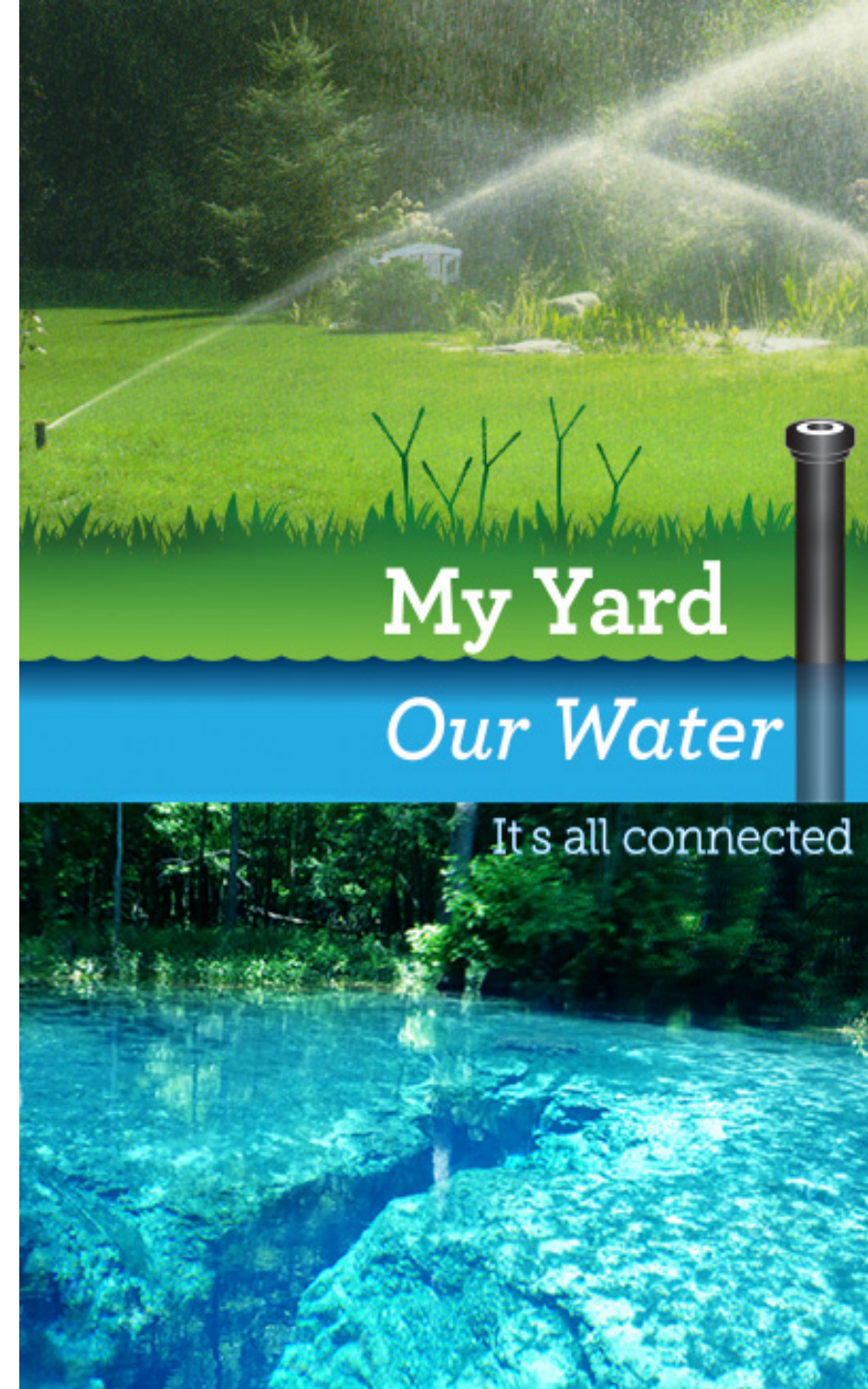




# Achroma County's Water Conservation Program

Stacie Greco, Water Resources Manager  
Environmental Protection Department

February 2021

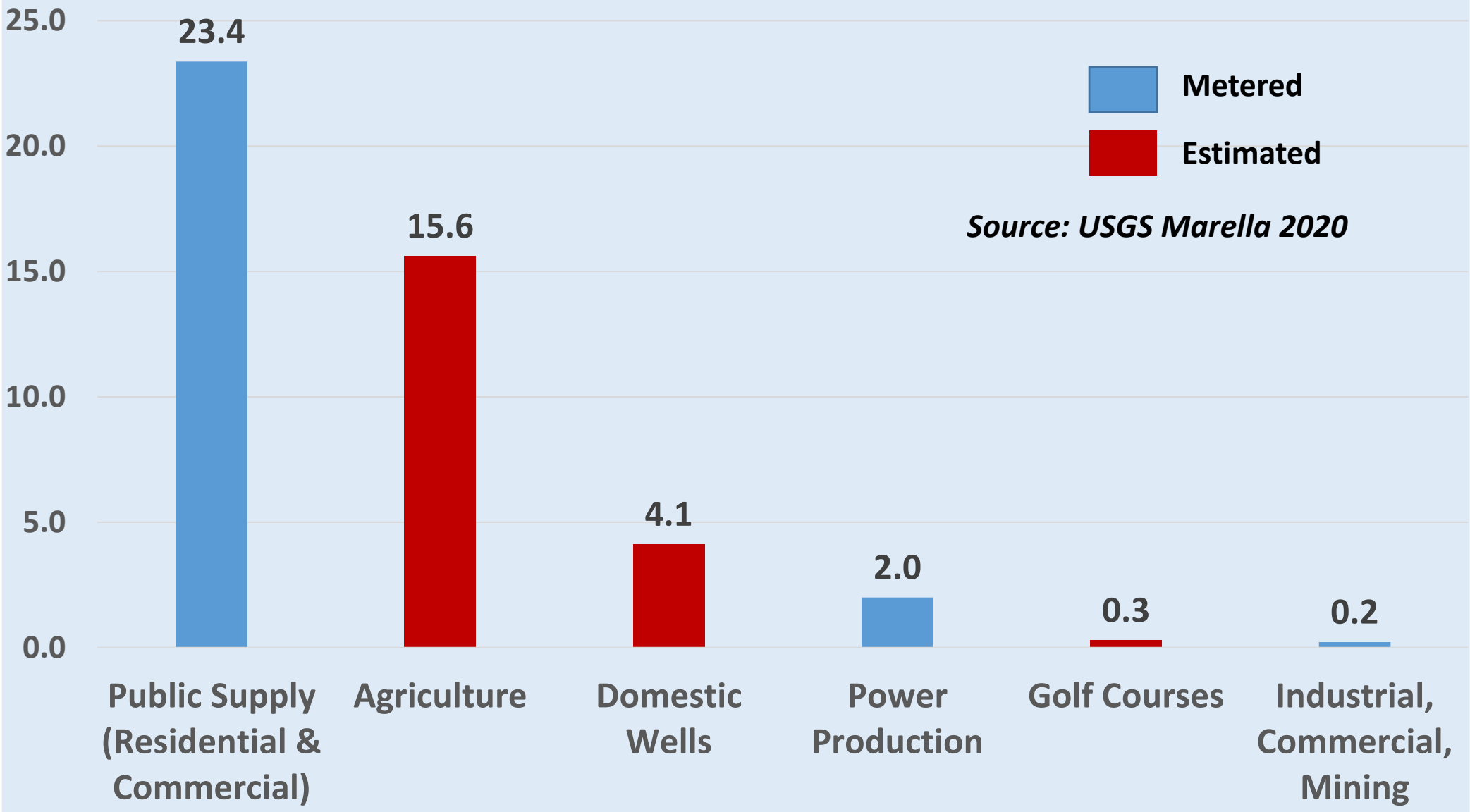


**Our aquifer**

**Our  
water**

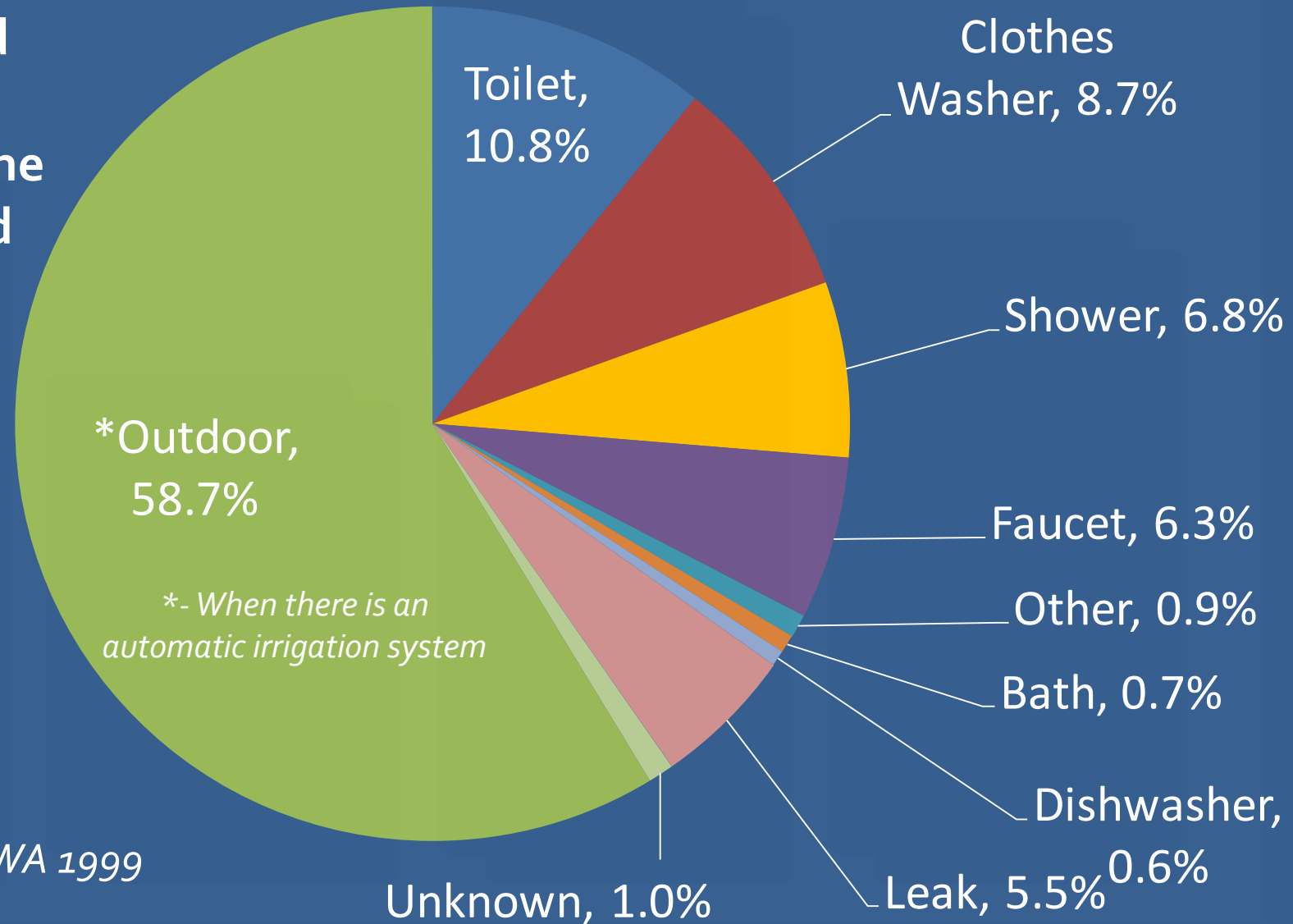
**It's all connected.**

# Alachua County 2015 Groundwater Pumping Million Gallons Per Day (MGD)



“ The single most effective strategy to reduce water demand in Florida is to significantly reduce the amount of water used for landscape irrigation.”  
Water2070 report

# Residential Water Use



Source: AWWA 1999

# Local Landscape Irrigation Water Use

There are at least 15,000 landscape irrigation systems within Alachua County

Average daily water use in newer homes:

- 💧 358 gallons- with irrigation system
- 💧 190 gallons- without irrigation

(Source: UF PREC)



~90% of new homes (in Gainesville Regional Utilities service area) have irrigation systems

