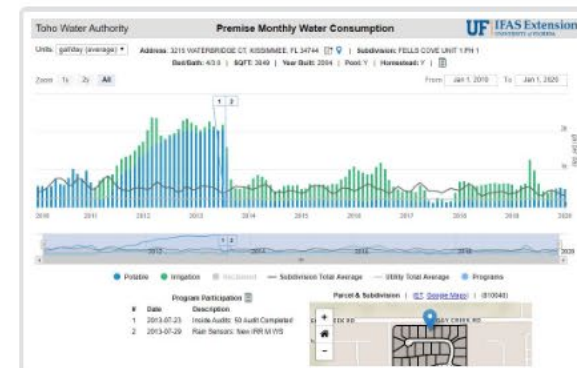
Exploratory Tool (ET): Explore the utility's service region and gain insights at 3 levels: utility, subdivision, and premise.



Targeting Tool (TT): Slice and dice consumption, premise, and subdivision data for targeting, analysis, and more.



Analysis Tool (AT): Analyze the efficacy of conservation programs adopted by the utility over time.



Premise View (PV): View premise consumption, features, and program participation via a smart-search interface.

h2osav.buildgreen.org/info/methods

SF-BMP Pilot Projects



Robinshore & 88th Street Cottages

- Gainesville, Alachua County
- “Cottage” Neighborhood Development
- Amended soils and installed “irrigation-free” landscapes
- Completed in Spring 2020

