



Draft 2018

Water Supply Assessment Update

NWFWMD Workshops

July 2018



Workshop Agenda

1. Background and Overview

2. Draft 2018 Water Supply Assessment

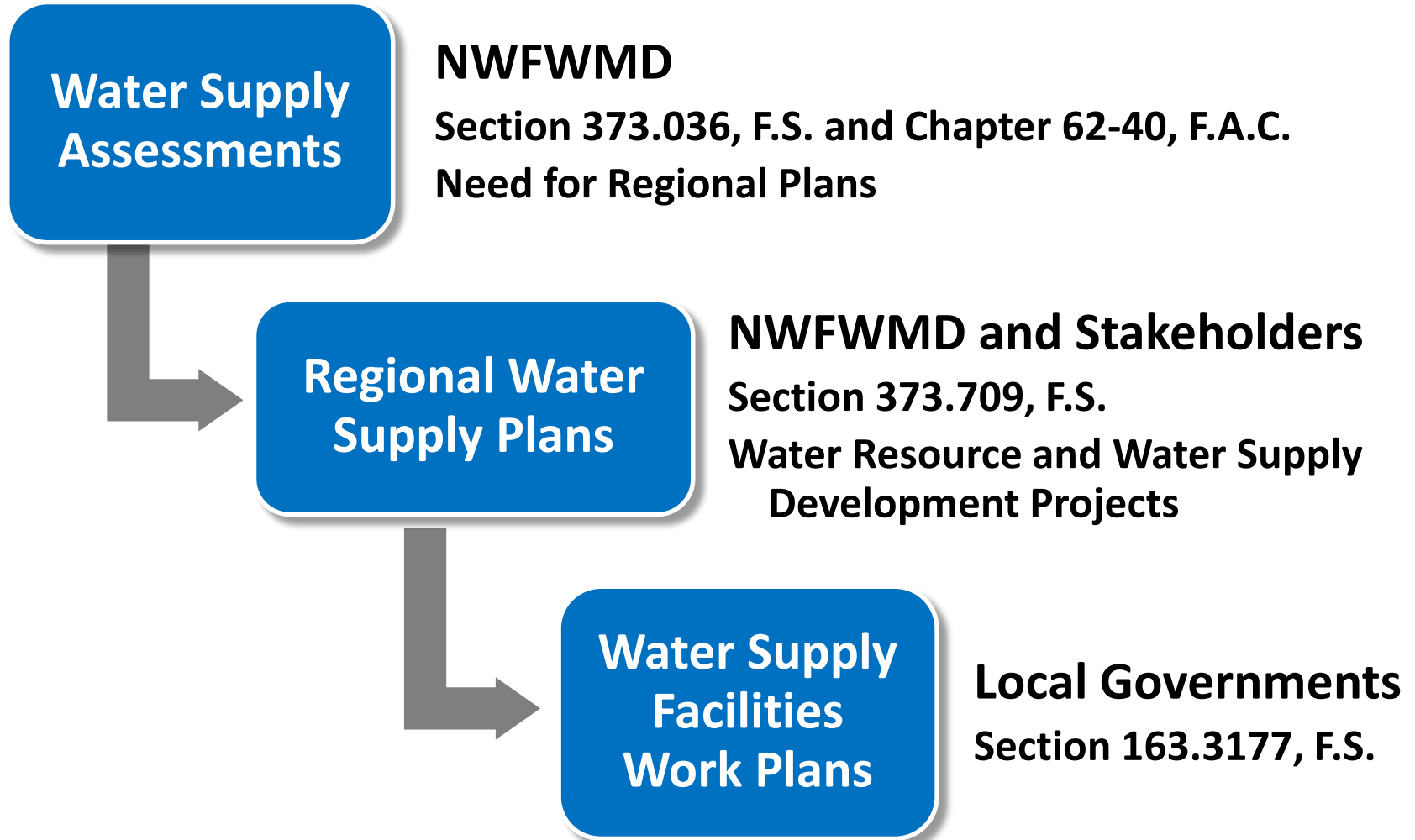
- Estimates and Projections
- Resource Assessments

