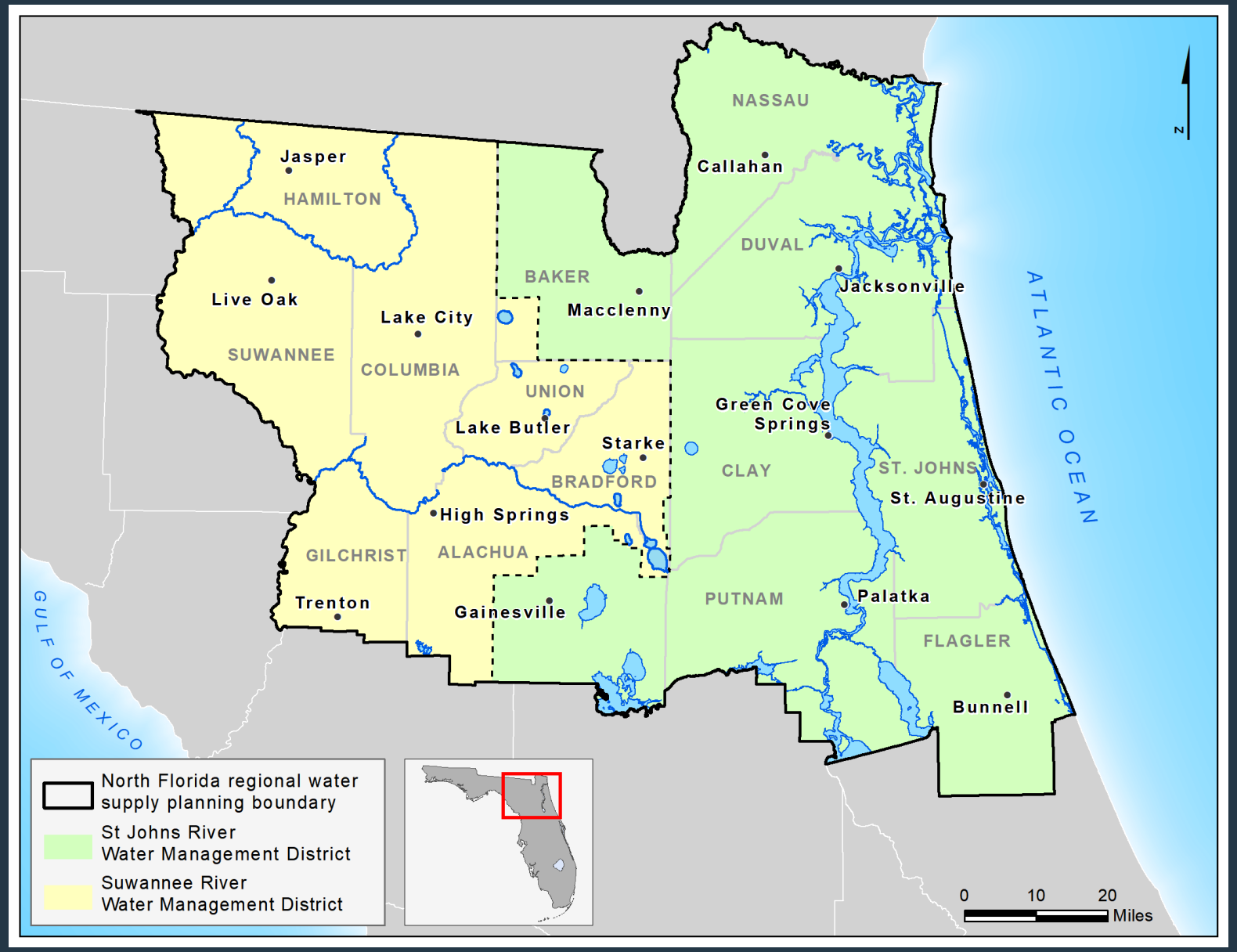
North Florida Regional Water Supply Plan Update

