

Update on the Draft North Florida Regional Water Supply Plan

September 9, 2016

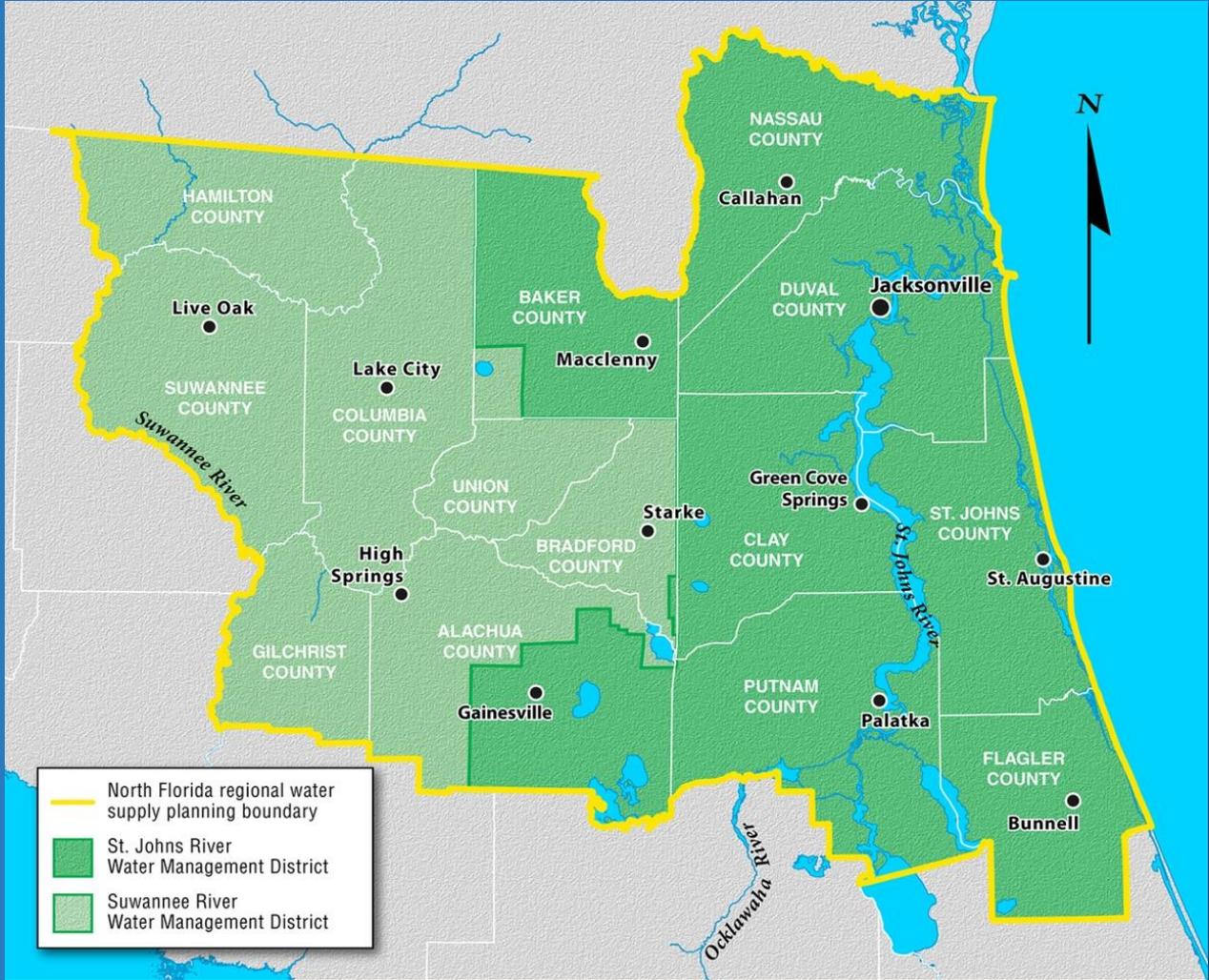
2016 EPB/UNF Environmental Symposium

John Fitzgerald

Regional Water Supply Planning Coordinator

North Florida Regional Water Supply Partnership

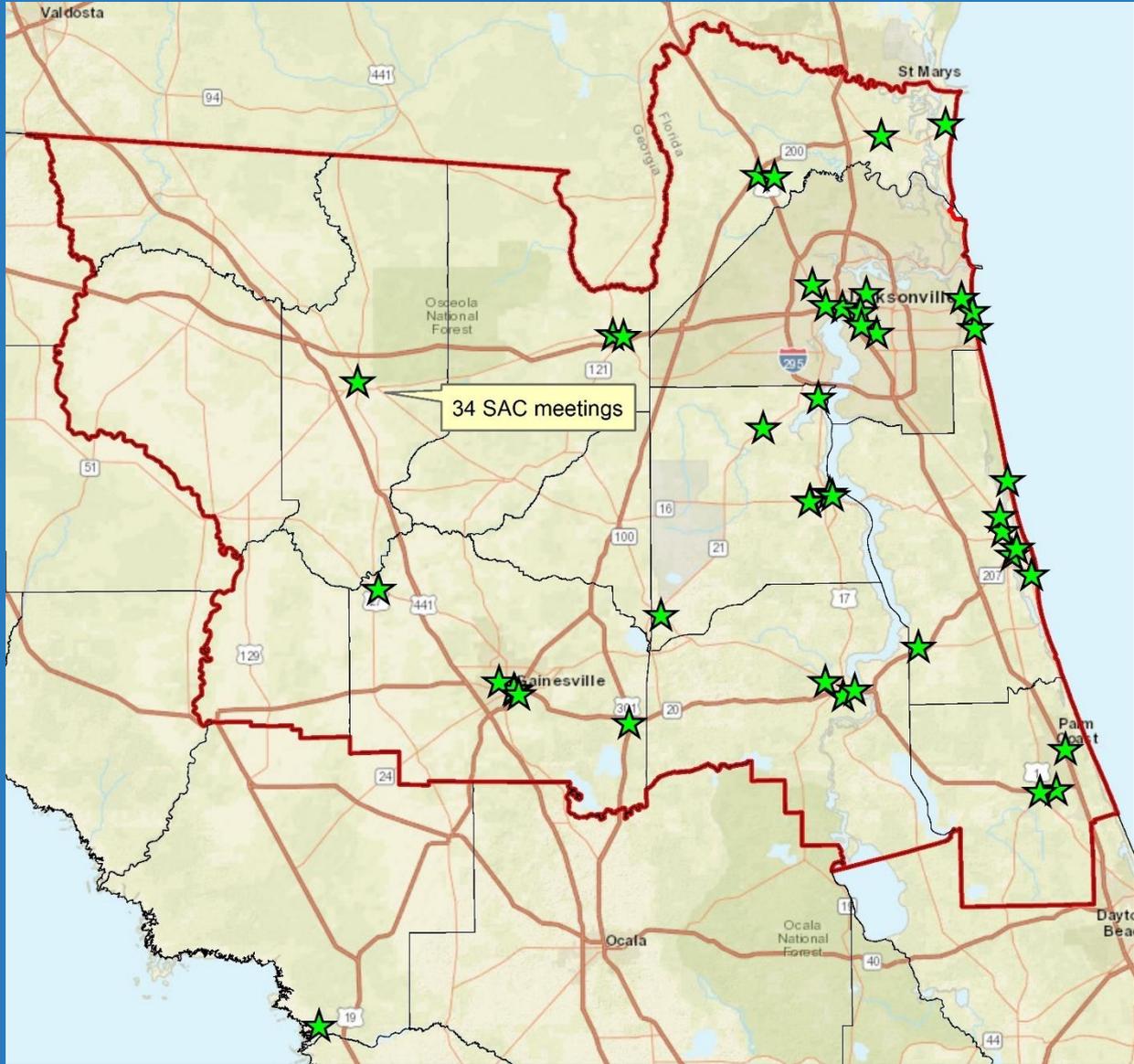
North Florida Regional Water Supply Partnership