3. Next Steps

4. Questions and Discussion

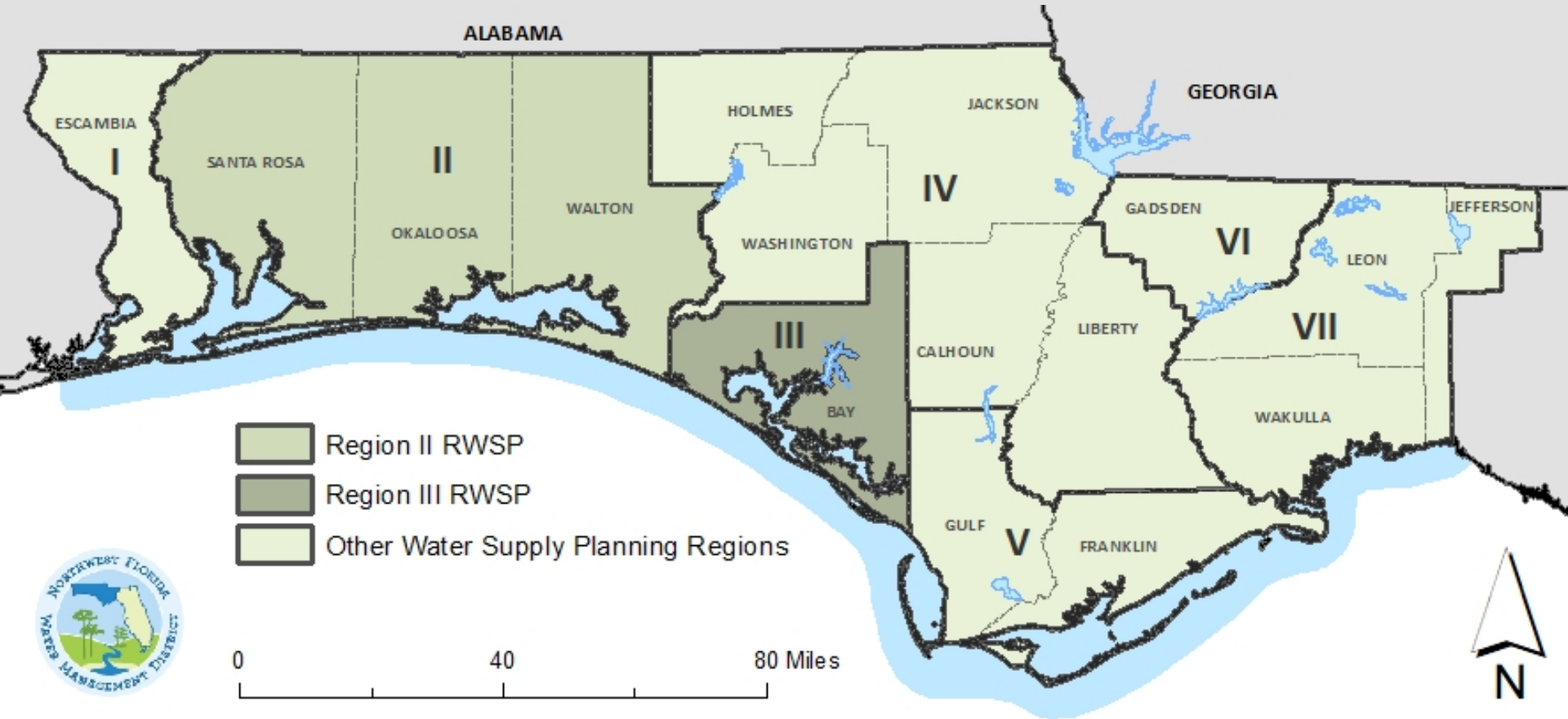


Water Supply Planning and Implementation



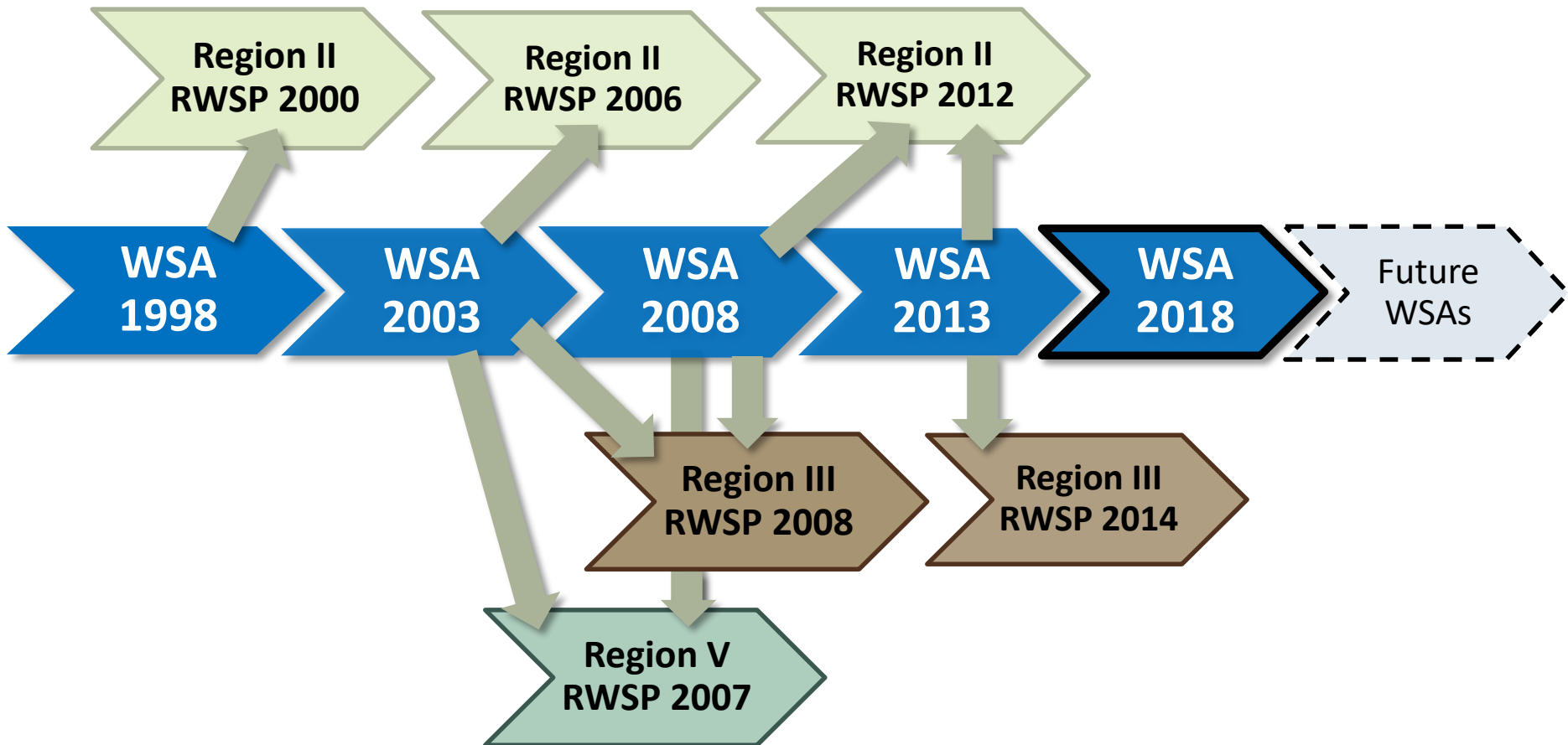


NWFWMD Planning Regions and RWSPs





Water Supply Assessments (WSAs) and Regional Water Supply Plans (RWSPs)





Water Supply Planning Process

Draft 2018 Water Supply Assessment

Public and Stakeholder Input

www.nfwwater.com
and Social media

WORKSHOPS

Comments and Feedback

NFWWMD Governing Board Approvals

2018 WSA - Methodologies

1. Water Use Estimates and Demand Projections



2. Alternative Water and Conservation

3. Regional Resource Assessments

- Six Water Use Categories
- Population Estimates and Projections
- Base Year (2015) Estimates
- 2020-2040 Demand Projections
- Drought Year Projections





Estimating Methodologies

Water Use Category	Reported	Estimated
1. Public Supply	✓	
2. Domestic Self-Supply (DSS)		✓
3. Agriculture	DACs/FSAID	
4. Recreational Irrigation	✓	✓
5. Industrial/Commercial/Institutional (ICI)	✓	
6. Thermoelectric Power Generation	✓	

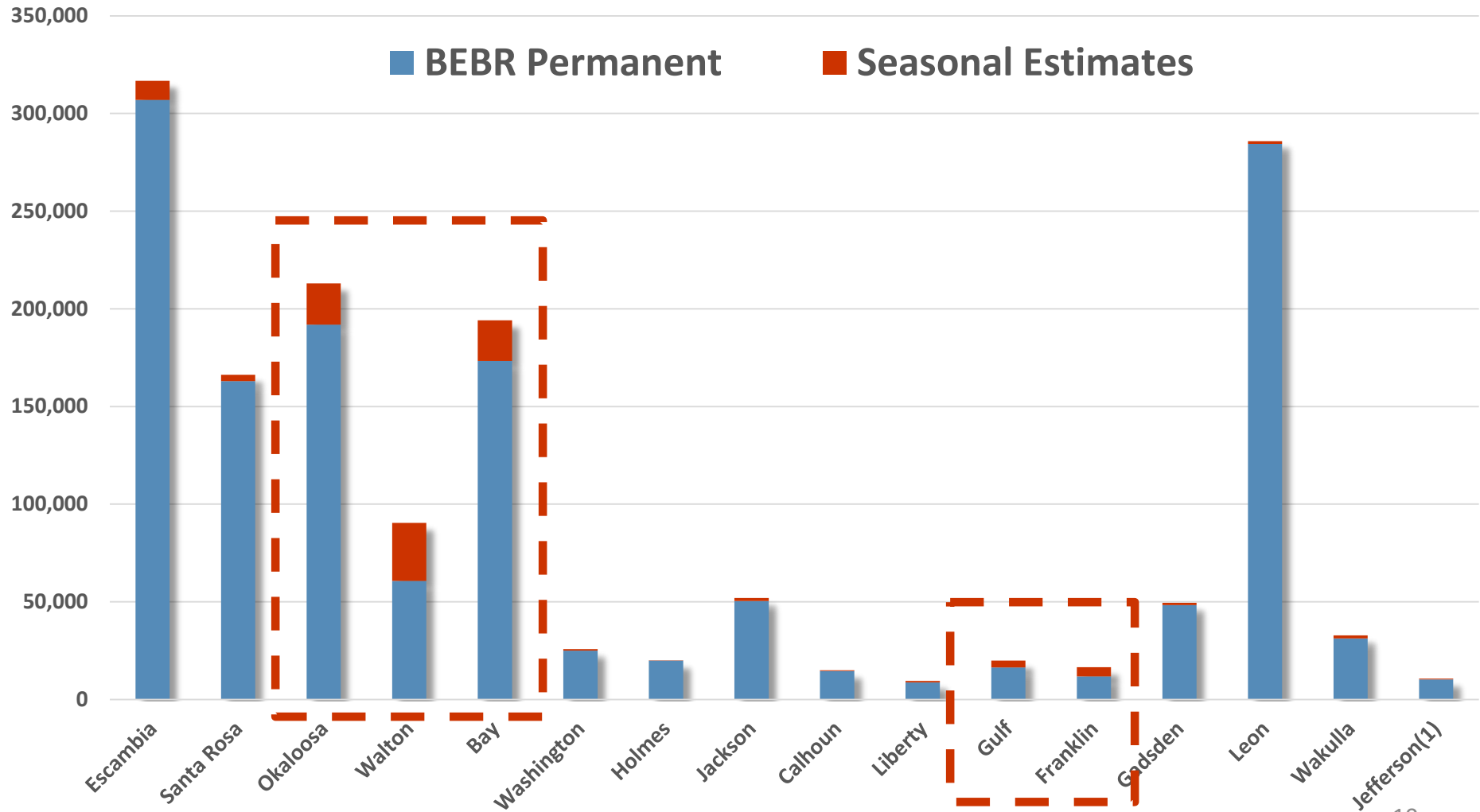


Demand Projection Methodologies

Water Use Category	Population	Other
1. Public Supply	✓	✓
2. Domestic Self-Supply (DSS)	✓	
3. Agriculture		FSAID
4. Recreational Irrigation	✓	
5. Industrial/Commercial/Institutional (ICI)		✓
6. Thermoelectric Power Generation		✓