Suwannee River Water Management District

September 28, 2023

Introduction

- Update to 2017 Plan
- 14 counties in planning area

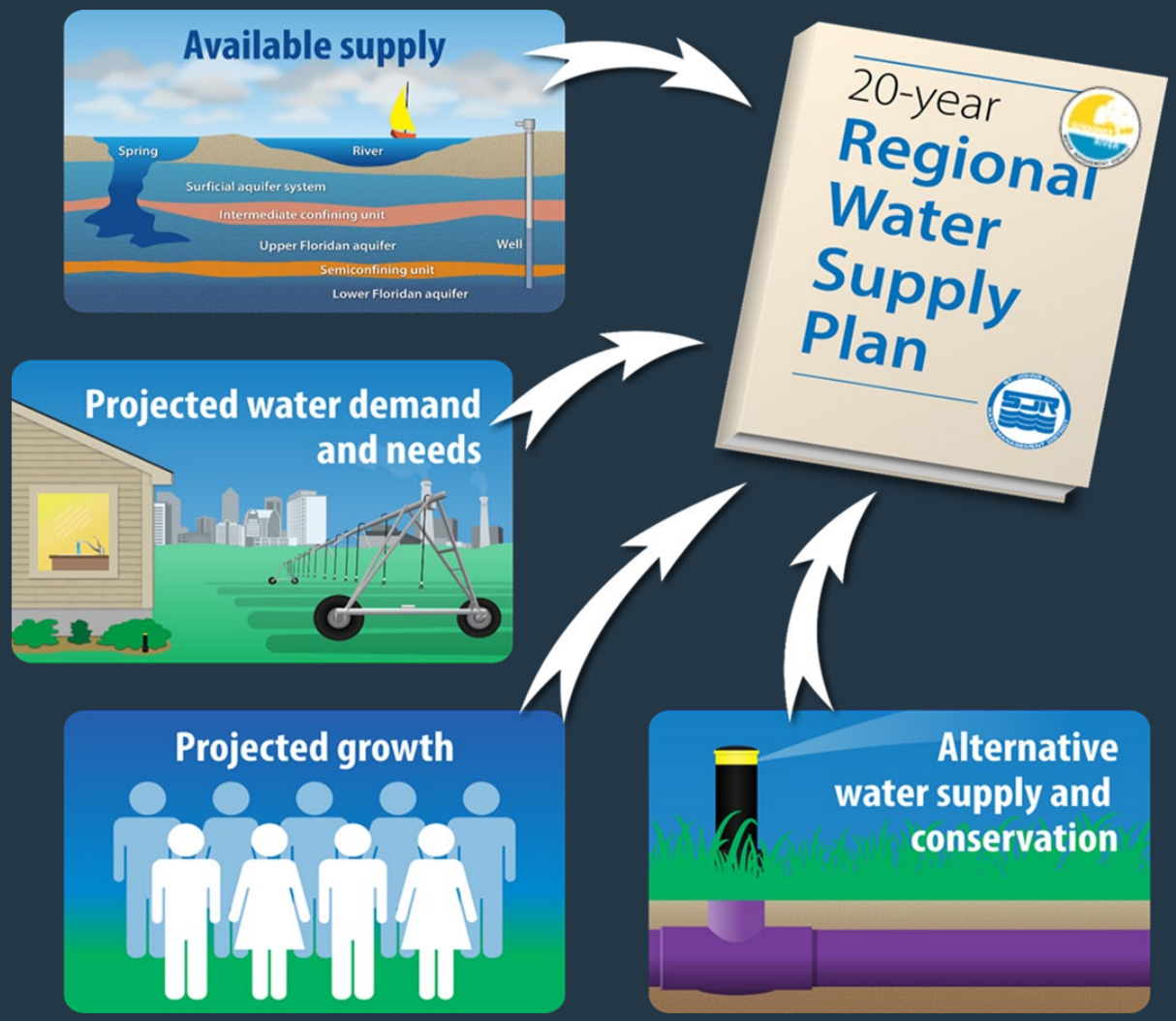


Regional Water Supply Planning §373.709, F.S.

"The governing board of each water management district shall conduct water supply planning for a water supply planning region…, where it determines that existing sources of water are not adequate to supply water for all existing and future reasonable-beneficial uses and to sustain the water resources and related natural systems for the planning period."

Regional Water Supply Planning Process

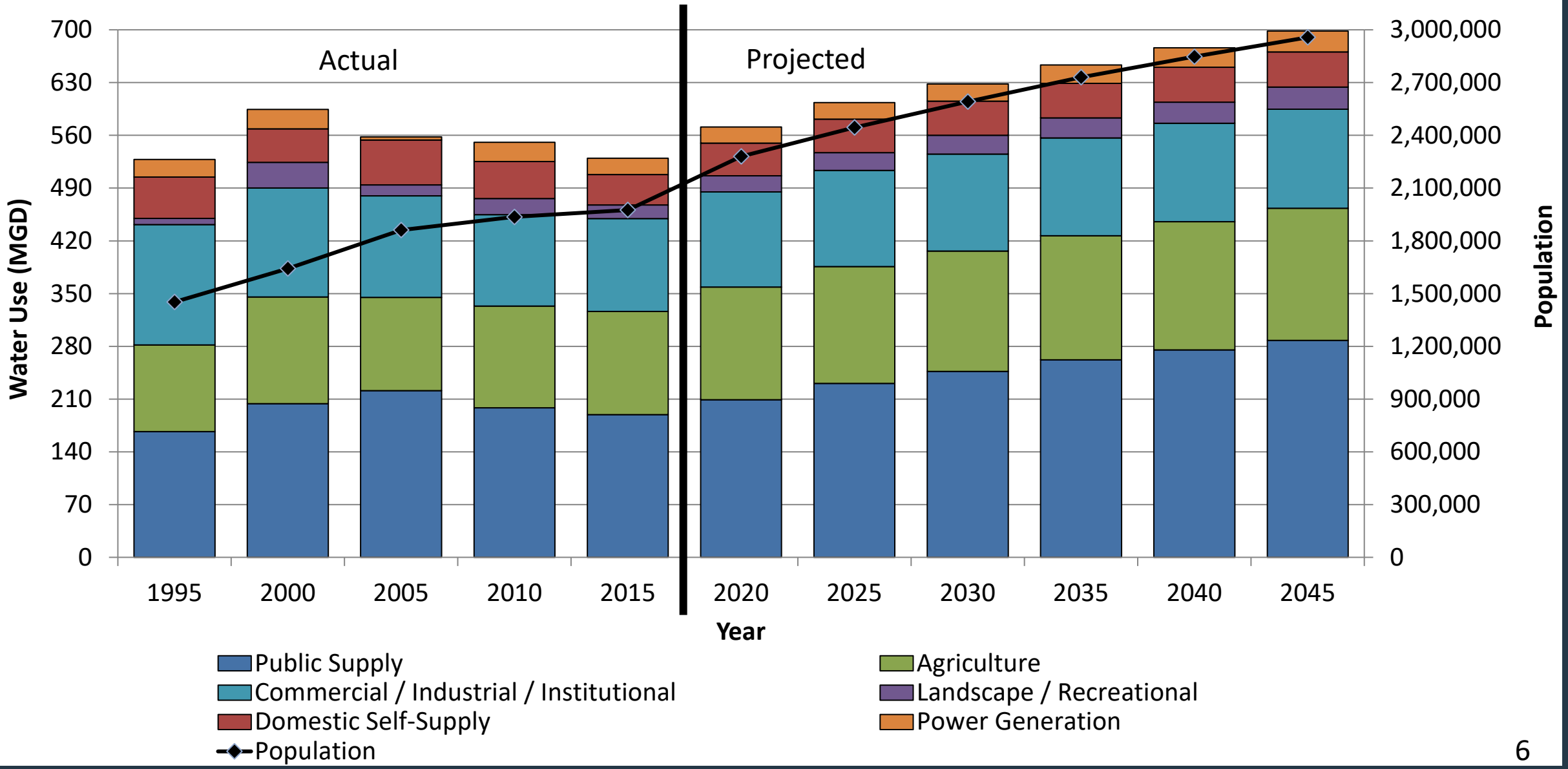
- 20-year planning horizon
- Conducted in an open public process
- Coordination with other agencies
- Approval by the Governing Board
- Updated every five years



Importance of Public Involvement

- Ensure plan reflects local needs
- Review of RWSP conclusions and recommendations
- Coordination among:
  - County Commission/ City Council
  - Utility staff
  - Planning staff
- Identify projects to meet future water demand