34 Stakeholder Advisory Committee Meetings

| Stakeholder Group | SJRWMD Member | SRWMD Member |
|------------------------------------|---|--|
| Public Supply | Rick Hutton, P.E. <i>Gainesville Regional Utilities</i> | Stephen Roberts <i>Lake City Utilities</i> |
| Agriculture | Kerry Kates <i>Florida Fruit and Vegetable Association</i> | Thomas Harper <i>Harper Farms</i> |
| Commercial/Power Generation | Nancy Kilgo Veasey <i>JEA</i> | James Cornett <i>Cornett's Spirit of the Suwannee, Inc.</i> |
| Environmental | Patrick T. Welsh, Ph.D. <i>UNF and Save Our Lakes</i> | Jacqui Sulek <i>Audubon Florida</i> |
| Industrial/Mining | J. Michael O'Berry <i>Vulcan Materials Company</i> | Terry L. Baker, P.E. <i>PotashCorp – Phosphate Division</i> |
| Local Government | Lee Pinkoson <i>Commissioner, Alachua County</i> | Gene Higginbotham <i>Commissioner, Dixie County</i> |

Outreach and Collaboration

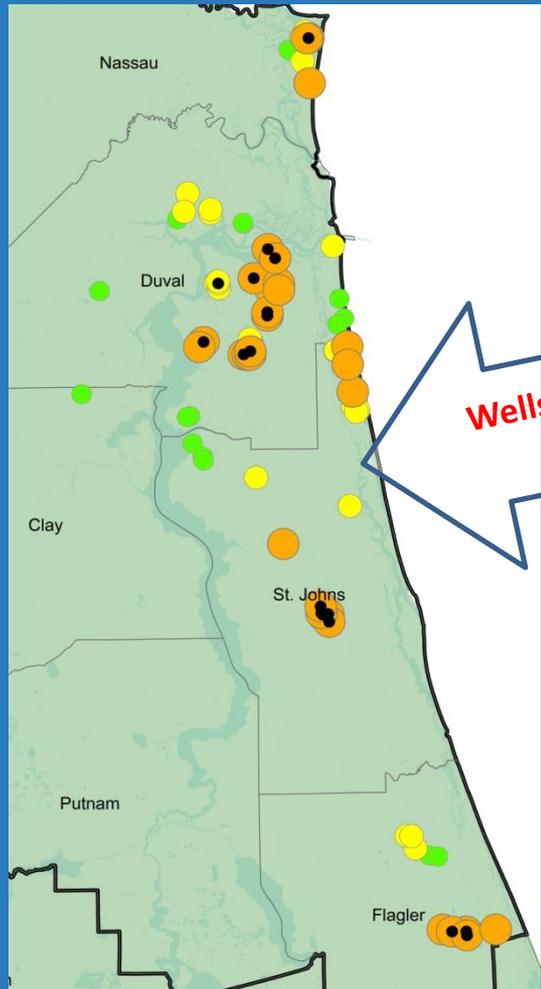


Water Resource Analysis

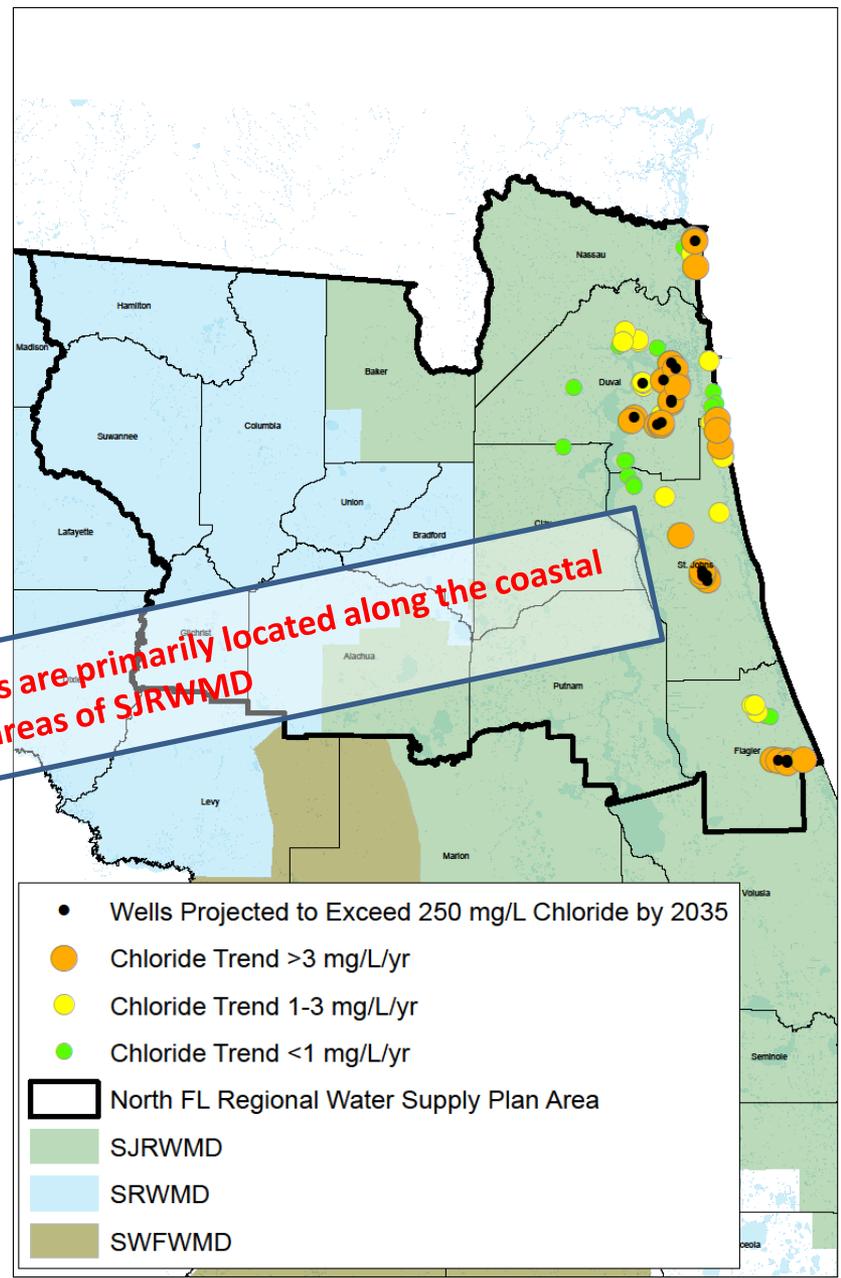
- Assessment of the amount of fresh groundwater available for water supply
- Determine impacts to water resources (i.e. constraints)
 - groundwater quality
 - wetlands
 - MFLs
 - spring flows