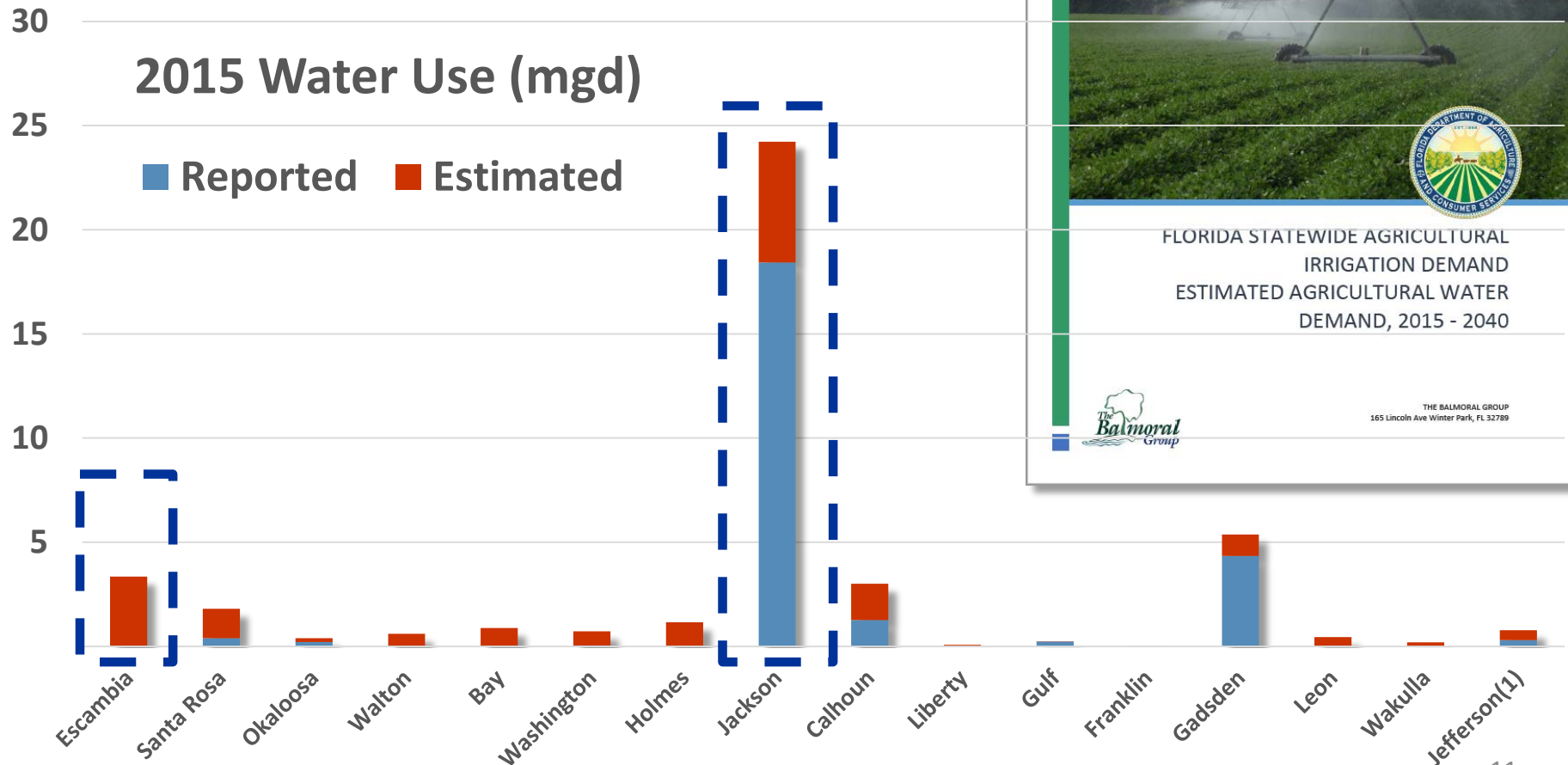
Population Estimate Methodologies





Agricultural Methodologies

DACS Florida Statewide Agricultural Irrigation Demand (FSAID) IV



JUNE 30, 2017

FLORIDA STATEWIDE AGRICULTURAL IRRIGATION DEMAND
ESTIMATED AGRICULTURAL WATER DEMAND, 2015 - 2040

THE BALMORAL GROUP
165 Lincoln Ave Winter Park, FL 32789

Alternative Water and Conservation

Conservation Potential - Region II and Region III

- Potential that may be realized over the planning horizon
- Plumbing retrofit/replacement projects

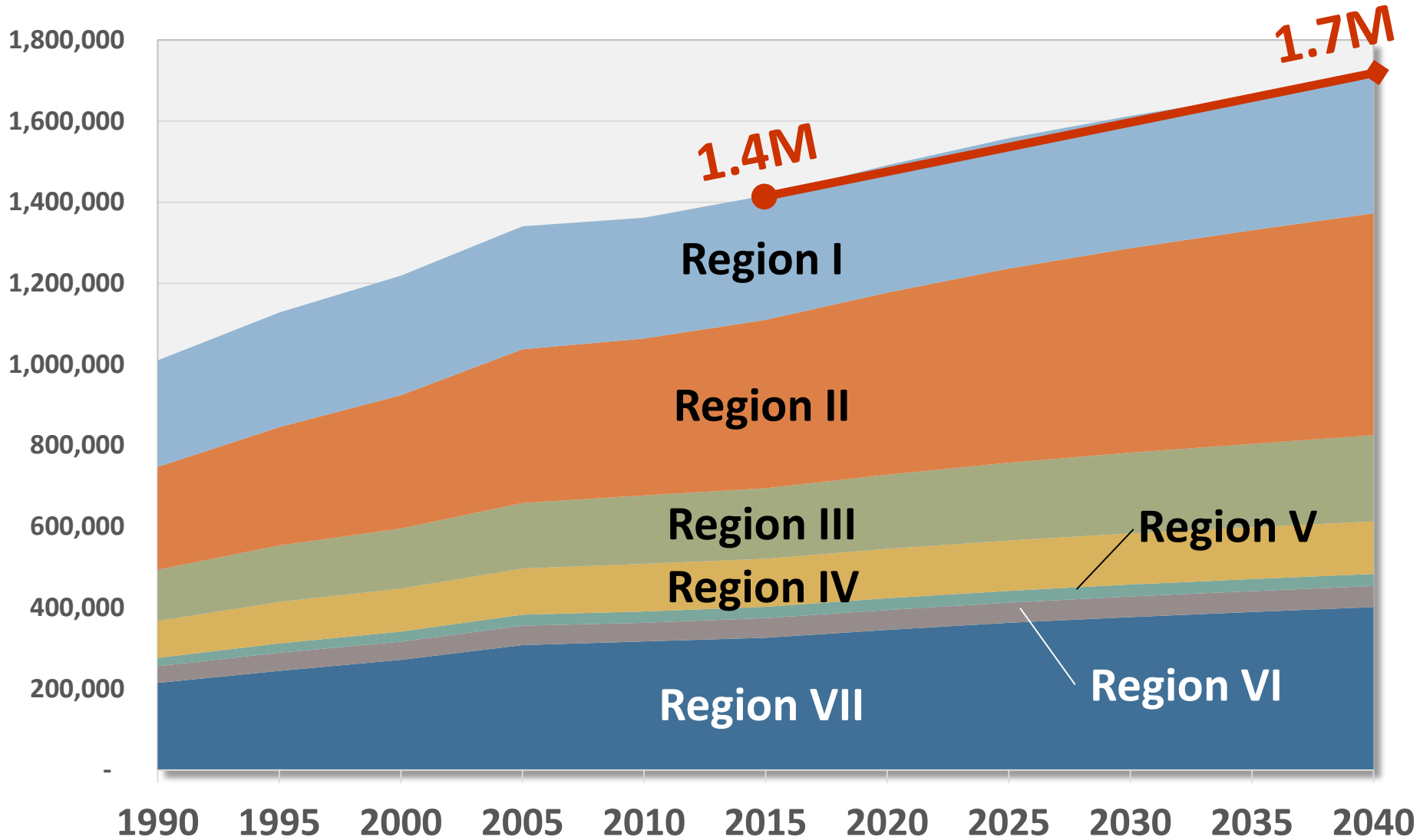


Potable Offset Reuse Potential - Districtwide

- Estimates - DEP 2015 Reuse Inventory
- Future Potential - based on population growth