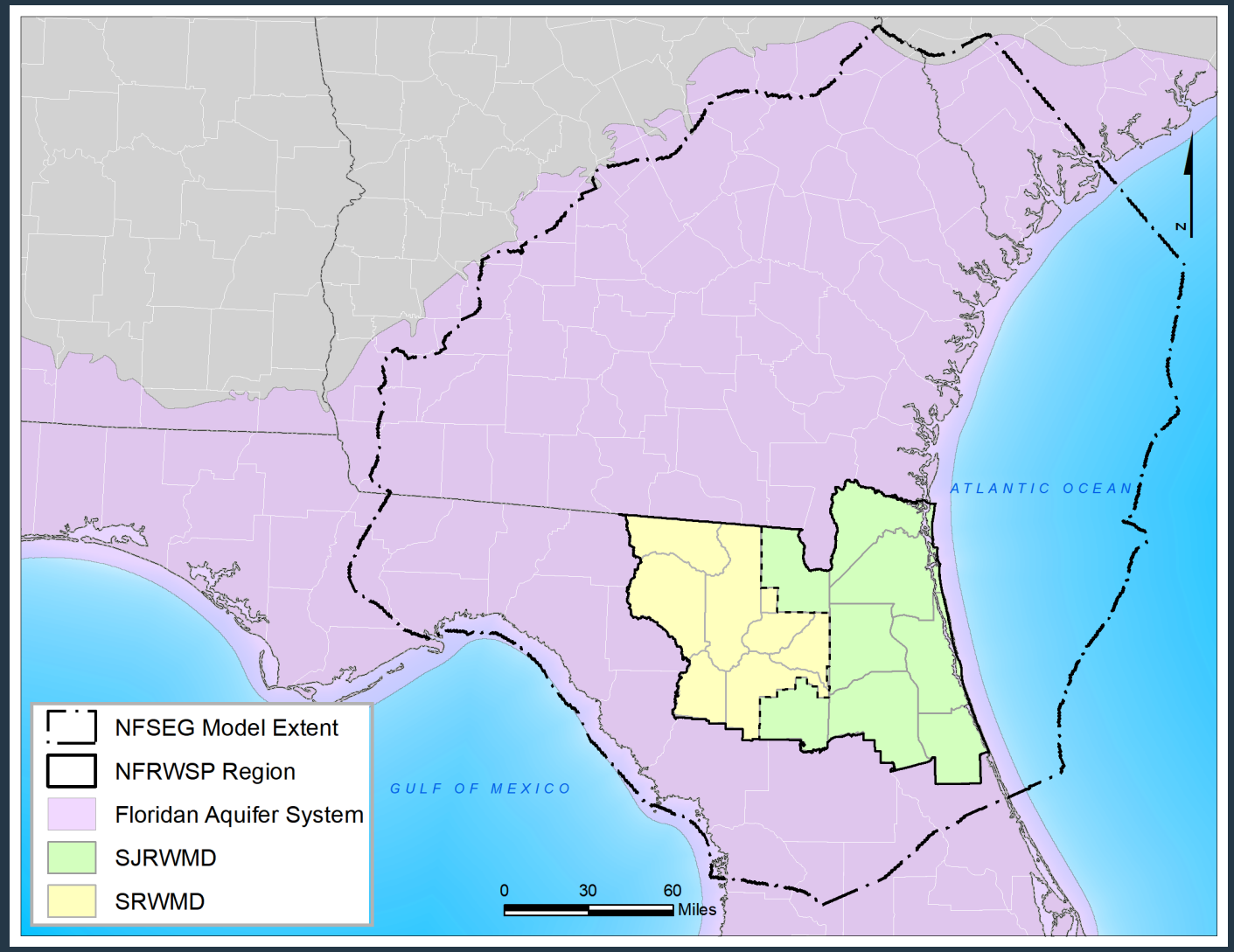
Historic Water Use and Population -vs- Projected Water Demand and Population in NFRWSP



NFSEG Groundwater Flow Model Overview

- North Florida-Southeast Georgia Model (NFSEG), v 1.1

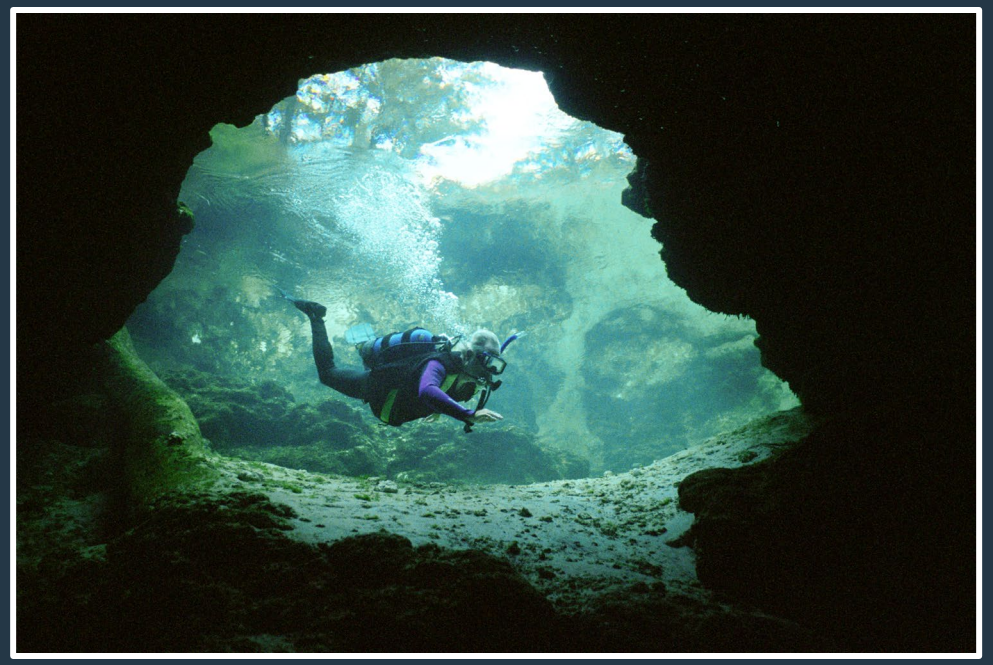
- Model Scenarios
  - Pumps off (PO)
  - Current pumping (CP) – 2014-2018 average groundwater use
  - 2045 projected groundwater demand



Water Resource Evaluation

Can future water demand be met with traditional sources, while protecting water resources and related natural systems?

