

# How Water Supply Planning and MFLs Affect Us

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Supervising Utility Engineer



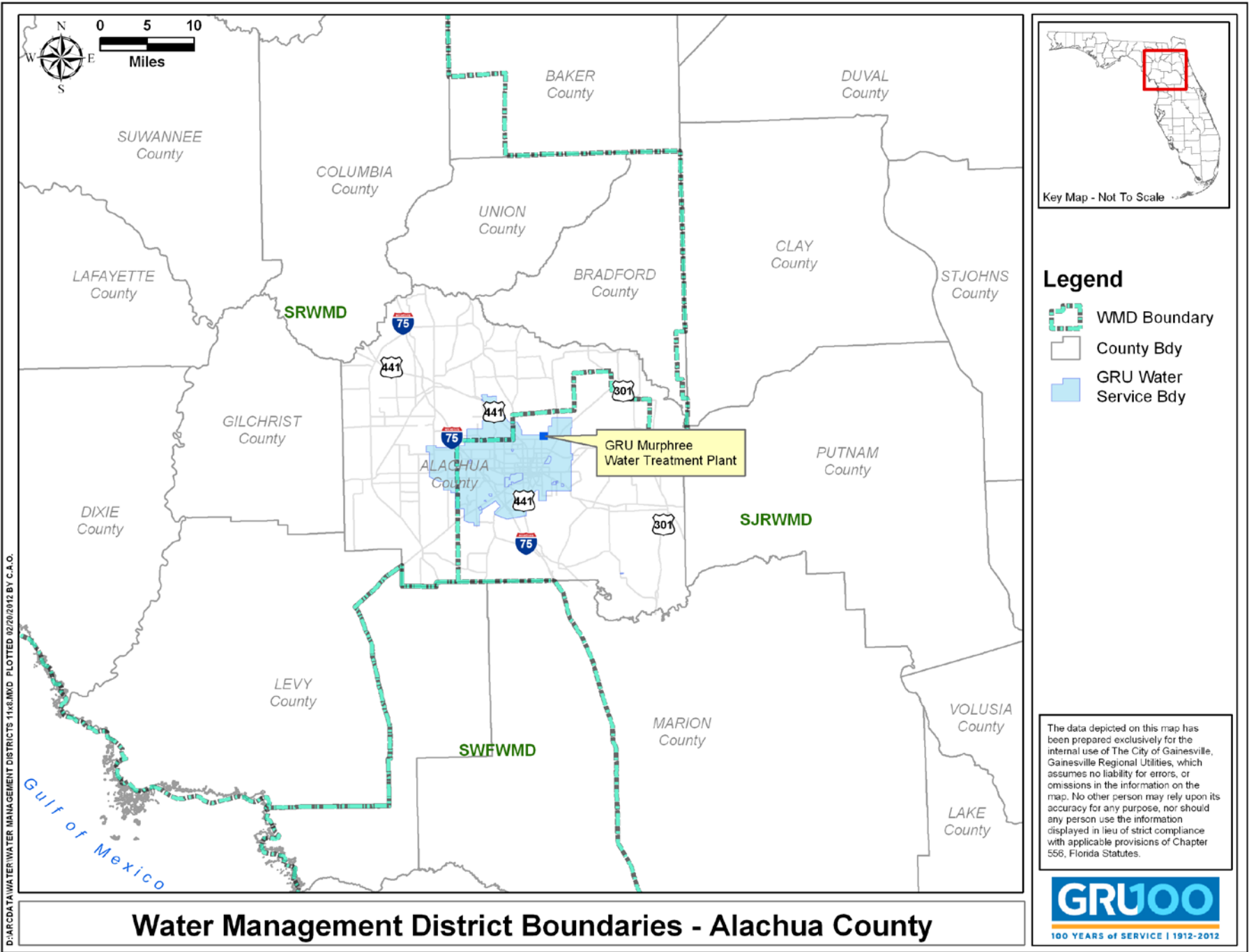
# How Does GRU & Our Community Fit In?

- GRU currently serves approximately 189,000 people as well as UF, area hospitals and business
  - ~3/4 of the population of Alachua County
- GRU within both SJRWMD and SRWMD boundaries
- Anticipate population growth of 43,000 people over next 20 years






# GRU Murphree Water Treatment Plant





D:\ARC\DATA\WATER\WATER MANAGEMENT DISTRICTS 11x8.MXD PLOTTED 02/20/2012 BY C.A.O.