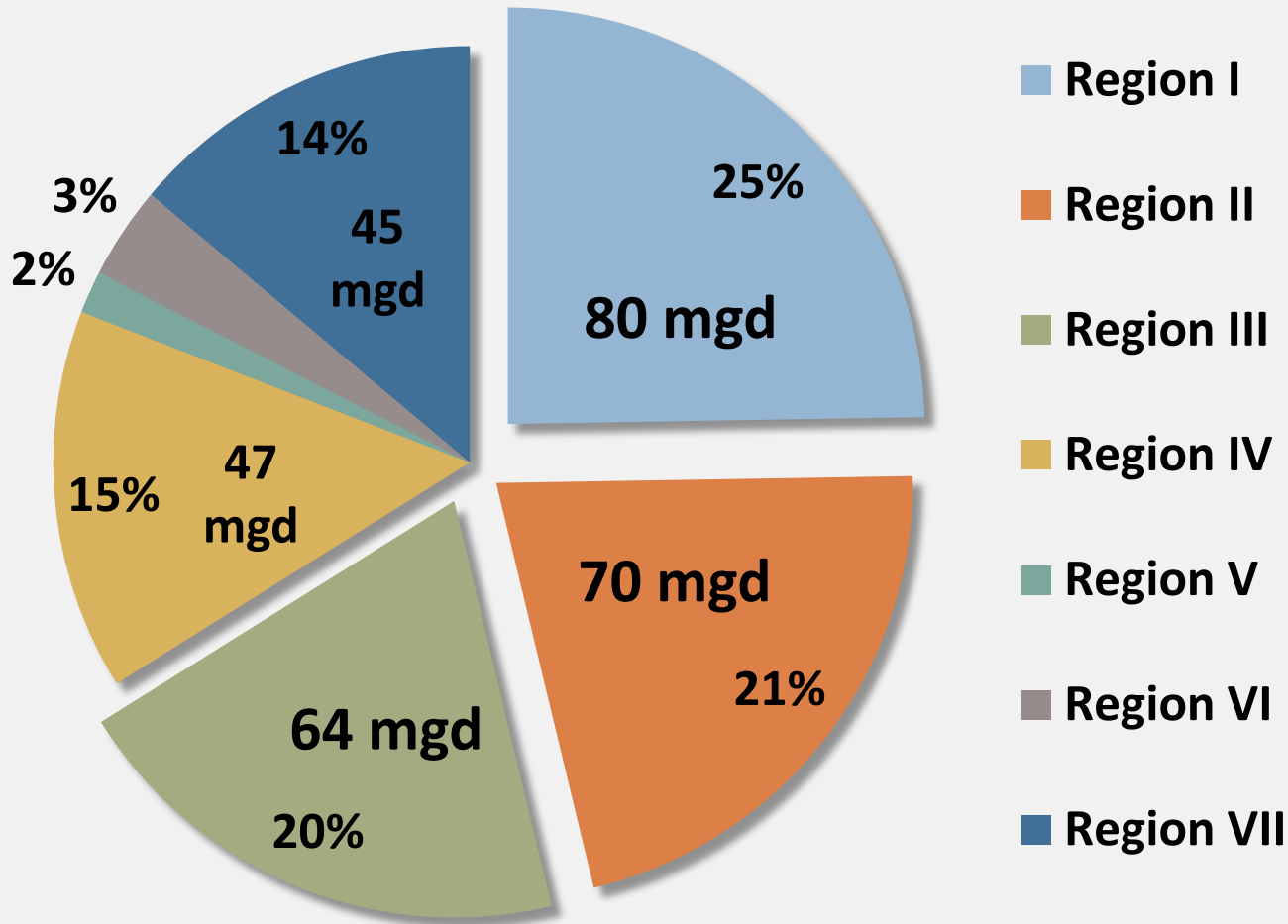
BEBR Population Districtwide by Region





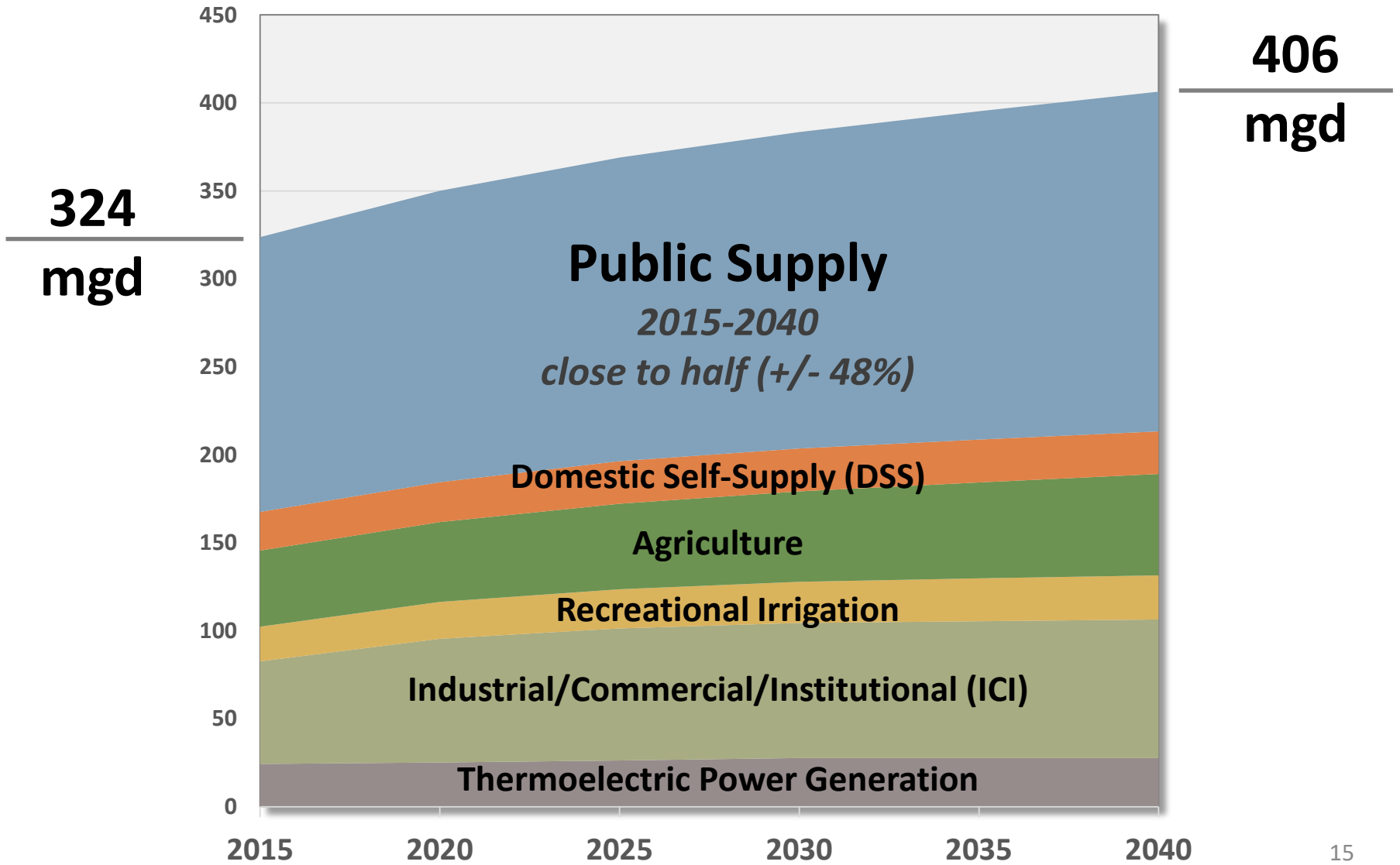
2015 Water Use Estimates by Region (mgd)

Districtwide Total 324 mgd



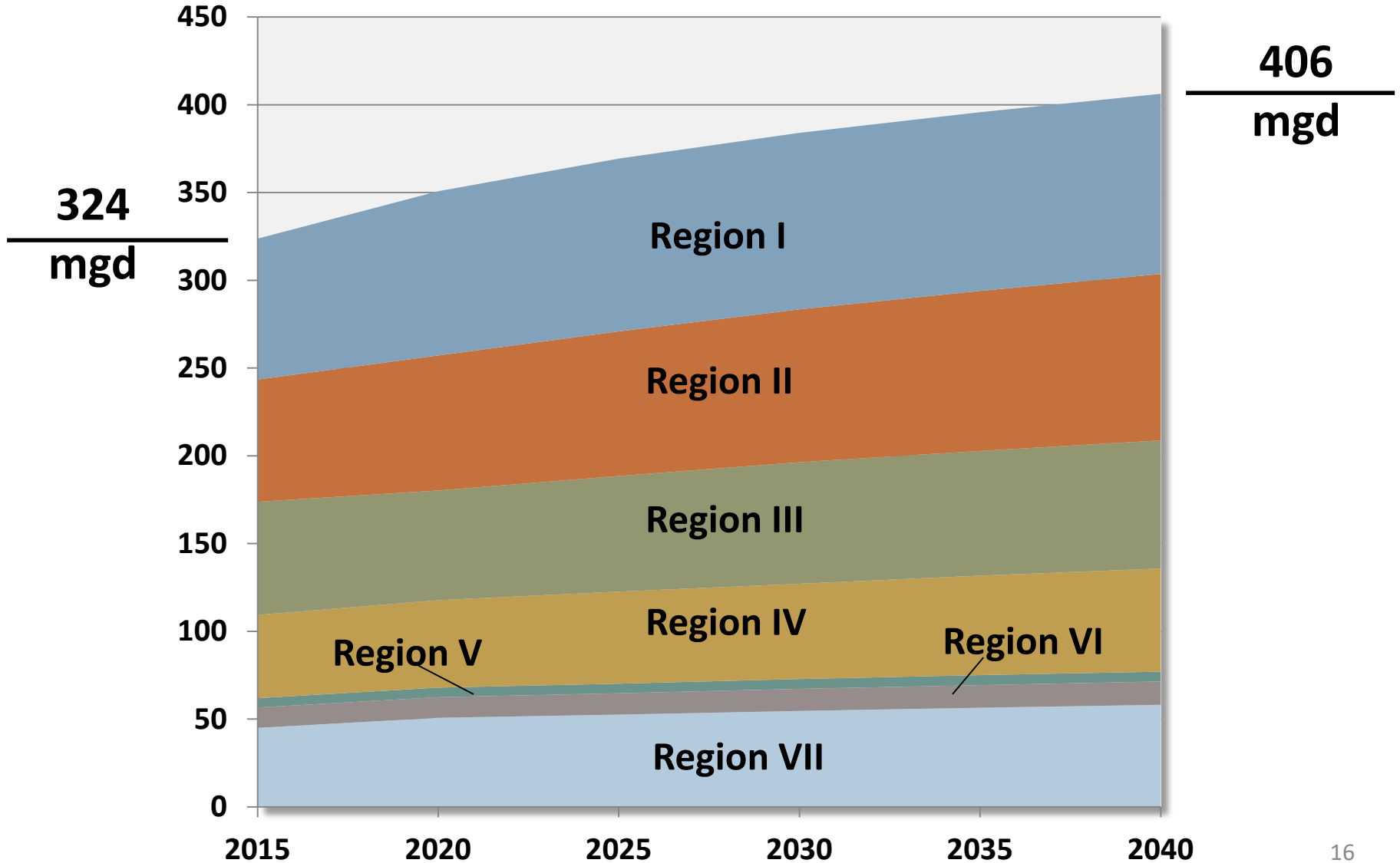


Estimates and Projections by Category (mgd)