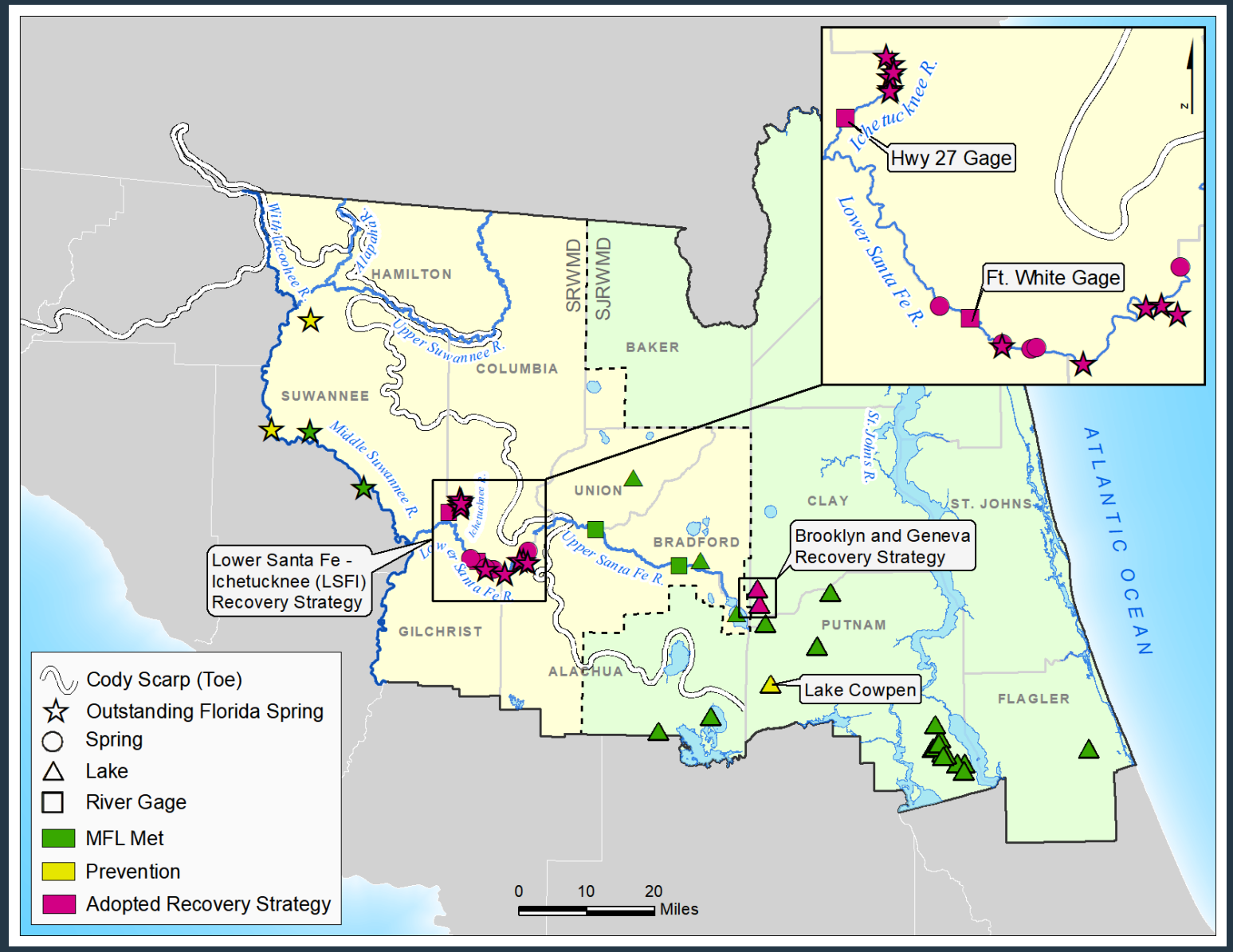
- Minimum flows and levels (MFLs)
- Waterbodies without adopted MFLs
- Wetlands
- Chloride concentrations



Little River Spring

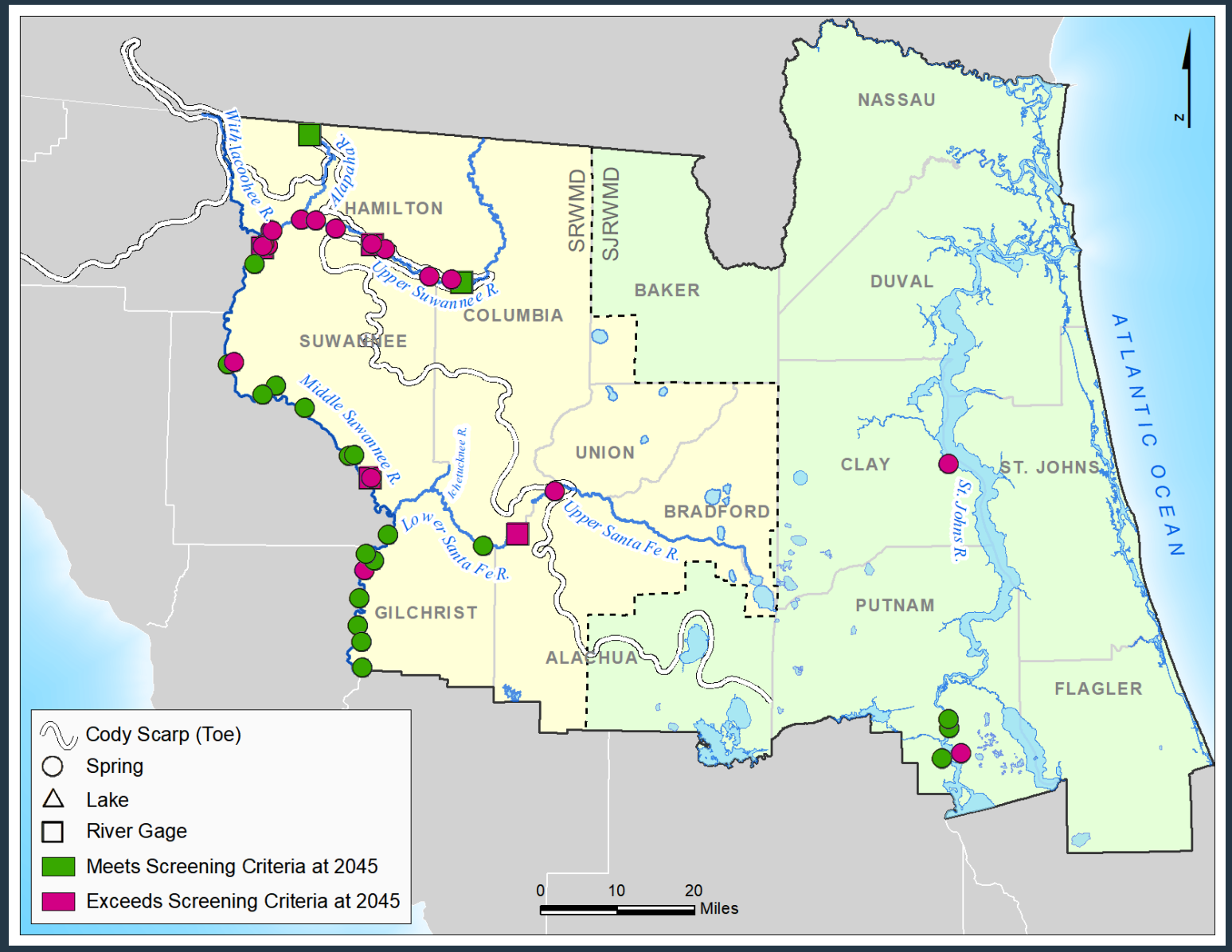
Adopted MFLs

- MFL waterbodies assessed = 45
- Met = 24
- Prevention = 3
- Recovery = 18
- Recovery Strategies = 2