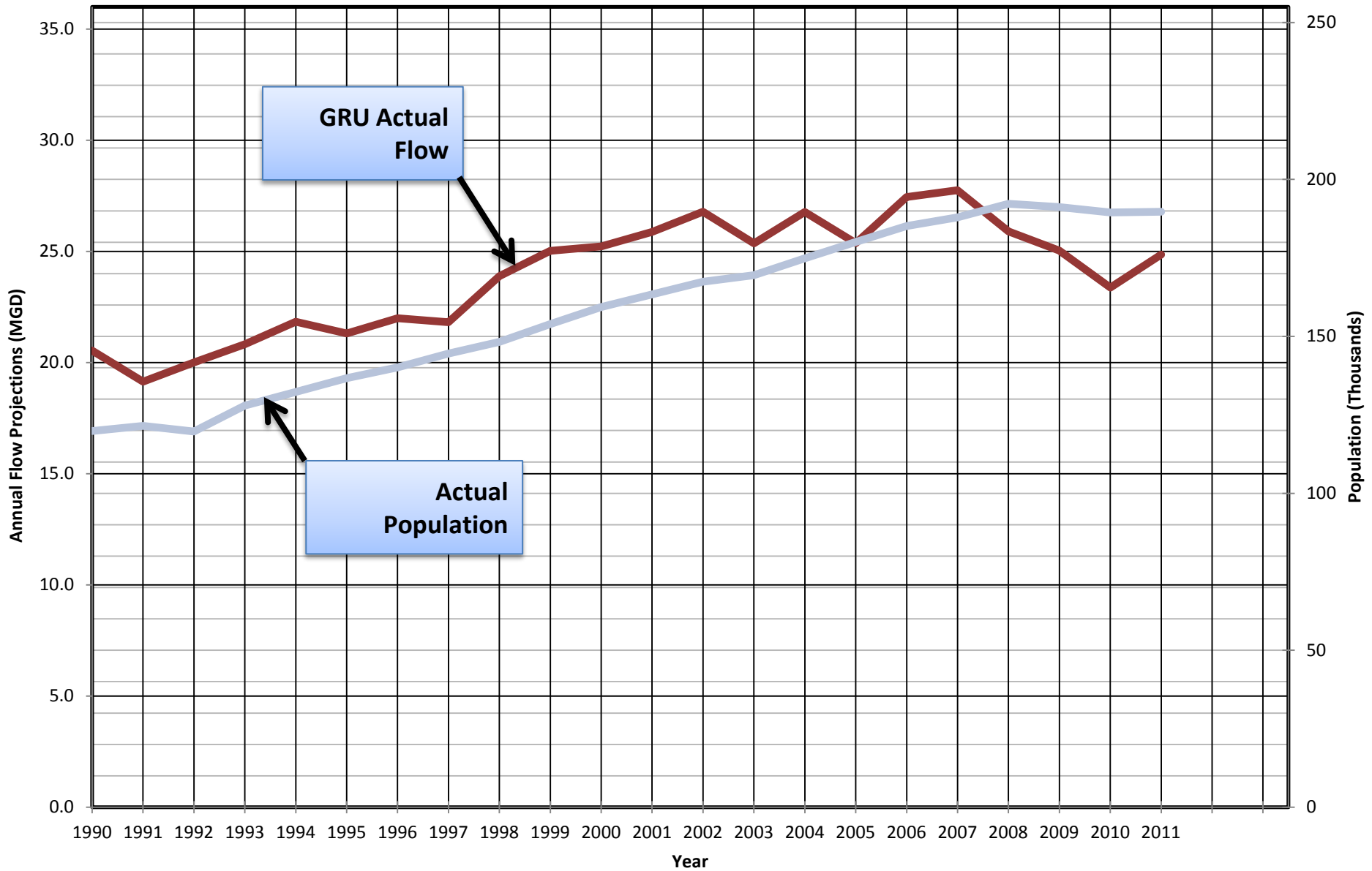
- Legend**
-  WMD Boundary
  -  County Bdy
  -  GRU Water Service Bdy