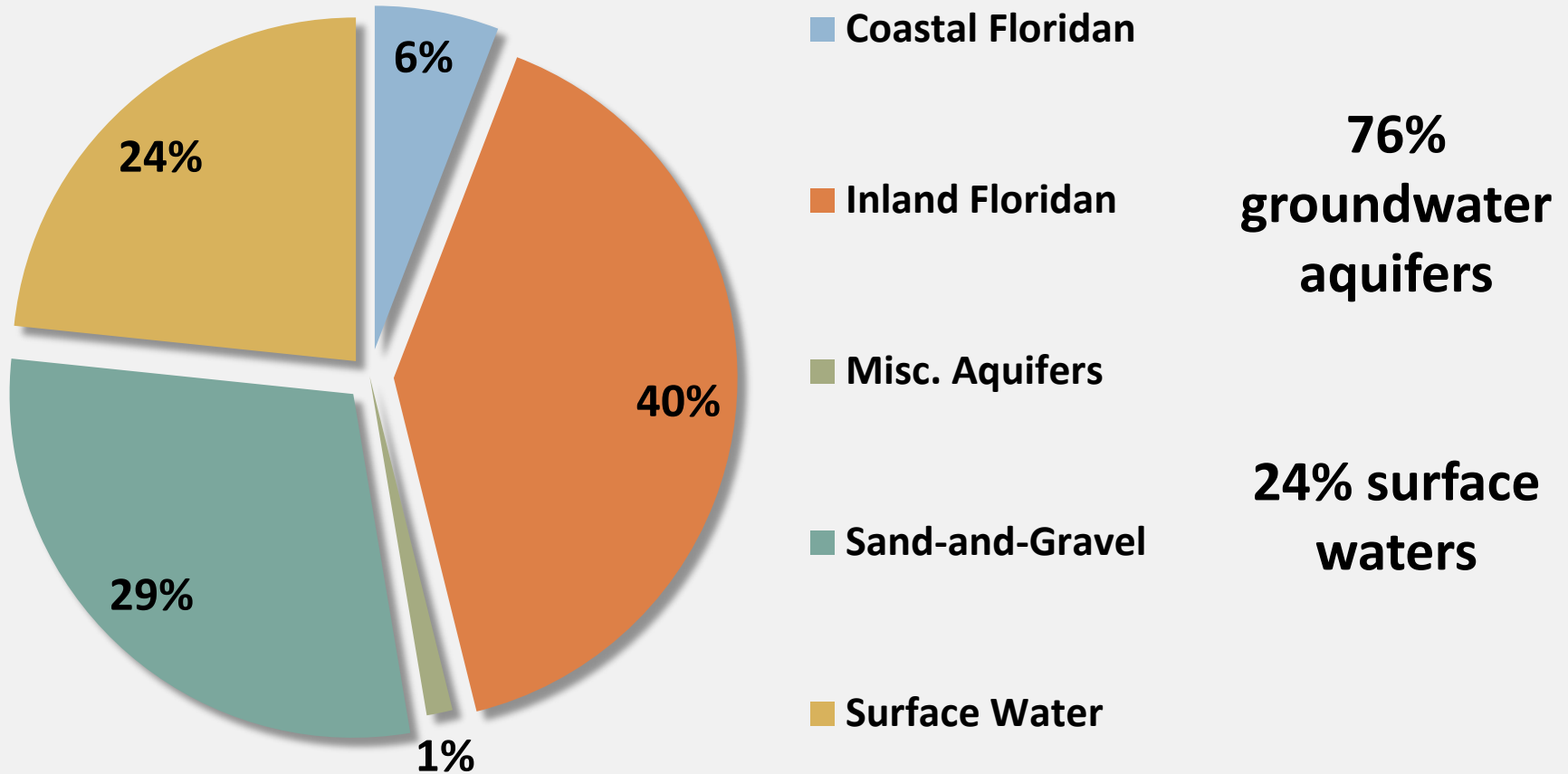
Estimates and Projections by Region (mgd)