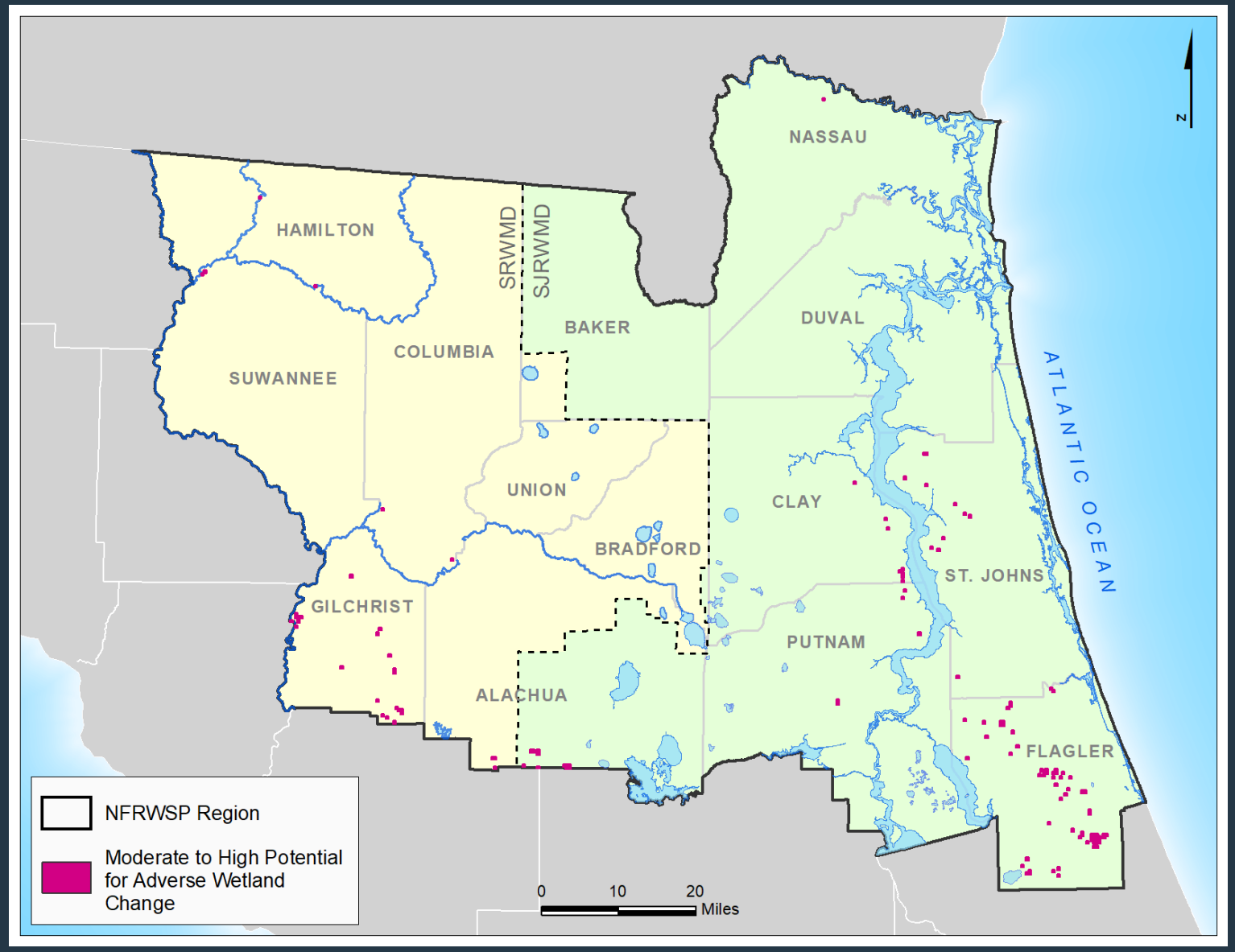
Waterbodies Without Adopted MFLs

- Waterbodies assessed = 42
- Not exceeding = 20
- Exceeding = 22



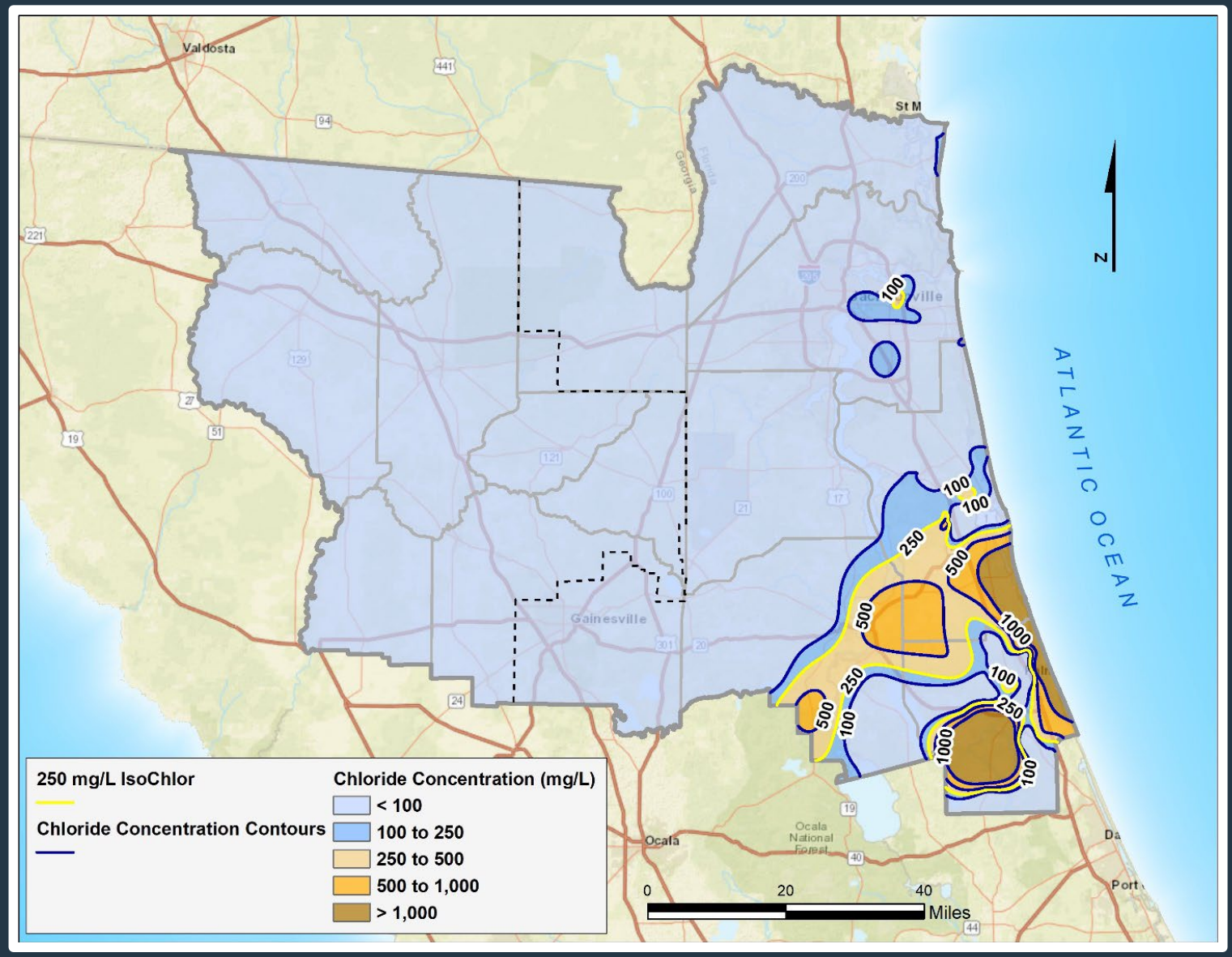
Wetlands

- 8,129 acres of wetlands with moderate to high potential for adverse change
- Regulatory programs provide actual verification and monitoring



Water Quality

- Majority of region has less than 100 mg/L chloride concentration
- 5 of 17 re-assessed CUP production wells still have an increasing trend
- Chloride concentrations may constrain fresh groundwater in limited geographic regions east of the St. Johns River