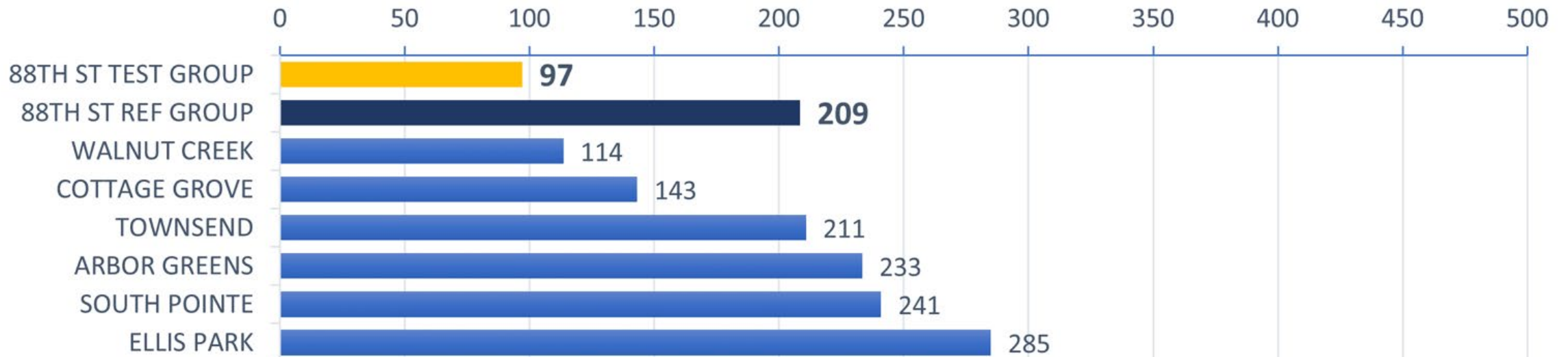


88TH st cottages
HOME SWEET HOME

Robbinshore & 88th Street Cottages

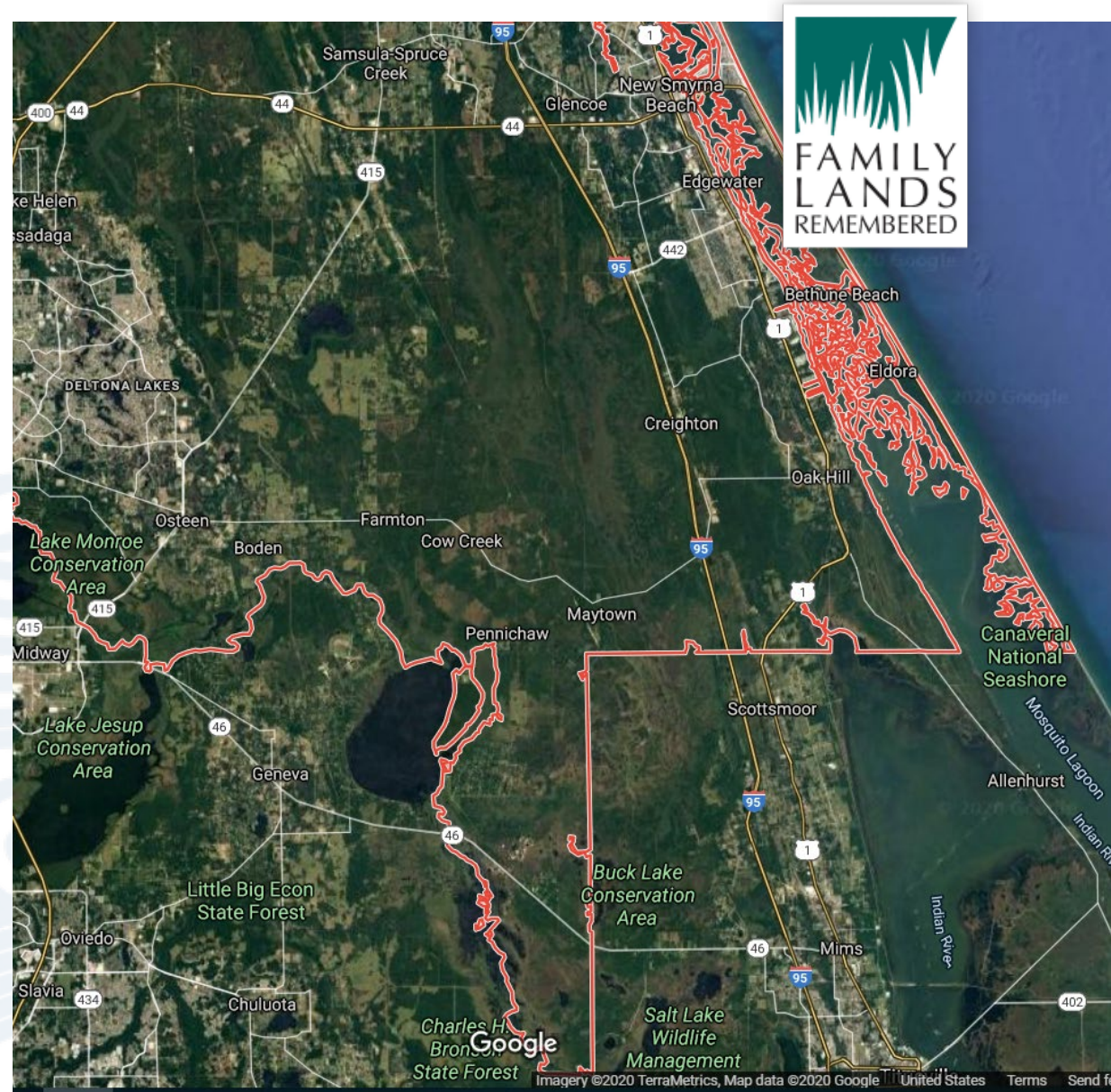
HOUSEHOLD WATER USE (AVG GALLONS PER DAY)

■ 'TEST' GROUP ■ 'REFERENCE' GROUP ■ 'REFERENCE' SUBDIVISIONS



Farmton, Deering Park

- 59,000 Acre Master Development of Regional Impact; 50-yr build out
- Volusia and Brevard Counties
- “GreenKey” and “Sustainable Development Area” land use designations
- Goal: 2/3 of land protected in perpetuity



Sunbridge Stewardship District

- 27,000 Acre Master Planned Development with 30-yr build out
- Osceola & Orange Counties
- “Eco-Life” Tenets aligned with 5 SF-BMP Sustainability Elements
- Master Research Agreement with UF & UCF
- First neighborhood model homes installed *last week*.



Sunbridge Reduced Impact Residential Landscapes

- Minimize/eliminate irrigation beyond establishment
- Minimize/eliminate mineralized fertilizer use
- Minimize/eliminate pesticides, insecticides, herbicides
- Promote/maximize ecological diversity and ecosystem services



Sunbridge Stewardship District "Eco-Life" Tenets



TAVISTOCK

DEVELOPMENT COMPANY



Take-Aways

- Conventional practices are not doing enough to protect Florida's water resources
- Developers and public sector interests are eager to partner in shifting the landscape and water use status quo
 - SF-BMP Partnership is helping us create “Living Laboratories” for sustainability
- Raising the bar for water goals, monitoring and verifying performance over time, and phased certification are key
 - ROIs matter—the business case must be made to accelerate and scale progress
 - Cross-sector collaborations can reveal untested leverage points and areas of common interest

Questions?

“Lightening Florida’s Water Footprint”

Jennison Kipp Searcy • mjkippp@ufl.edu

Beth Lewis • beth.lewis@TNC.org