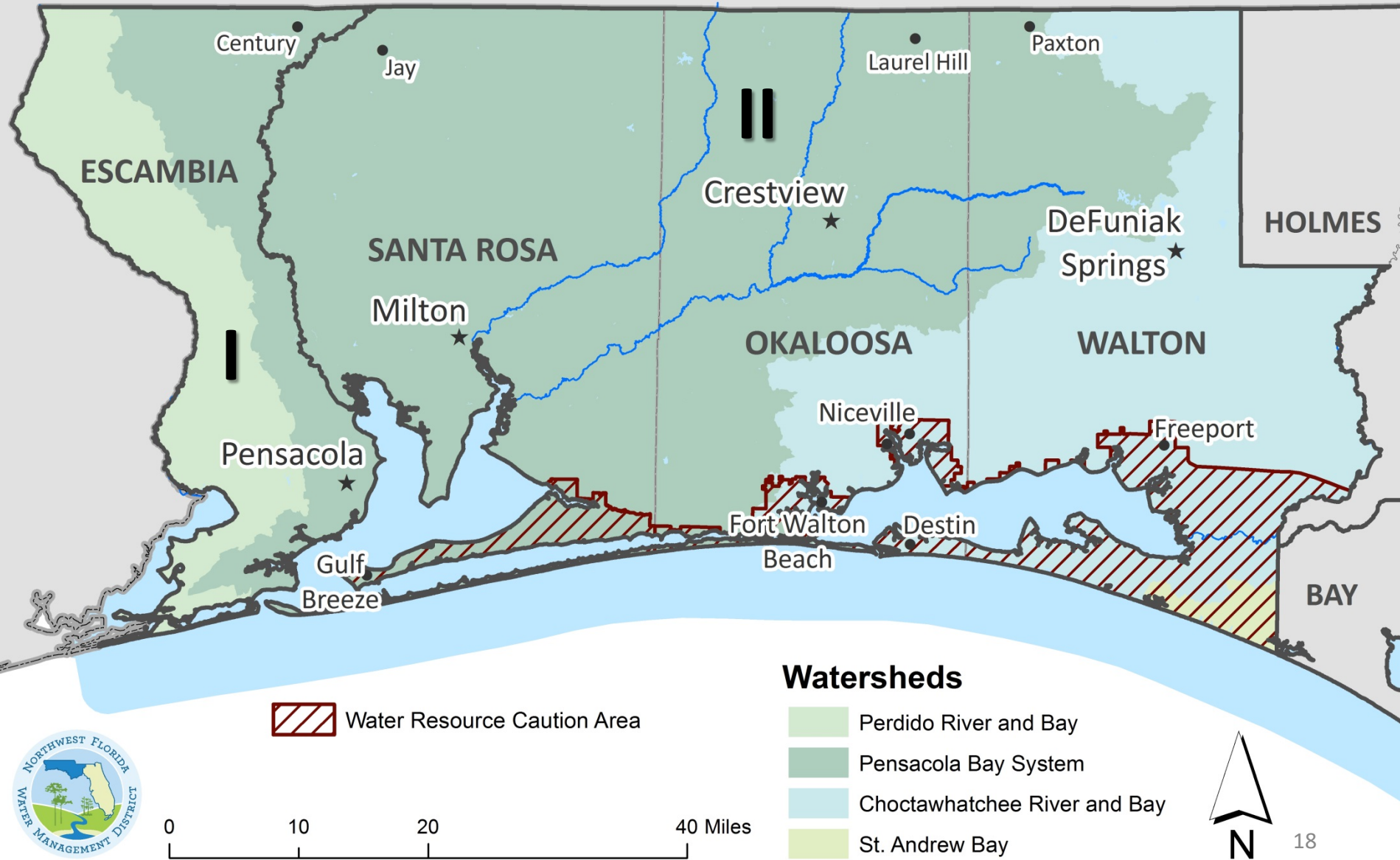
2015 Share of Water Use by Source

Districtwide Total 324 mgd





Region I and Region II





Region I

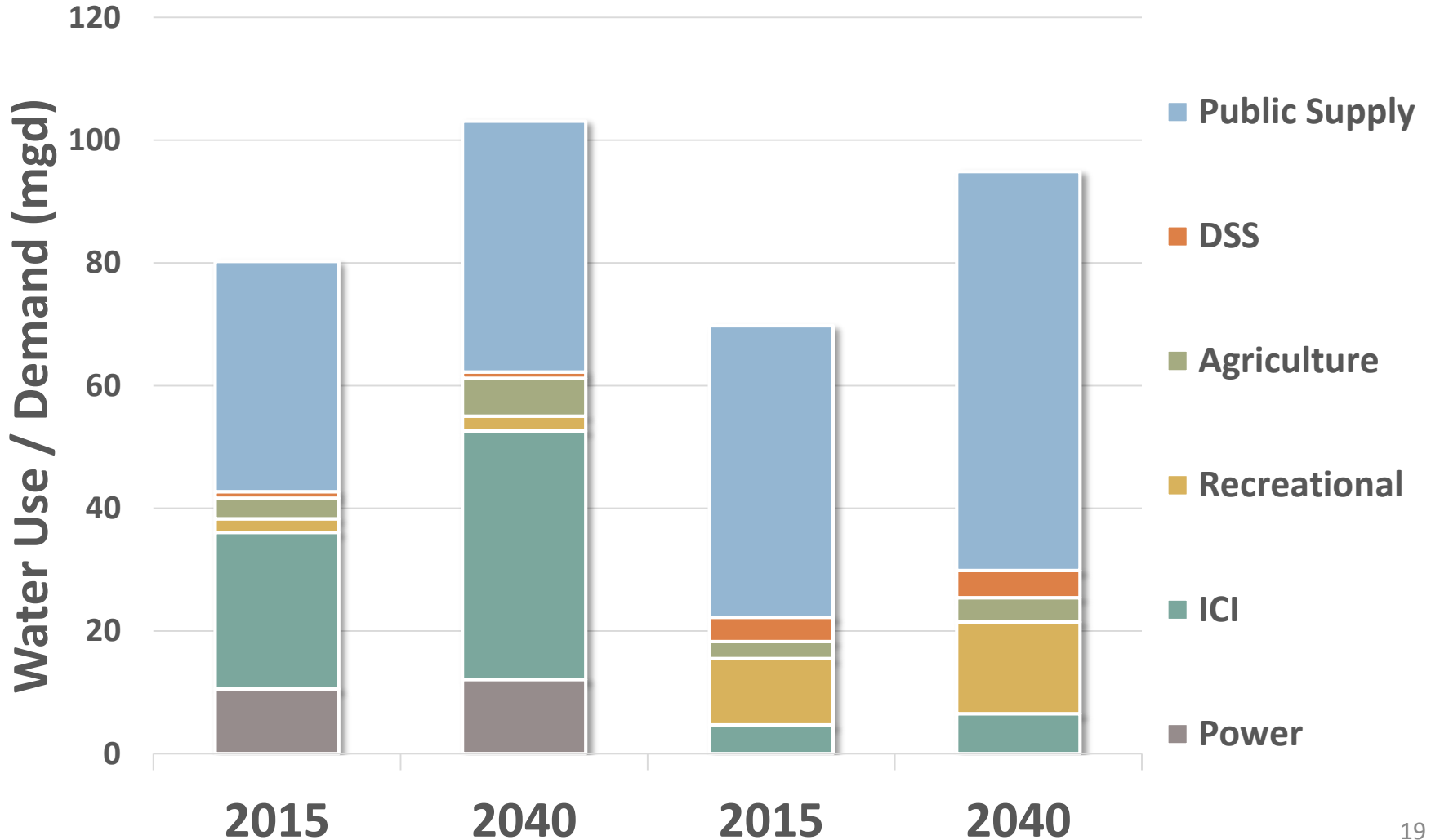
Water Use: 80 to 103 mgd (29%)

Population: 316,766 to 344,275 (9%)

Region II

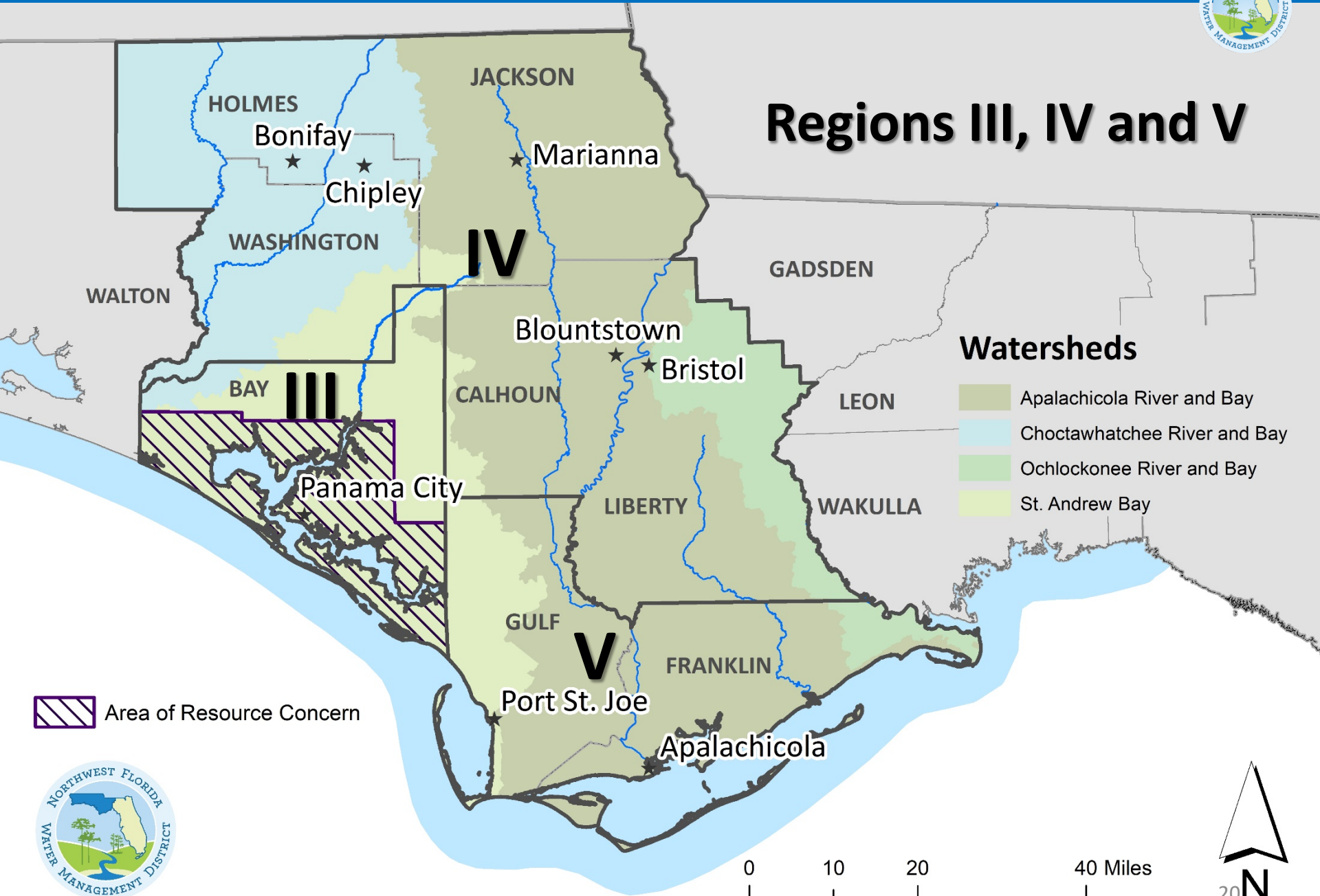
Water Use: 70 to 95 mgd (36%)

Population: 469,615 to 623,300 (33%)