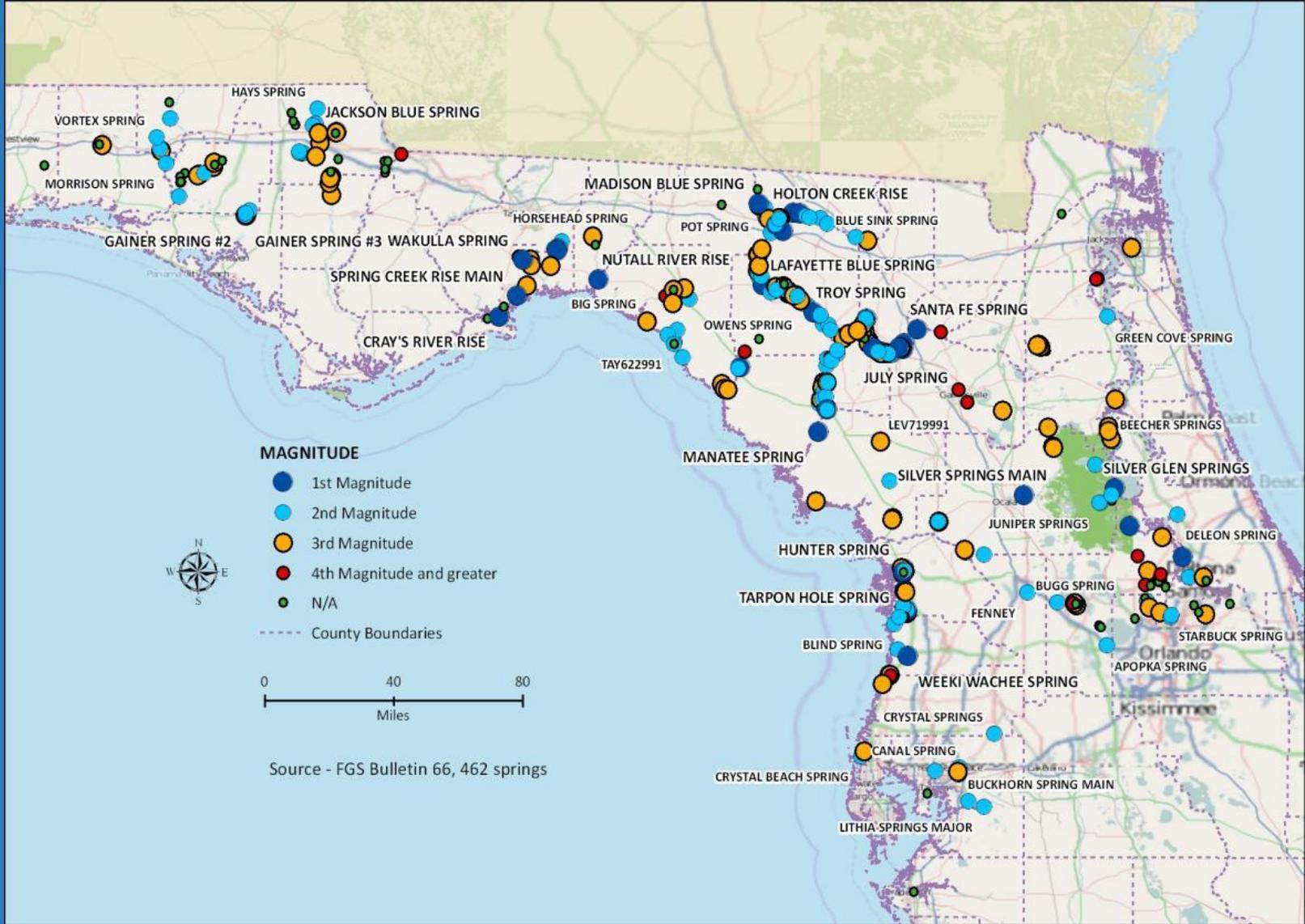
Some Wells Indicate Areas of Concern Regarding Groundwater Quality