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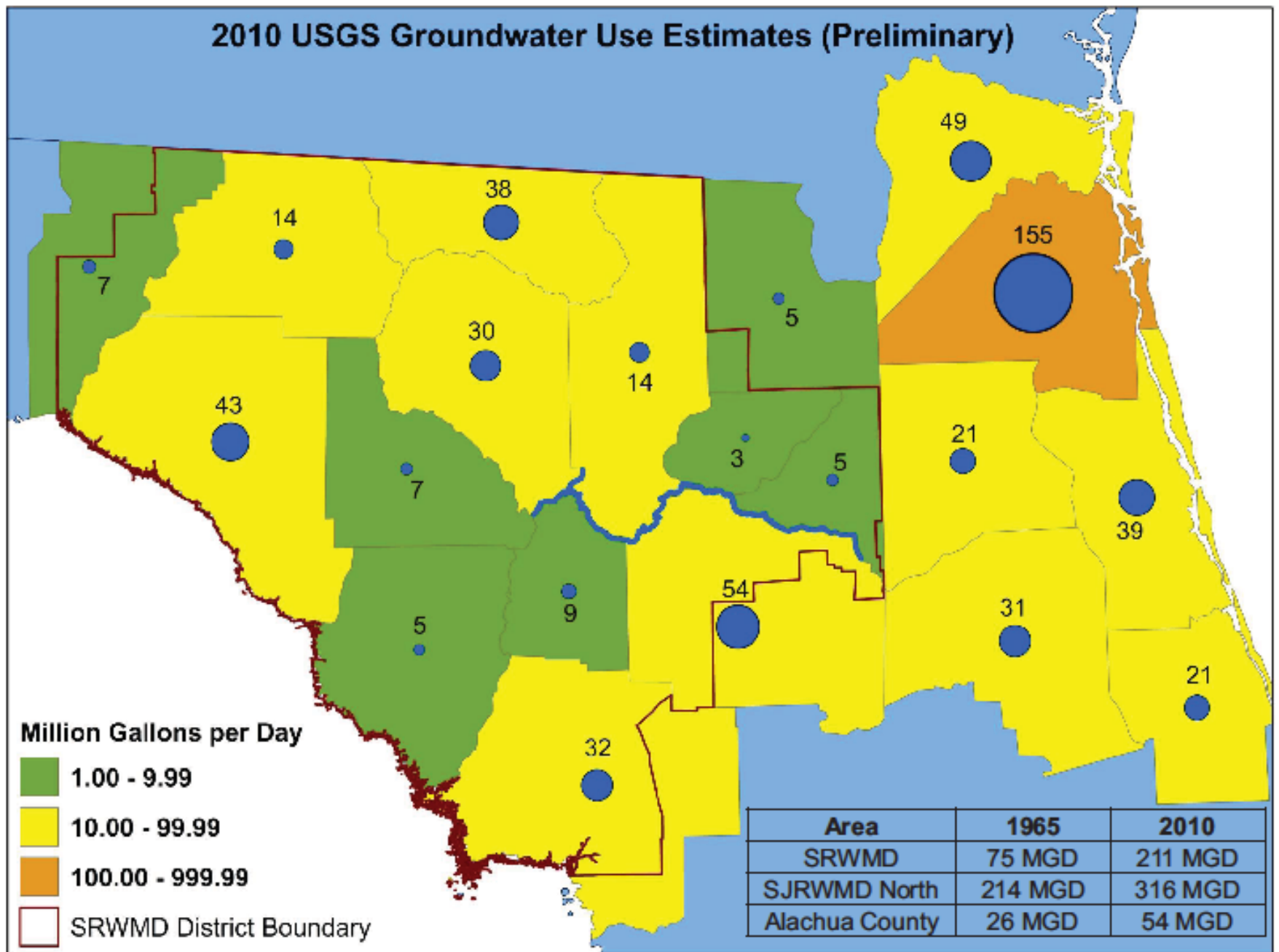