Regions III, IV and V



 Area of Resource Concern



0 10 20 40 Miles

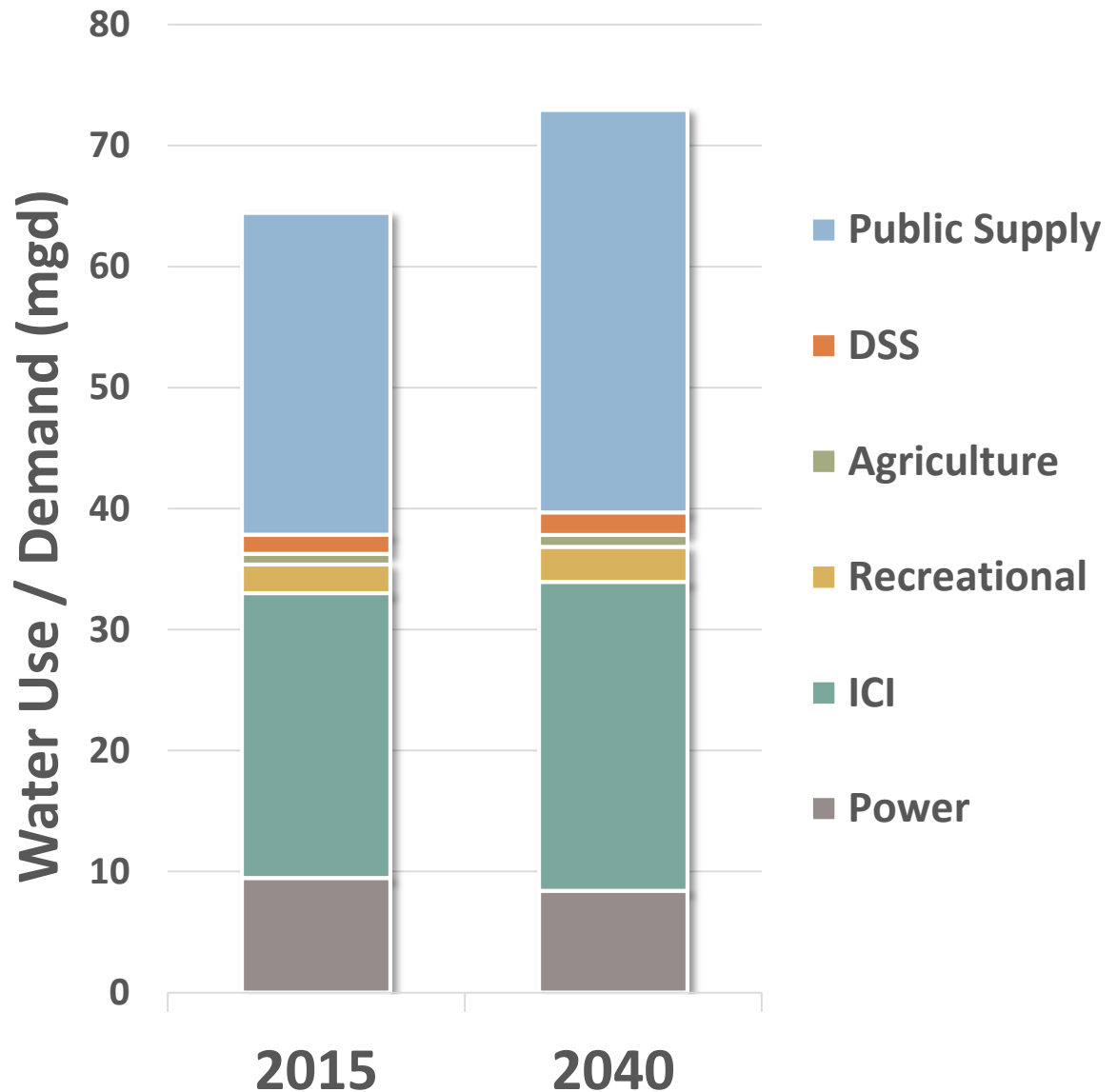




Region III Bay County

Water Use: 64 to
73 mgd (13%)

Population:
194,107 to
238,784 (23%)

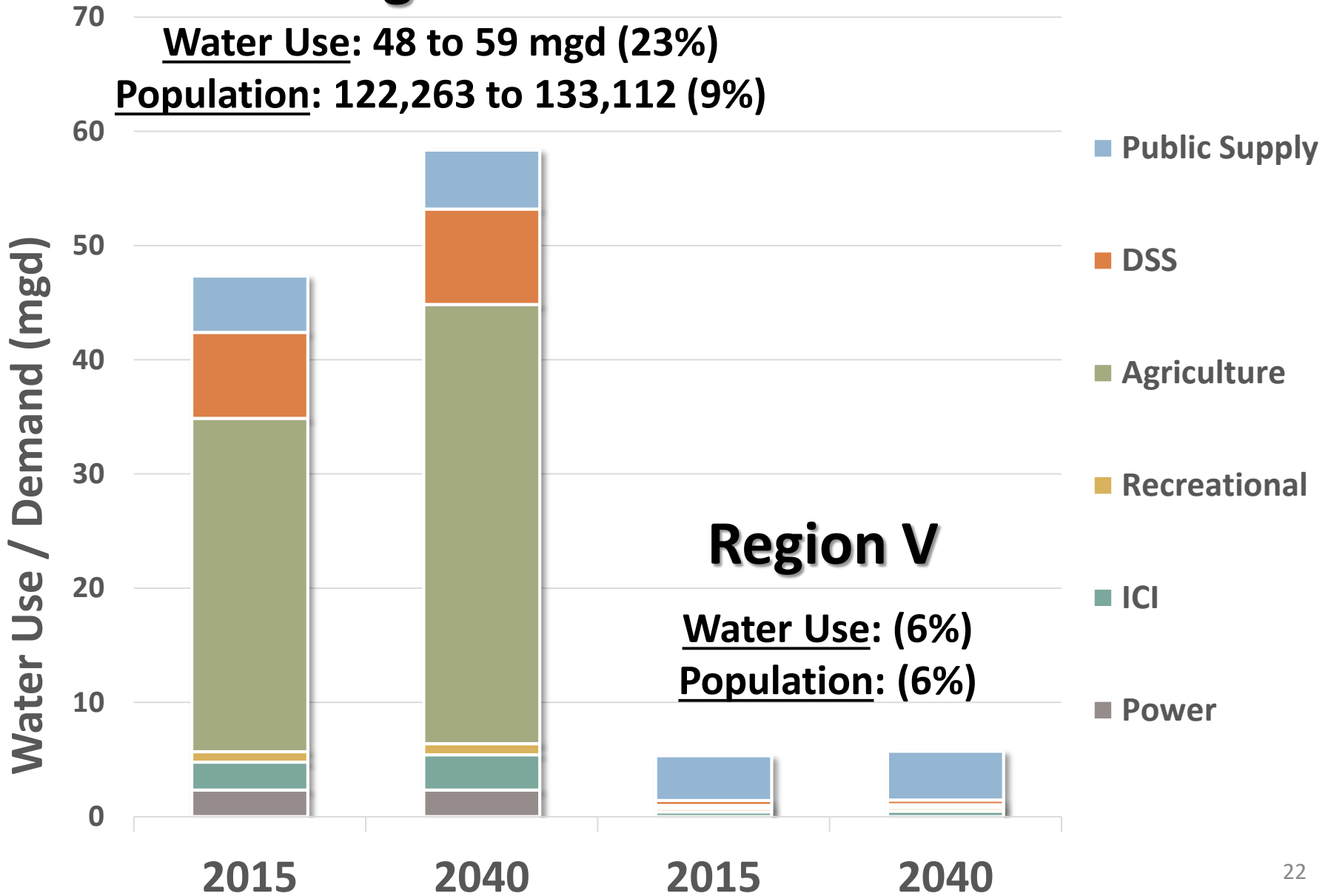




Region IV

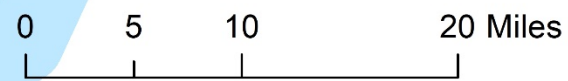
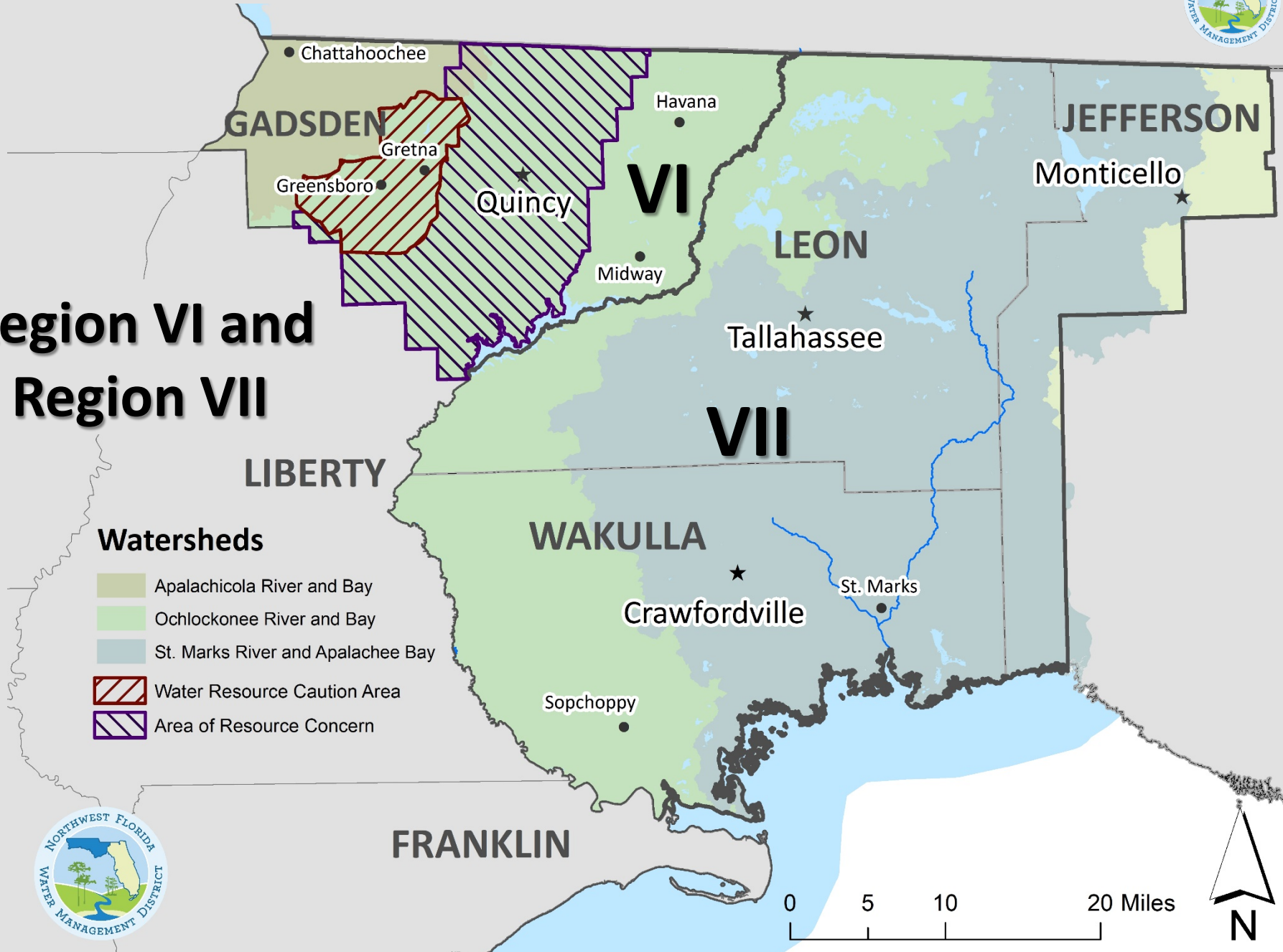
Water Use: 48 to 59 mgd (23%)