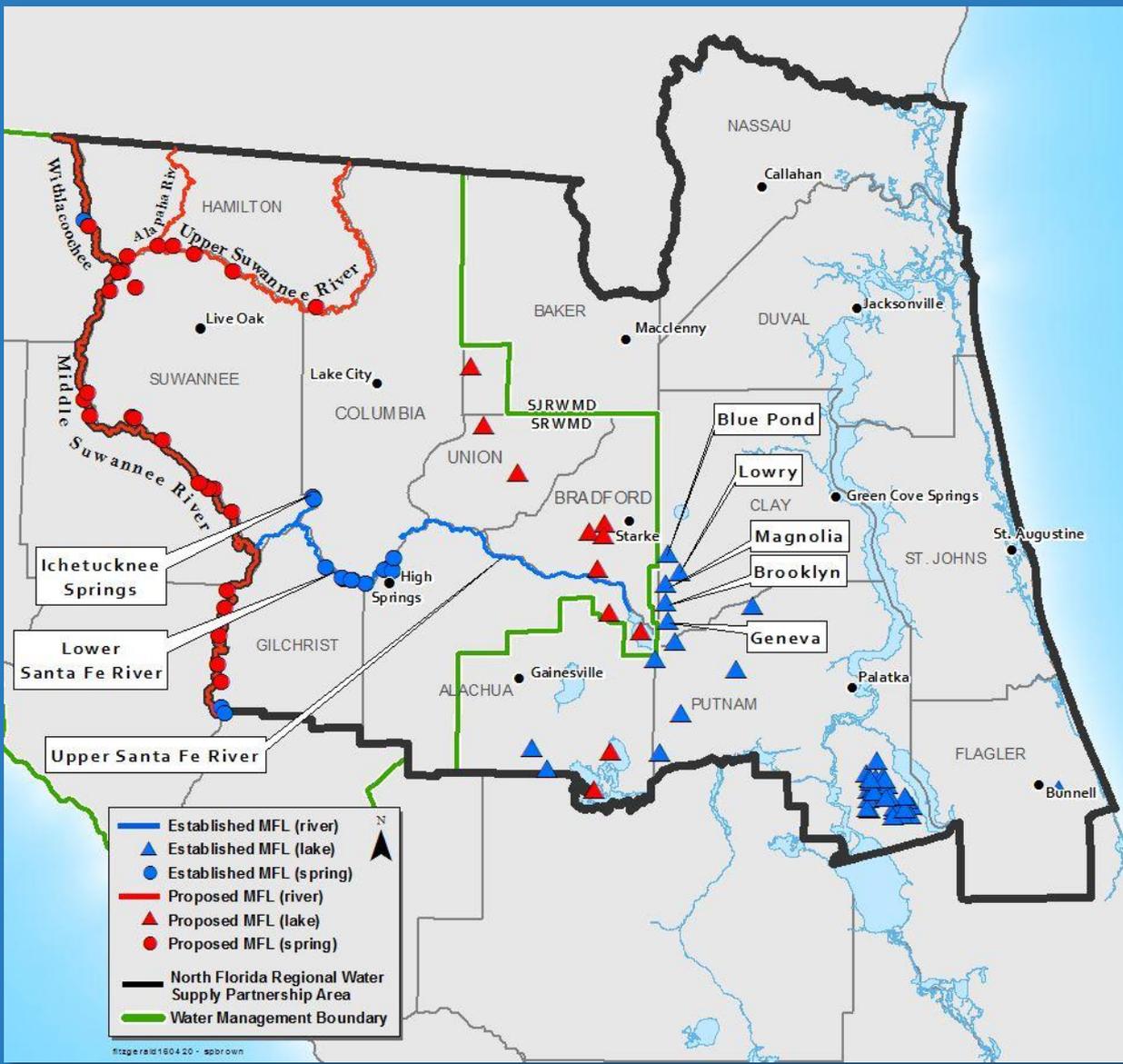
Wells experiencing trends are primarily located along the coastal areas of SJRWMD



North Florida — Springs Heartland

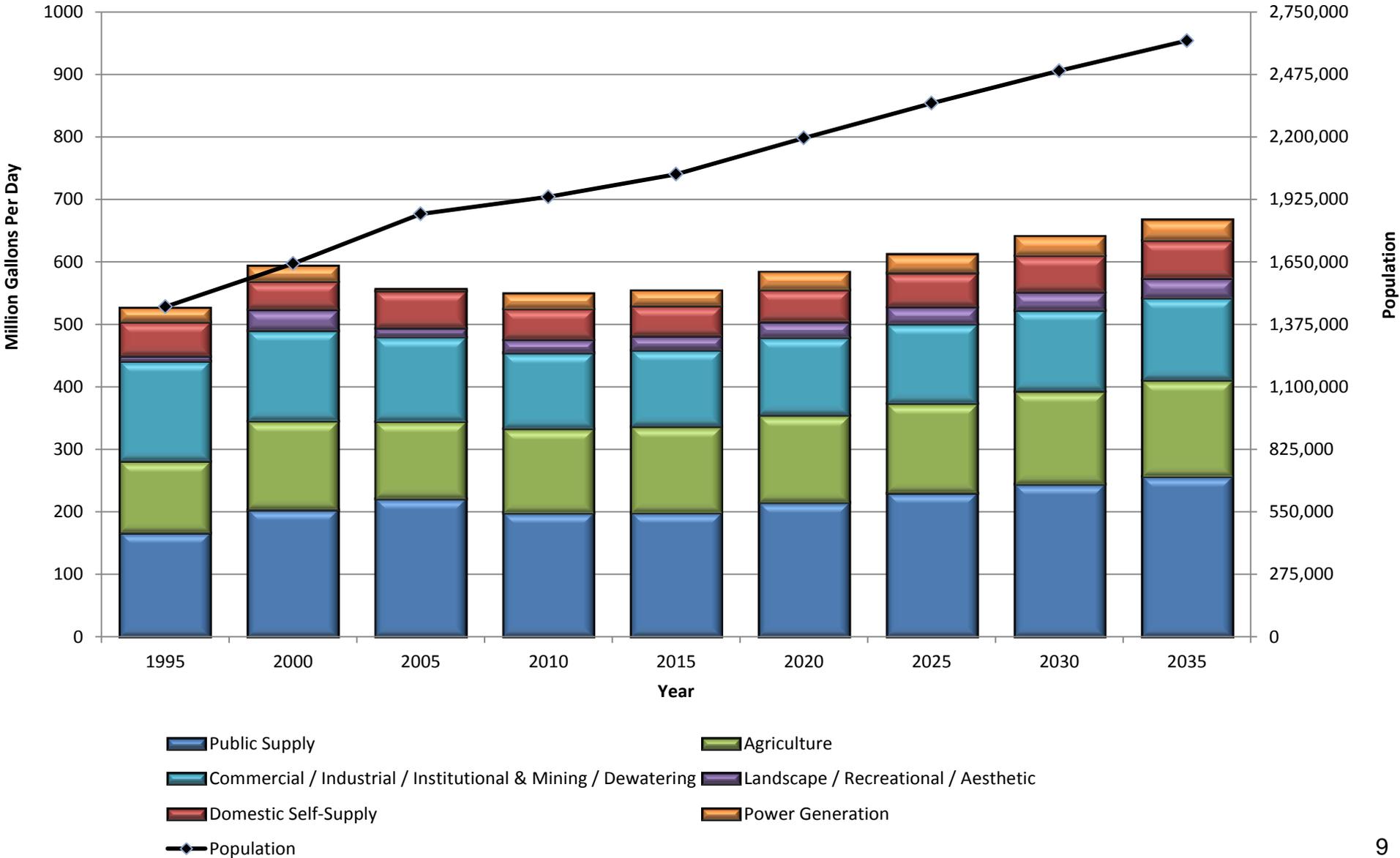


MFLs in and near the NFRWSP



St. Johns River Water Management District

Historic Water Use and Population -vs- Projected Water Demand and Population in NFRWSP