## Water Management District Boundaries - Alachua County

# Historic Water Use and Population

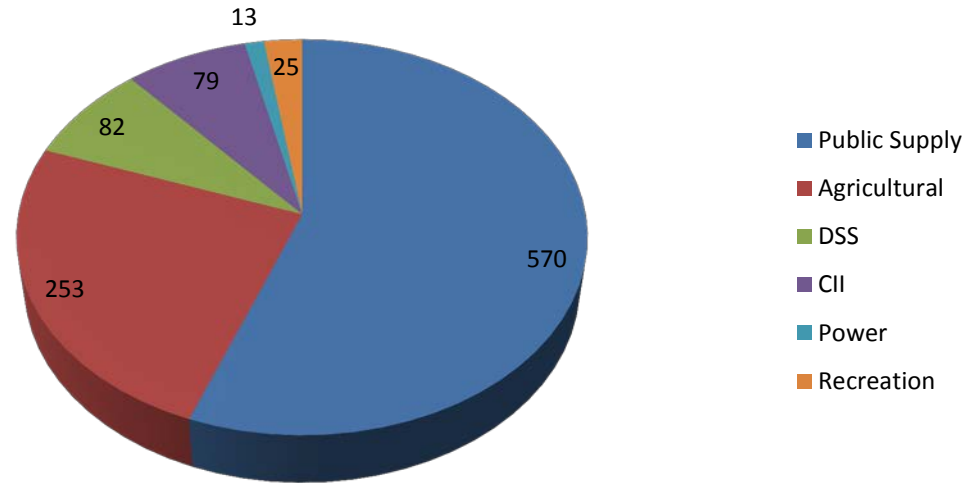


## 2010 USGS Groundwater Use Estimates (Preliminary)

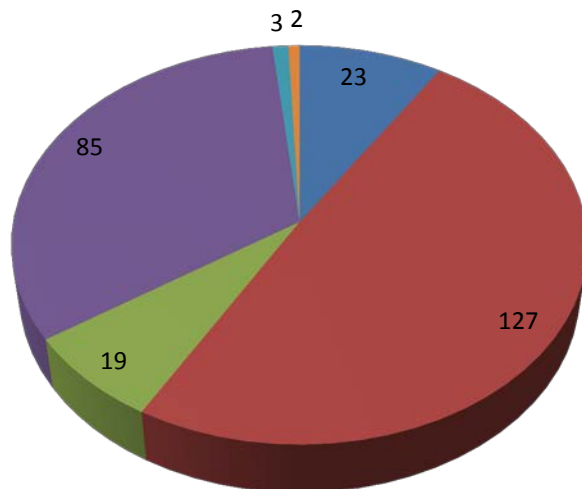


# SJRWMD 2010 WSP actual groundwater use 2005

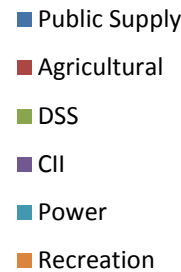
## SJRWMD (mgd by use)



## SRWMD (mgd by use)

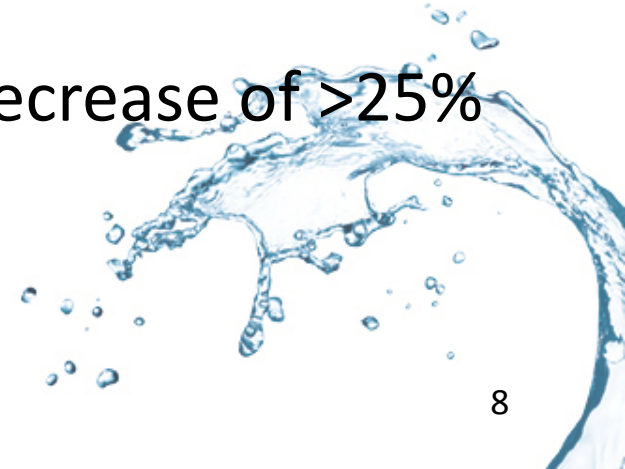


## SRWMD 2010 WSA water use in 2010



# GRU Approach to Water Supply

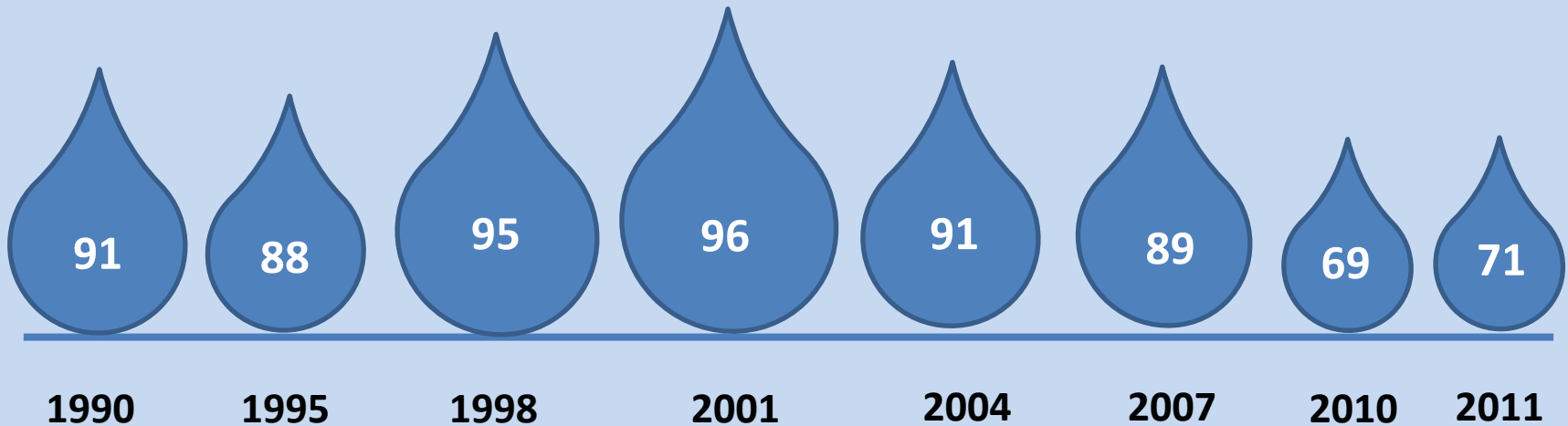
- Conservation
  - Tiered rates, rebates, retrofit programs, education & other programs
  - Innovative Conservation Programs
    - SJRWMD Cost share Program
  - Alachua County & water management district efforts
  - Residential per capita water use decrease of >25% since 2001