2016-2020 average chloride concentrations in Upper Floridan Aquifer

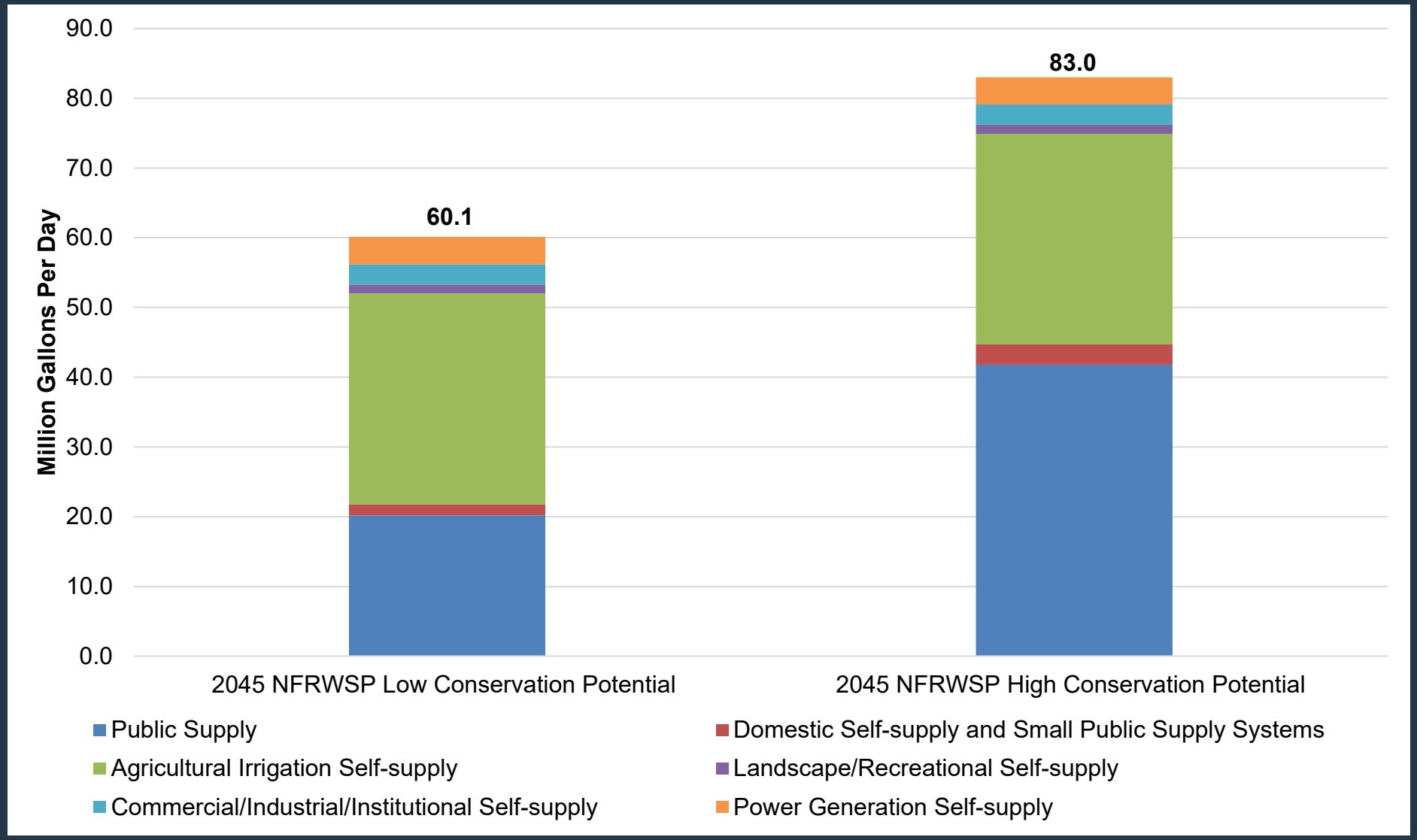
Water Resource Evaluation Results

- There are springs, rivers, and lakes that are currently not meeting or projected to not meet their MFLs.
- There are waterbodies without MFLs that are exceeding the screening criteria.
- There are wetlands with moderate to high potential for adverse changes.
- There are wells with increasing chloride trends and areas of elevated chloride concentrations.