Water Use and Draft Projections for the NFRWSP Area

| Category | 2010 | 2035 | Change | % Change |
|---|------------|------------|------------|-----------|
| Public Supply | 198 | 256 | 58 | 29 |
| Domestic Self-Supply and Small Utilities | 49 | 61 | 12 | 24 |
| Agriculture | 135 | 153 | 18 | 13 |
| Commercial / Industrial / Institutional and Mining / Dewatering | 121 | 132 | 11 | 9 |
| Landscape / Recreation / Aesthetic | 22 | 31 | 9 | 41 |
| Power Generation | 25 | 34 | 9 | 36 |
| Total | 550 | 667 | 117 | 21 |

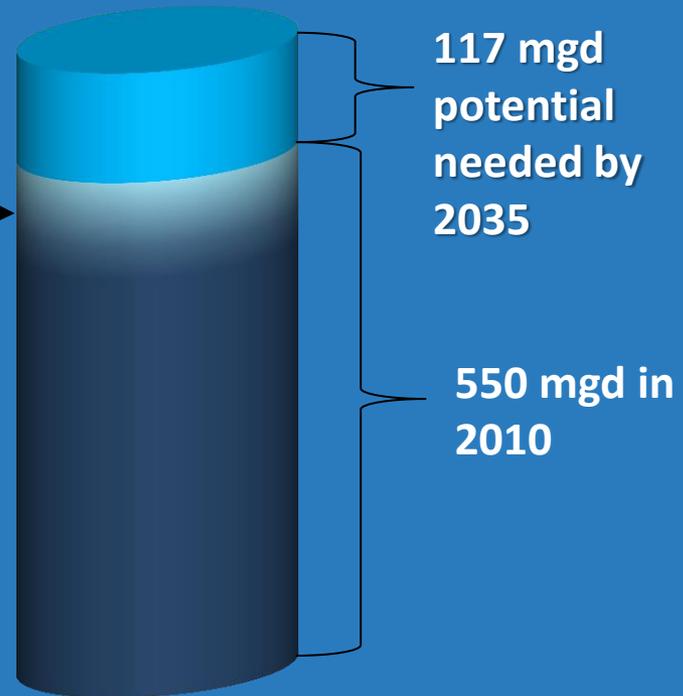
Numbers may differ slightly due to rounding

Values shown in million gallons per day. Values do not include NFWWMD, SWFWMD or Georgia

The Region's Challenge

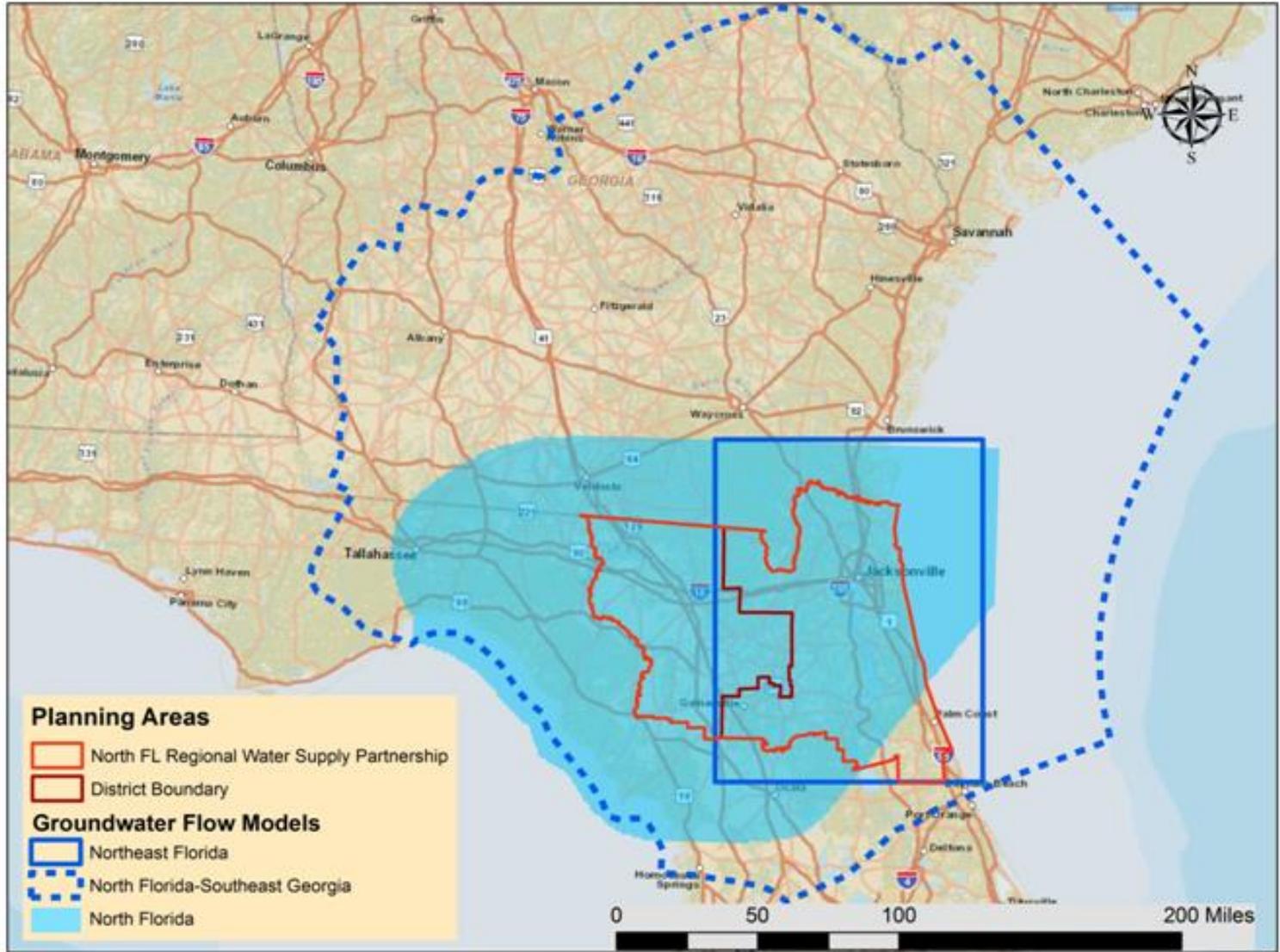
Estimate 667 mgd of water need at 2035

Range of recovery
for the Lower
Santa Fe and
Ichetucknee MFLs



Currently modeling efforts
are underway to estimate
the available groundwater
to meet future demands.