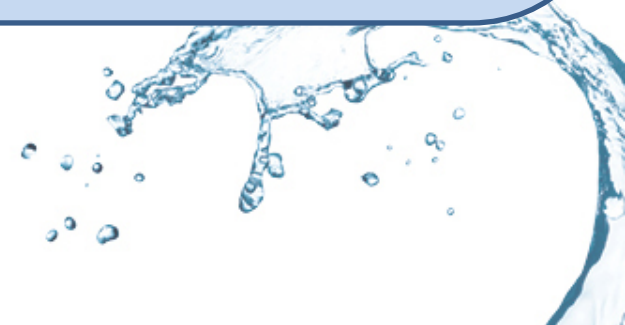


# Reduce - Water Conservation

## Gainesville and Vicinity Public Water Supply – Residential Use

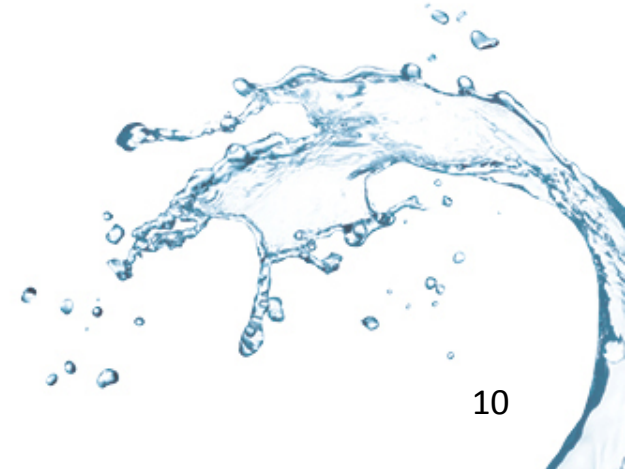


**Average gallons used per person per day.**



# GRU Approach to Water Supply

- Water Reuse
  - 70% of water withdrawn at Murphree is returned to aquifer
  - Reclaimed water used to offset potable water demands
    - Irrigation
    - Cooling





**Sweetwater Branch/Paynes Prairie  
Sheet Flow Restoration**

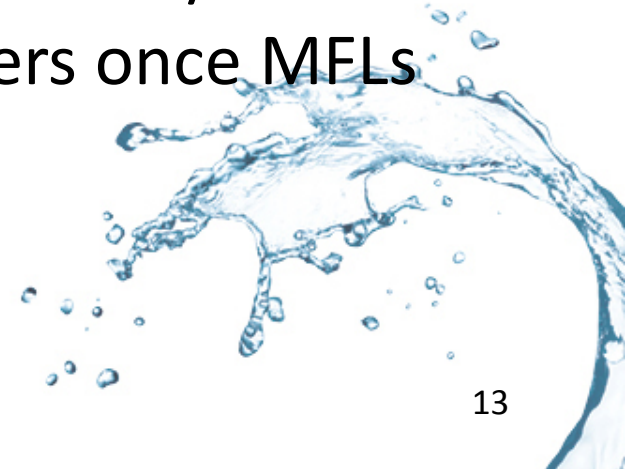
Image # 130607 2011  
Aero Date : 06.07.2013  
Photo 888.542.0231

# KWRF Groundwater Recharge Wetland



# GRU Approach to Water Supply

- GRU CUP Permit Renewal Application
  - Asking for current 30 mgd allocation for 20 yrs
  - Additional conservation
  - Ability to expand allocation if more growth than projected, if we do additional projects to offset additional allocation
  - Commitment to participate in prevention/recovery plans along with other users once MFLs set.