Since traditional sources cannot meet future demand while protecting water resources…

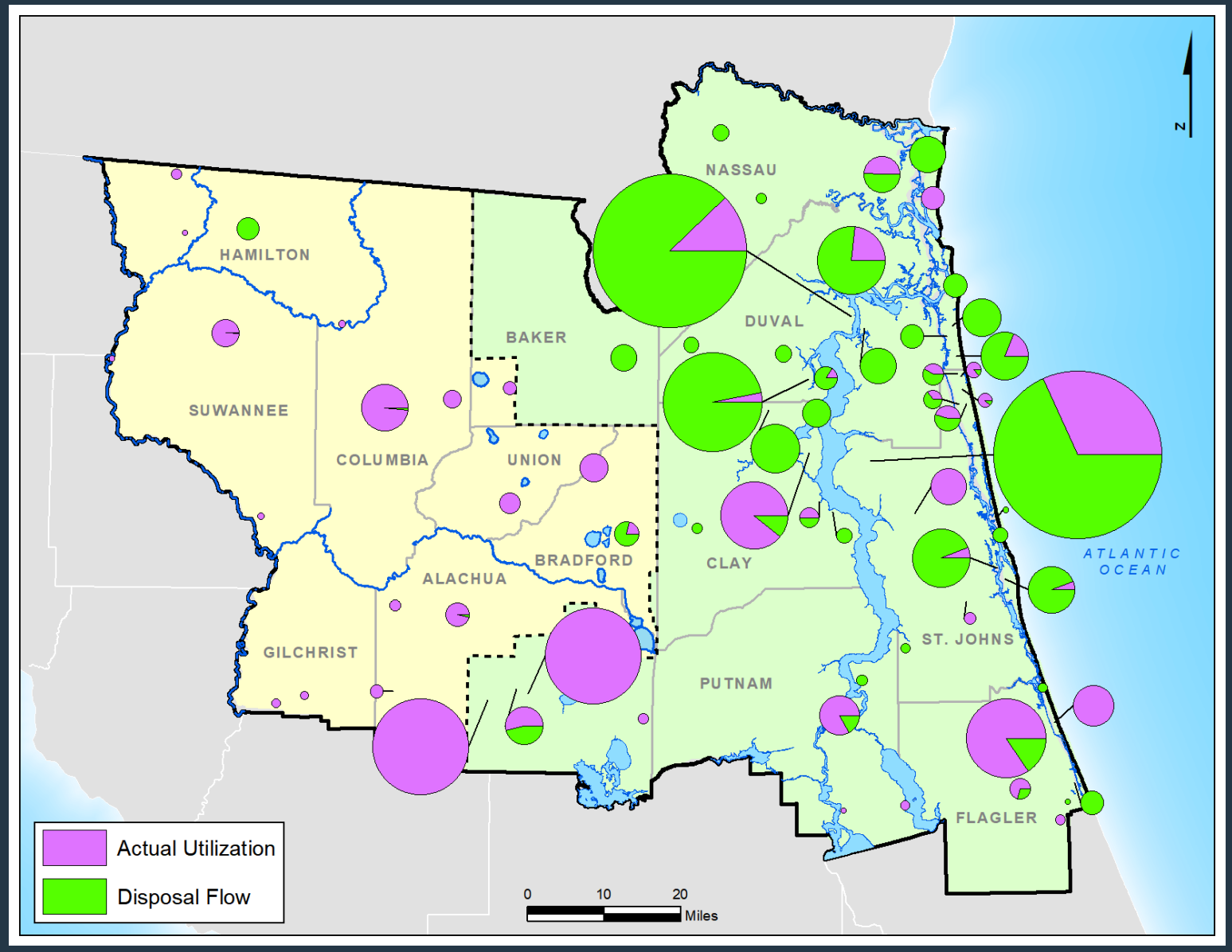
- The plan identifies projects to meet future water demands
  - Water supply development
  - Water resource development
  - Water conservation
  - Conceptual
- Future demand can be met, while protecting water resources, through a combination of alternative sources and other identified projects