NFSEG Model Overview

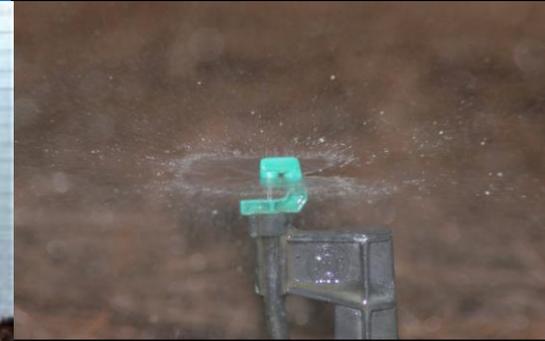


Opportunities and Solutions

- Water conservation
- Recharge
- Alternative water supply
 - Surface water
 - Stormwater harvesting
 - Reuse
- Collaboration



Water Conservation



know your days

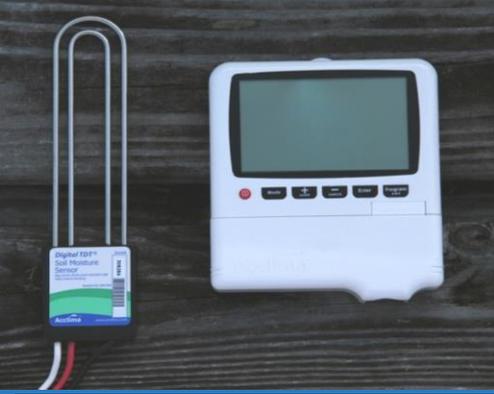
Mandatory lawn watering restrictions specify the days when you may water. These days depend on whether your address ends in an odd or even number, and on the time of year. So unless your day and number are up, make sure those sprinklers stay down.

| Time of year | Homes with addresses that end in an odd number (or have no address) | Homes with addresses that end in an even number | Nonresidential properties |
|-----------------------|---|---|---------------------------|
| Daylight Saving Time | Wednesday/Saturday | Thursday/Sunday | Tuesday/Friday |
| Eastern Standard Time | Saturday | Sunday | Tuesday |

Additional restrictions include:

- Water only when needed and not between 10 a.m. and 4 p.m.
- Water for no more than one hour per zone.
- Restrictions apply to water from private wells and pumps, ground or surface water and water from public and private utilities.
- Some exceptions apply, such as use of micro-irrigation or a hand-held hose with a spray nozzle, installation of new landscaping, watering in of chemicals and fertilizers, and use of reclaimed water. Check with your water supplier to see if restrictions are in place for reclaimed water in your area.

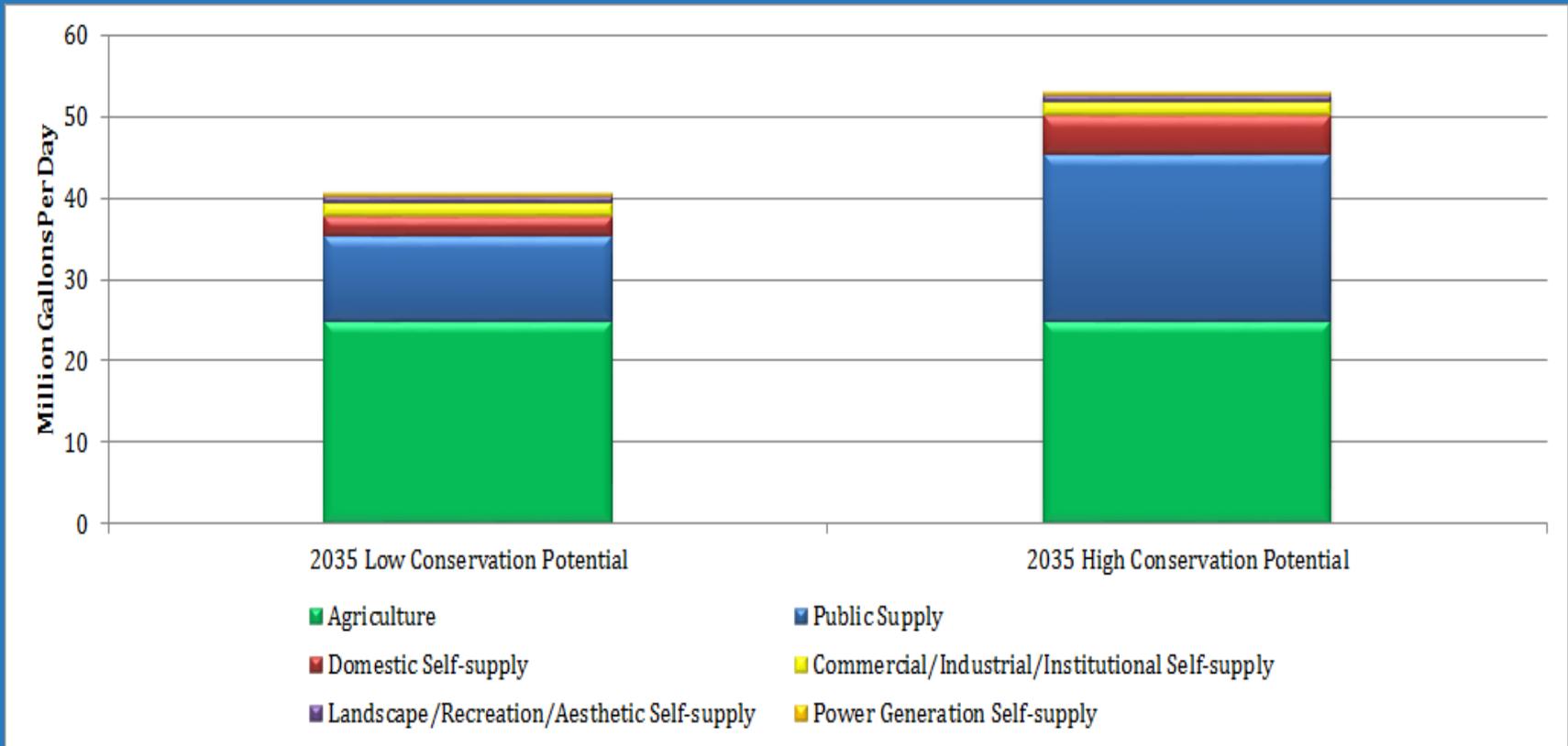
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- Indoors
- Outdoors
- Rates
- Education