# Alachua County

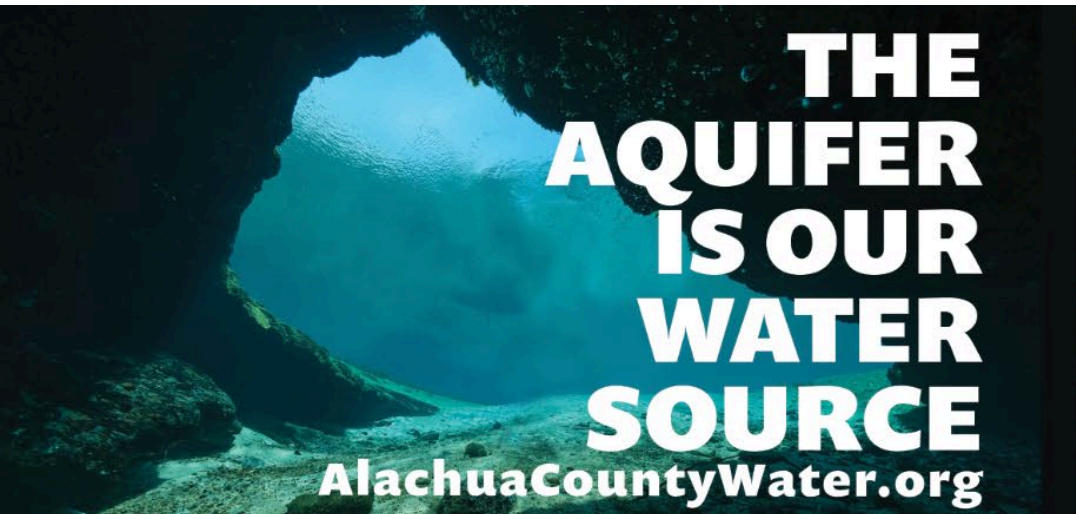
## Landscaping Strategies

- **Education-** Shifting Landscaping Paradigm ~\$10,000 County
  - Social media marketing
  - Television commercials and billboards
  - Turf SWAP Rebate Program
- **Regulatory-** Reducing Irrigation and Fertilizer Use ~2.0 FTE
  - Irrigation Efficiency Design Code
  - Irrigation Restrictions
  - Fertilizer Code
  - HOA FFL Code



# Education: Aquifer Awareness

- Based on local survey data, less than 50% of residents know that their drinking water is groundwater from the aquifer
- Billboards, social media, print media, and bus advertising
  - \$22,000 to date with \$10,000 from a grant



# Education: Irrigation System Operation

- Many property owners are not operating irrigation efficiently
  - Focus on maintenance and “watch the weather, wait to water”
  - \$1,300 to reach 92,000 residents and 1,800 website visits



# Education: Irrigation Tune Ups

- Run irrigation systems with property owners and identify leaks and heads that can be repaired, adjusted, or capped
- Adjust timer and encourage them to hire a professional to fix issues
- Time intensive (looking for grant)



# Education: Turf SWAP

## Landscaping Retrofit Rebate Program

- Goals: Reduce the area of irrigated turf
  - Reduce nutrient (fertilizer) pollution
  - Reduce outdoor water use
  - Promote Florida Friendly Landscaping™



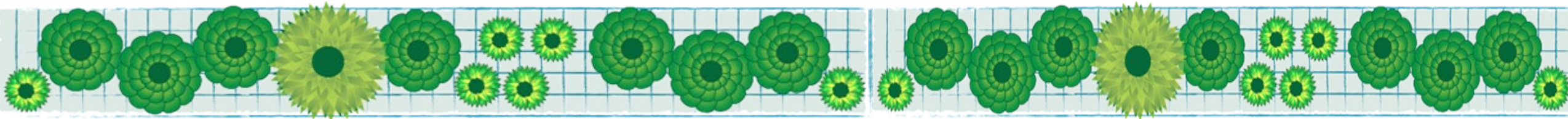
Before



After

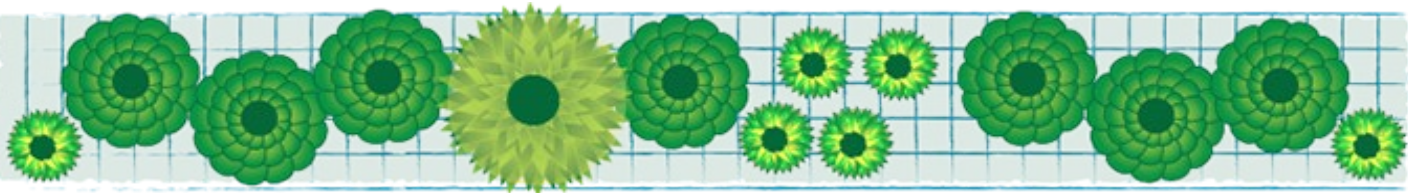
# 2017-2019: \$240,000 from SJRWMD

- 50% rebate up to \$2,000
- 135 participants
- 1,901 irrigation heads removed
- More than 400,000 ft<sup>2</sup> high volume irrigation removed
- ~16 million gallons per year potential savings (estimated based on flow rates/avg run times)