Water Conservation Potential

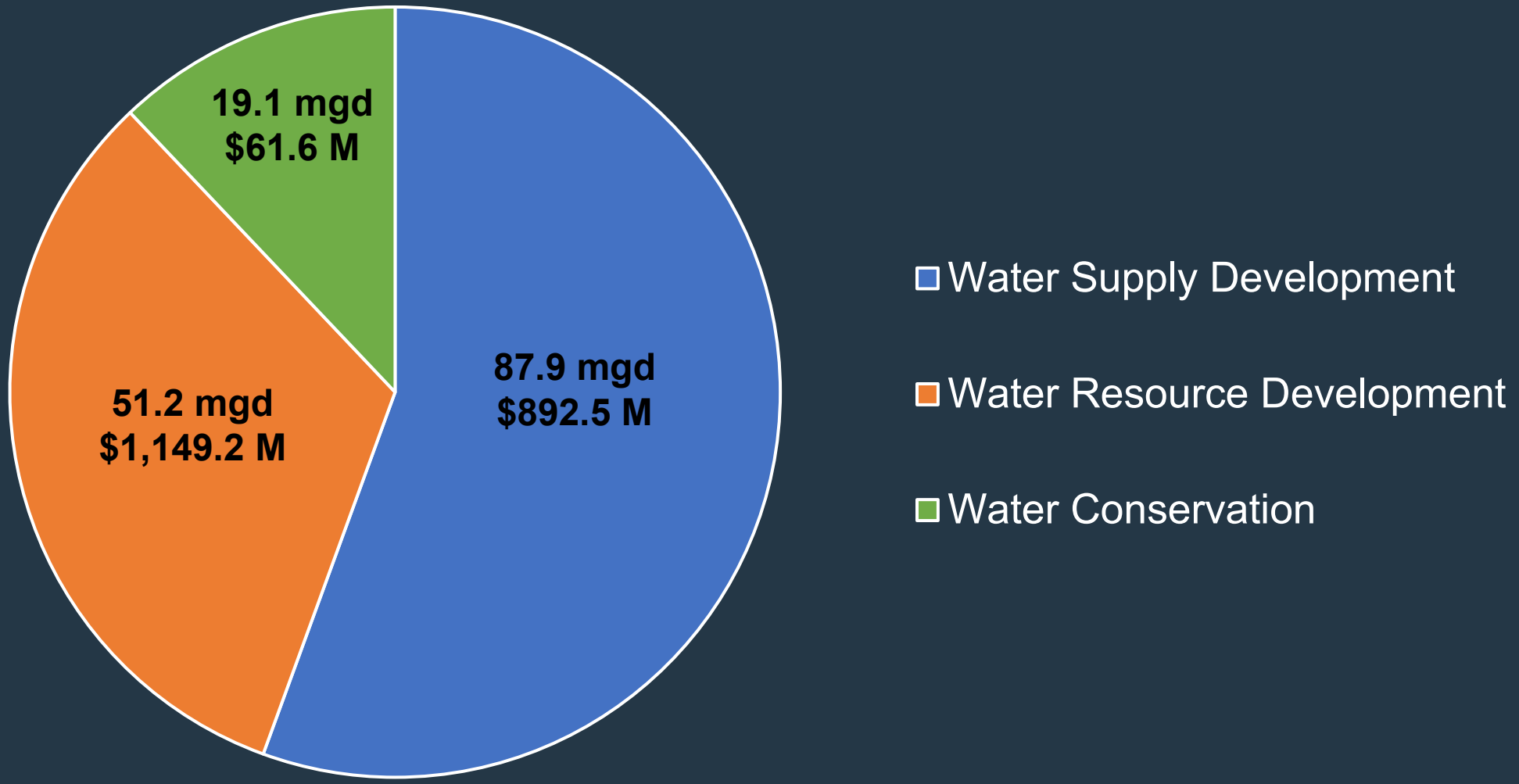


Reclaimed Water Availability

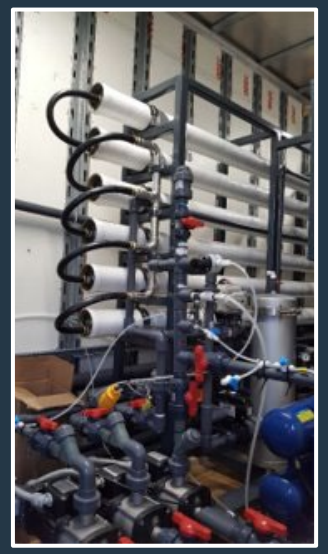
- Future reclaimed water flows could increase by 55 to 103 mgd by 2045

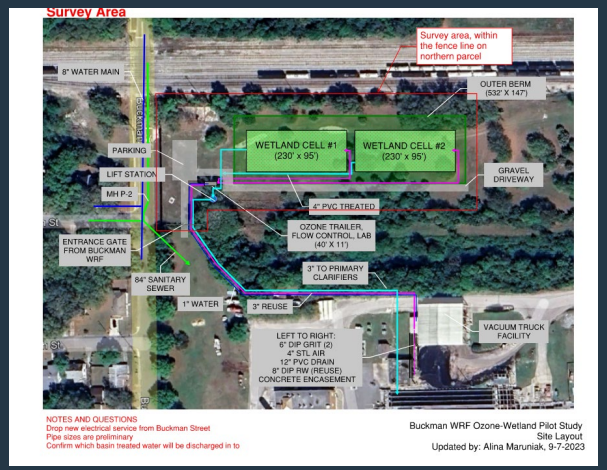


Project Options to Meet Future Demand



Projects Currently Under Construction





Water Supply Development Options

Type	Number of Projects	Estimated Benefit (mgd)	Estimated Total Cost ($M low range)
Aquifer Storage and Recovery	NA	NA	NA
Brackish Groundwater	NA	NA	NA
Reclaimed Water	45	78.7	$849.3
SAS/IAS Water Sources	4	5.0	$29.9
Surface Water	NA	NA	NA
Stormwater	1	0.2	$2.9
Wellfield Optimization	1	0.0	$10.5
Total	**51**	**87.9**	**$892.5**

Water Resource Development Options

Type	Number of Projects	Estimated Benefit (mgd)	Estimated Total Cost ($M)
Data Collection and Evaluation	1	0.0	$4.0
Groundwater Recharge	12	32.7	$262.0
Indirect Potable Reuse	4	17.4	$788.3
Reservoirs	NA	NA	NA
Seawater	NA	NA	NA
Stormwater/Surface water	2	0.03	$11.1
Technology Evaluation	3	1.0	$83.9
Total	**22**	**51.2**	**$1,149.2**

Water Conservation Project Options

Type	Number of Projects	Estimated Benefit (mgd)	Estimated Total Cost ($M low range)
Agricultural Conservation	6	12.4	$20.3
PS/CII Conservation	17	6.8	$41.3
Total	**23**	**19.1**	**$61.6**

Funding Options

- Water Supplier and User Funding Options
- Water Utility Revenue Funding Sources
- Water Management District Funding Options
  - Cooperative/cost-share programs
  - Water Resource Development Work Program
- State Funding Options
  - Agricultural Conservation
  - Springs Protection
  - Alternative Water Supply and Development Program
  - Drinking Water State Revolving Fund Program
  - Florida Forever Program
  - Water and Land Conservation Amendment
  - Resiliency Funding
- Federal Funding Options
- Public-Private Partnerships, Cooperatives, and Other Private Investment

Conclusions

- Projected 135 mgd increase in groundwater demand from 2015 to 2045
- Future demand cannot be met with traditional sources without potential impacts to water resources
- NFRWSP identifies 158 mgd of project options and that meet future demand while sustaining water resources and related natural systems

Local Government Requirements

- After the Districts approve the RWSP:
  - Local governments must amend their Comprehensive Plans to include a 10-year Water Supply Facilities Work Plan within 18 months of RWSP update and submit it to the Dept. of Economic Opportunity
  - Work Plan must demonstrate sufficient water supply for at least the next 10 years
  - Identify projects to be developed

Activity Name	Link	Contact
Lower Santa Fe and Ichetucknee Status	Lower Santa Fe and Ichetucknee Rivers and Springs | Suwannee River Water Management District (mysuwanneeriver.com)	mfl@srwmd.com
Lower Santa Fe and Ichetucknee Rulemaking	Water Policy Rulemaking | Florida Department of Environmental Protection	OWP_rulemaking@floridadep.gov
Lower Santa Fe and Ichetucknee Project Development	Conceptual Projects | Suwannee River Water Management District (mysuwanneeriver.com)	Projects@srwmd.org
North Florida Regional Water Supply Plan	North Florida Water| Water Supply Plan	partnership@sjrwmd.com

Regional Projects and Priorities

- North Florida Regional Water Supply Plan Draft Posted for Public Comment (Closes October 6) North Florida Regional Water Supply Plan (northfloridawater.com)
- DEP Cost Share Applications are now open for springs and alternative water supply projects (Due December 17): DEP Cost Share Program | Suwannee River Water Management District (mysuwanneeriver.com)
- We anticipate posting the updated Suwannee River Basin Surface Water Improvement and Management (SWIM) plan for public comment soon
- Project concepts that benefit the core mission areas of the District can be submitted via the District's projects portal any time: Conceptual Projects | Suwannee River Water Management District (mysuwanneeriver.com)

Draft 2023 NFRWSP Public Workshop

Public comments can be emailed to the North Florida Partnership
partnership@sjrwmd.com

Or submitted online at
https://northfloridawater.com/watersupplyplan/commentform.html

No later than **October 6, 2023**

For additional NFRWSP information, go to
https://www.northfloridawater.com/