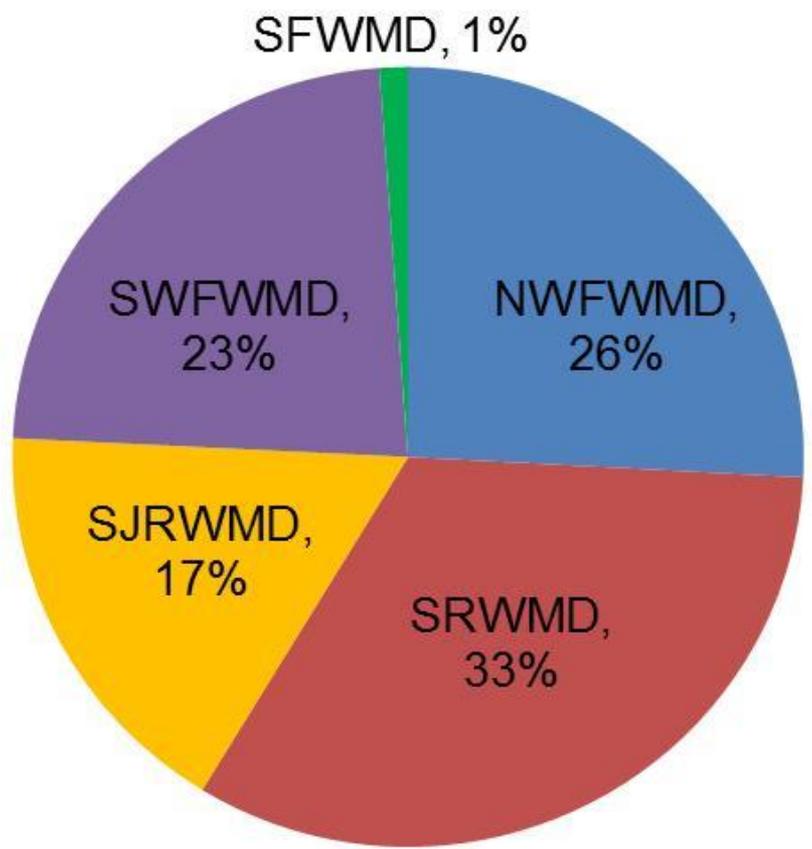


2035 Low and High Conservation Potential



Recharge to Floridan Aquifer

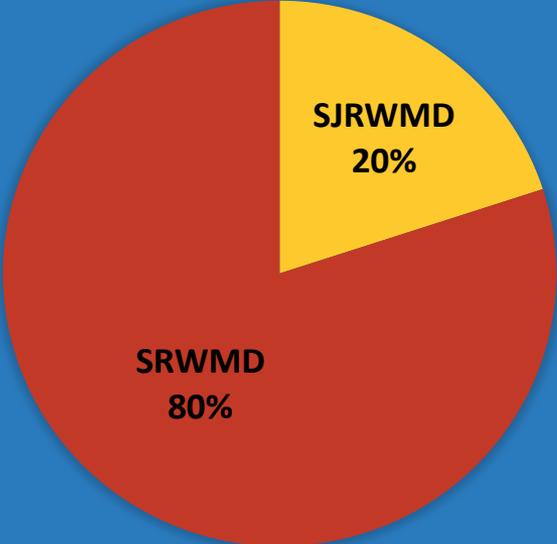
Floridan Aquifer Weighted Recharge



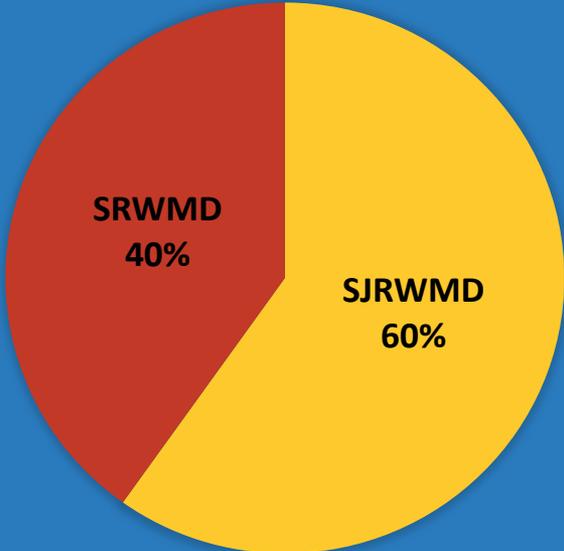
■ NFWWMD ■ SRWMD ■ SJRWMD ■ SWFWMD ■ SFWMD

St. Johns River Water Management District

Recharge in partnership area



Acreage in partnership area



Diversification of Water Supplies: Excess Surface Water or Storm Water



Reuse Options



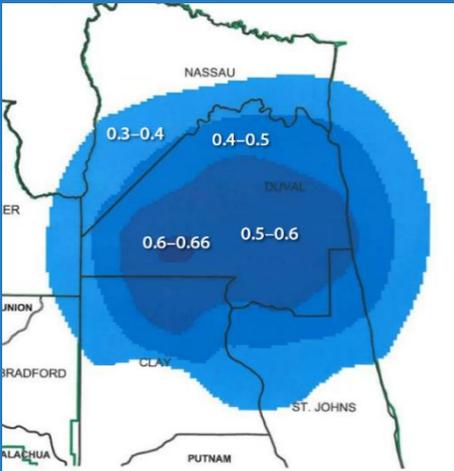
Augmentation of surface waters used for irrigation