# What is an MFL?

- Defines the extent to which flows and/or water levels can differ from un-impacted conditions without causing harm
- Calculated individually for each spring, river, or lake
- Calculation Highly Complex
  - Must separate out effects of pumping versus:
    - **Rainfall**
    - Changes in drainage patterns
    - Changes in land uses



# What is an MFL?

- If a water body is not meeting its MFL, or is expected to not meet its MFL the water management district or FDEP must develop a “Prevention/Recovery Strategy”
  - **Requires actions of Consumptive Use Permit Holders**



# Potential Prevention/Recovery Strategies

- Requirements for water conservation & using reclaimed water
  - Water Utilities
  - Agriculture
  - Golf Courses
  - Industrial
- Aquifer recharge projects
- Reduction of water allocations
- Alternative water supplies
  - Desalination &/or surface water





# Why are MFLs Important?

- If MFLs are technically sound & well vetted:
  - Help to ensure natural resources are protected
  - Sets a regulatory benchmark to allow us to plan ahead to ensure we can sustainably meet future water supply needs of community
- MFLs & Prevention/Recovery strategies
  - Technical review
  - Vetting & buy-in from all stakeholders



# Why are MFLs Important?

- Both MFL and Prevention/Recovery Strategy are adopted together as rules
  - Prevention /Recovery Strategy must provide plan & schedule of how MFL will be met
  - Existing & New water users must meet MFL
- Costs & Economic Impacts can be substantial
  - MFLs need to be technically sound & recovery actions need to be understood by all stakeholders



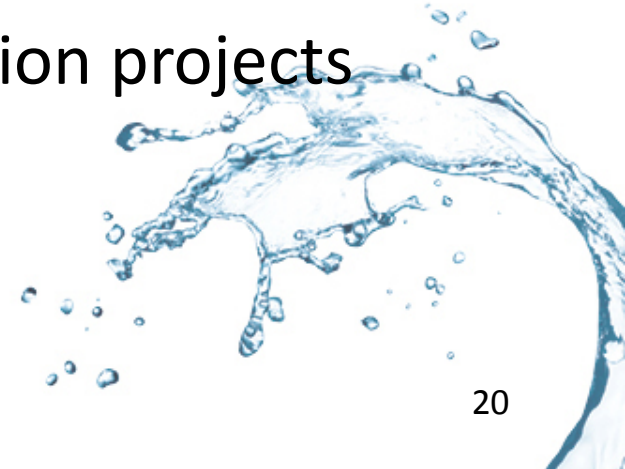
# Concerns with Lower Santa Fe & Ichetucknee MFLs

- Technical Concerns with MFL Criteria
  - Unprecedented drought in 2000-2010
  - Over-estimates impact of pumping
  - Under-estimates impact of weather
    - UF Peer review team & we identified critical flaws
- Recent change in technical method
  - New method not peer reviewed
- Accelerated timeline



# Concerns with Lower Santa Fe & Ichetucknee MFLs

- Draft Recovery Plan
  - We generally support most of actions in plan
    - Conservation (agriculture, public supply, self supply)
    - Aquifer recharge projects
  - We & our community already doing much of this
  - We are already working w/ SRWMD & SJRWMD on additional recharge & conservation projects



# Concerns with Lower Santa Fe & Ichetucknee MFLs

- Concern is that actions & costs required to meet MFL may potentially be well beyond what is anticipated in recovery plan
  - Large scale surface water transfer
  - Desalination & long distance pumping
  - Large scale buy-out of farms to close their Consumptive Use Permits
- Costs regionally potentially in \$100s of millions or \$billions
- FDEP & WMDs legally required to enforce MFLs

# Current Approach/Status

- Providing technical comment to FDEP, SRWMD & SJRWMD
- Working with FDEP, SRWMD & SJRWMD to understand actions that will be required to meet MFL, how much they will cost and how much of this cost will be borne by GRU & our customers



# Summary

- GRU continues to be committed to providing clean, safe, affordable, sustainable water supply to community & to protection of natural resources
- GRU supports appropriate regulatory efforts to ensure protection of springs, rivers, and other natural resources
- GRU committed to doing our fair share in meeting MFLs once they are set



# Summary

- MFLs & other regulations need to be
  - technically sound
  - Reasonable
  - Fair & equitable
  - Produce desired result
- GRU continuing to provide technical comment to FDEP, SRWMD & SJRWMD to resolve our concerns