# Turf SWAP 2020/2021

- \$100,000 Grant from SRWMD
  - 50% rebate up to \$1,500
- About to get \$50,000 more
  - Target higher water users
  - Require Irrigation Tune Ups to improve water savings



# Alachua County Irrigation Design Code

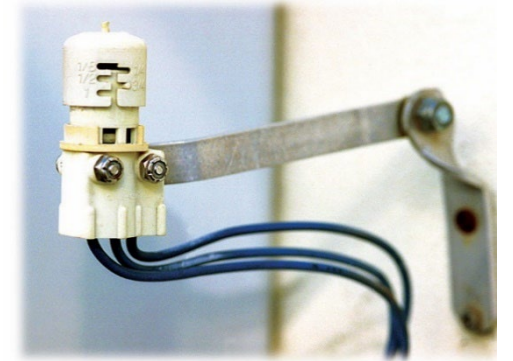
## *(Chapter 77 Article 6, modified April 2019)*

- All new irrigation systems installed after 4/2016 require approval (expanded to municipalities 10/19)
  - Submit plans and fees
  - Inspection (self-inspection or County)
- Irrigation professionals were previously unregulated



# Major Provisions of Design Code

- Based on Florida Water Star Criteria
  - Maximum of 60% high volume irrigation (rotors and sprays)
  - Maximum of 0.5 irrigated acres (residential)
  - Separate zones for different head types
  - No high volume in landscape beds
  - Pressure regulated heads
- Requires smart controller or soil moisture sensor (added in 2019)



# Design Code Stats

- April 2016 - January 2021
  - 1,395 irrigation systems have been approved
  - 441 county inspections
  - 167 failed inspections (mostly first jobs of contractors)
  - 10 Training events for the industry
- Water savings will be analyzed in 2021



# Irrigation Restrictions *(Chapter 77 Article 5)*

- Staff responds to citizen irrigation complaints
- Active inspections in high water use areas
- 216 violations in 2020



## Irrigation Restrictions

Watering is allowed before 10 a.m. or after 4 p.m.

Location	Summer 2 <sup>nd</sup> Sun in Mar - 1 <sup>st</sup> Sat in Nov	Winter 1 <sup>st</sup> Sun in Nov - 2 <sup>nd</sup> Sat in Mar
Odd House #	Wed and/or Sat	Sat
Even House #	Thur and/or Sun	Sun
Non-residential/ commercial	Tue and/or Fri	Tue

MyYardOurWater.org

Report Violations to 352-264-6800

Winter Irrigation  
Restrictions Start Nov. 1



Adjust your irrigation  
when you reset your clocks.

# Irrigation Restrictions

- 2014 UF Study showed water use decreases after warning letters are received
  - ~5.5 million gallons saved during a one year period
  - There is a need to continually enforce the restrictions, as water use goes back up over a period of time



## POTENTIAL IRRIGATION VIOLATION

**Please check your settings  
and call 352-264-6800**

Restrictions apply year round to water from wells, surface waters, or from a utility. All systems must have a functioning rainfall shut off device or soil moisture sensor to avoid wasteful watering during rainy weather.

**Exemptions:** micro-irrigation, hand-held hoses with a spray nozzle, installation of new landscaping (for 60 days after planting), watering in of chemicals, and the use of reclaimed water.

**MyYardOurWater.org**

Report Violations to (352)-264-6800

### Irrigation Restrictions

Restrictions are the maximum! To save water and money on your utility bills, irrigate only as needed.

Location	Summer 2 <sup>nd</sup> Sun in March to 1 <sup>st</sup> Sat in November	Winter 1 <sup>st</sup> Sun in November to 2 <sup>nd</sup> Sat in March
Odd House #	Wed and/or Sat	Sat
Even House #	Thur and/or Sun	Sun
Non-residential/commercial	Tue and/or Fri	Tue

Water before 10 a.m. or after 4 p.m. to prevent water loss through evaporation.