Landscape irrigation



Recharge

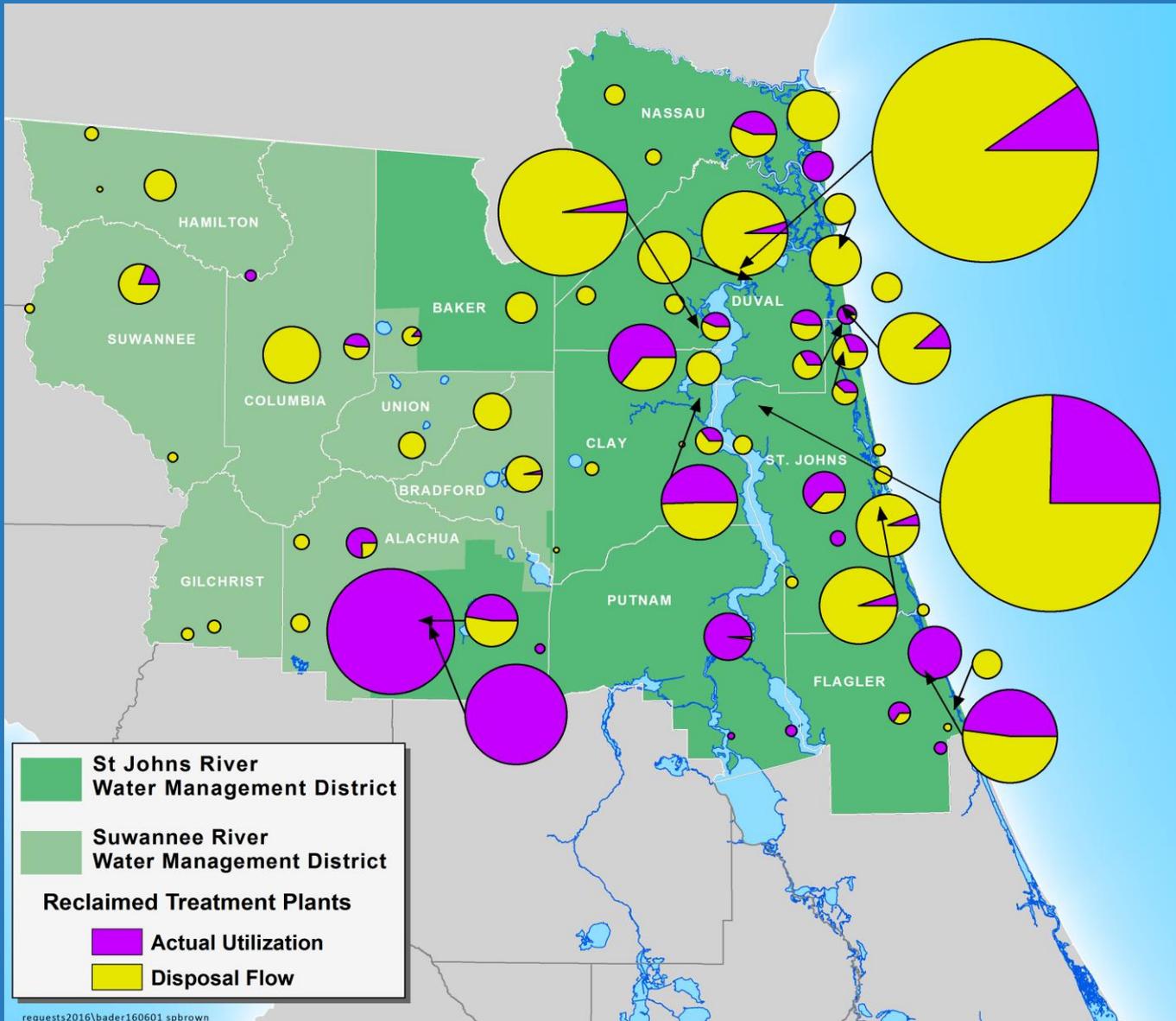


Potable reuse
Rebound (in feet)
for 10 MGD
injection

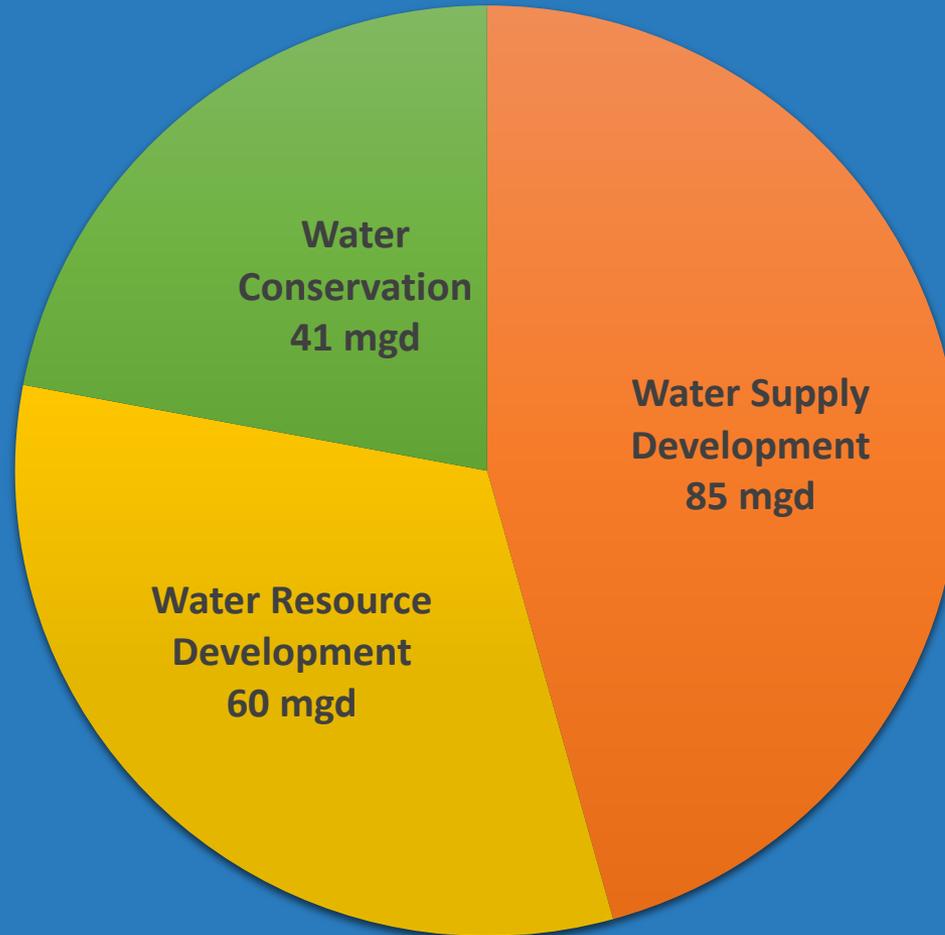


Golf course irrigation

2015 Reuse and Wastewater Disposal



Meeting Future Demands



Importance of Collaboration

- Meet needs of commercial, agricultural, environment and urban uses
- Meet needs of recreational and quality of life
- Business and community leader engagement is vital
- Working together to meet all the needs will ensure a vital economy



Questions?