# Barriers to Converting to Less Intensive Landscapes

- Social norms- traditional landscapes are mostly turf
- Expensive
- HOA Resistance
  - Florida Statute 373.185- Deed restrictions, covenants or local ordinances cannot prohibit implementation of Florida Friendly practices
    - Not assigned to a specific agency; enforced by court system



# Florida Friendly Landscaping Code for HOA

## *(Chapter 77 Article 7, adopted 2019)*

- Deed restrictions, covenants, or local ordinances cannot prohibit implementation of FFL
  - Homeowners still need to follow their HOA covenants
- Deed restrictions or covenants adopted after 10/1/19 shall not require a property owner to have permanent irrigation system
- Hosted 4 workshops with Extension and plan to do social media spring 2021
- All 3 “cases” have been resolved via education



# Landscape Water Use Next Steps

- Increase homeowner irrigation operator efficiency/maintenance
- Targeted education for reclaimed water users
  - very high in some areas and may contribute to water quality issues
  - Water quality study looking at leaching/runoff
- Landscaping Code changes which may require soil amendments in new development
- Work with water management districts to:
  - Adopt once a week year round irrigation restrictions
  - Prohibit irrigation wells
- Encourage State to add Irrigation to the Building Code

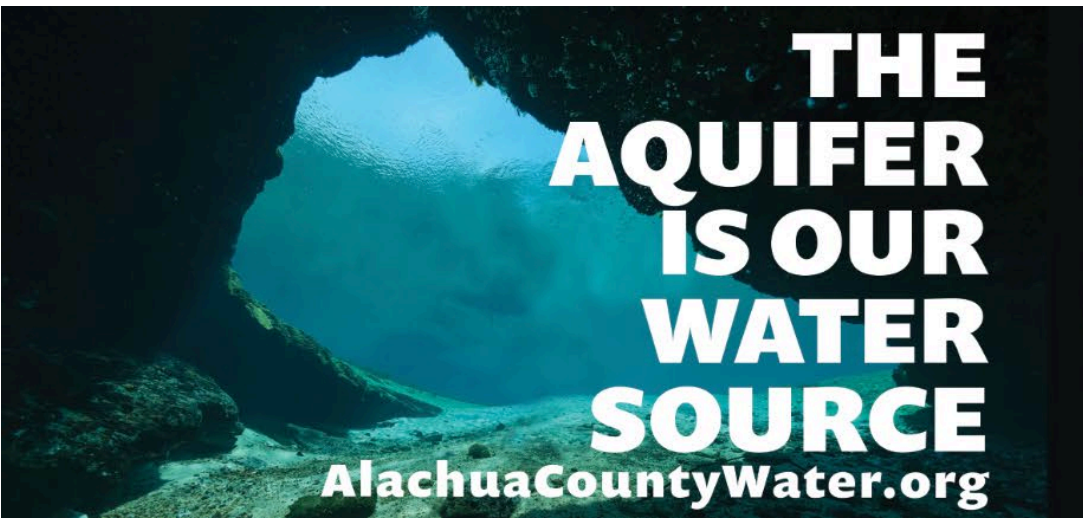
# Water Use from Private Wells

- Domestic self supply is the third largest water use in Alachua County and this use is estimated by the USGS
  - We have a pilot study in which we are monitoring water use from 9 volunteers which we hope to expand in 2021
- Some high water users install irrigation wells to avoid high water bills
  - This may be skewing statewide data



# Indoor Water Conservation

- Presentations with adults and kids; distribute shower timers, dye tabs for finding toilet leaks, and sink aerators
- Partner with the Community Weatherization Coalition (CWC)
  - They install low flow showerheads during tune ups



# Statewide Regulatory Framework

- Consumptive Use Permits (CUPs) are issued by the Water Management Districts (WMDs)
  - Staff briefly reviews SJRWMD CUPs in Alachua County as they come up and SRWMD summaries published with governing board meeting materials
- Minimum Flows and Levels are set by WMD
  - The Lower Santa Fe and Ichetucknee is currently being revised
    - We contracted a peer review with a professional geologist
    - EPD will provide a presentation in the spring

# Partnerships

- Local water conservation meetings
  - GRU, UF, Extension, Water Management Districts (WMD)
- H2OSAV data visualization tool supported by GRU
- Joint educational programs with Extension
- Cost share funding through WMDs
- Staff serves on Florida Water Star Technical Advisory Committee and Water Use Efficiency Division of FL AWWA

# Contact Information

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[www.MyYardOurWater.org](http://www.MyYardOurWater.org)

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