Population: 122,263 to 133,112 (9%)





Region VI and Region VII





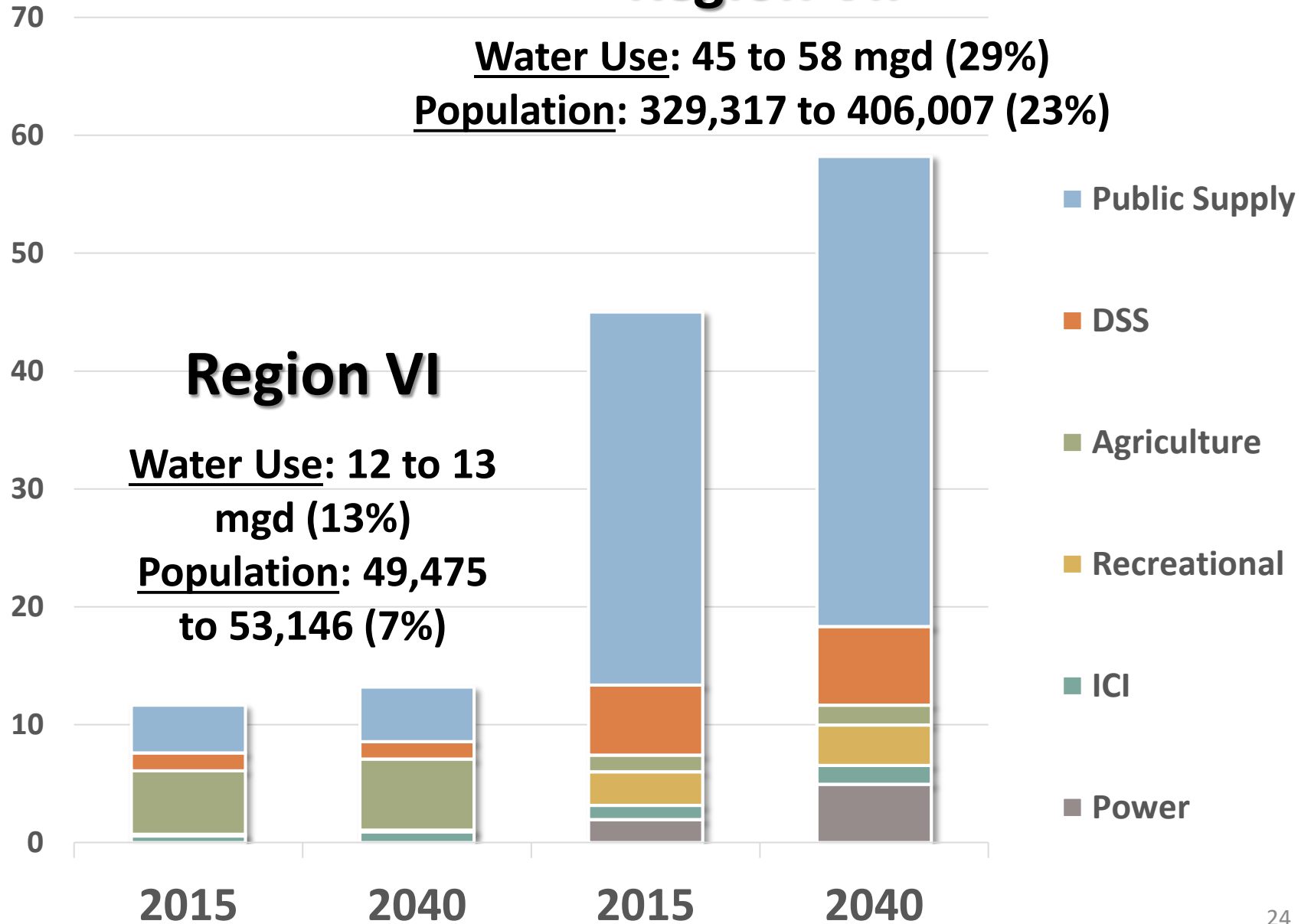
Region VII

Water Use: 45 to 58 mgd (29%)
Population: 329,317 to 406,007 (23%)

Water Use / Demand (mgd)

Region VI

Water Use: 12 to 13 mgd (13%)
Population: 49,475 to 53,146 (7%)



Resource Assessments Methodology

Groundwater Resources

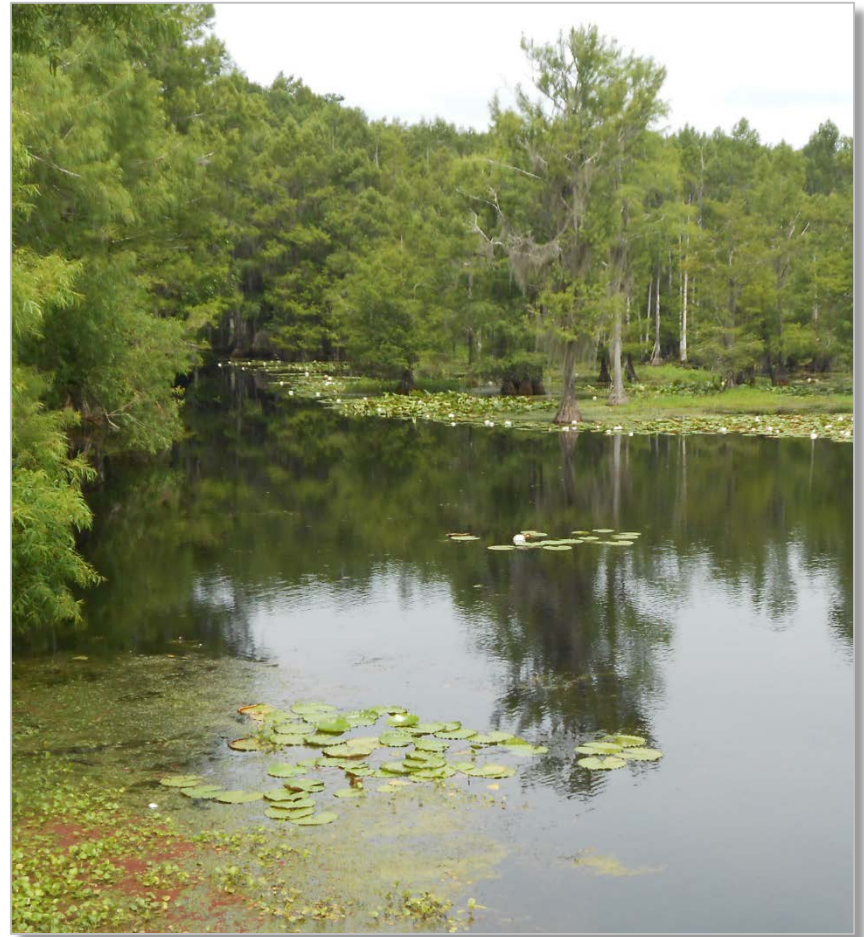
Examine changes and trends in:

- Aquifer water levels
- Spring flow
- Water quality
- Water budgets

Surface Water Resources

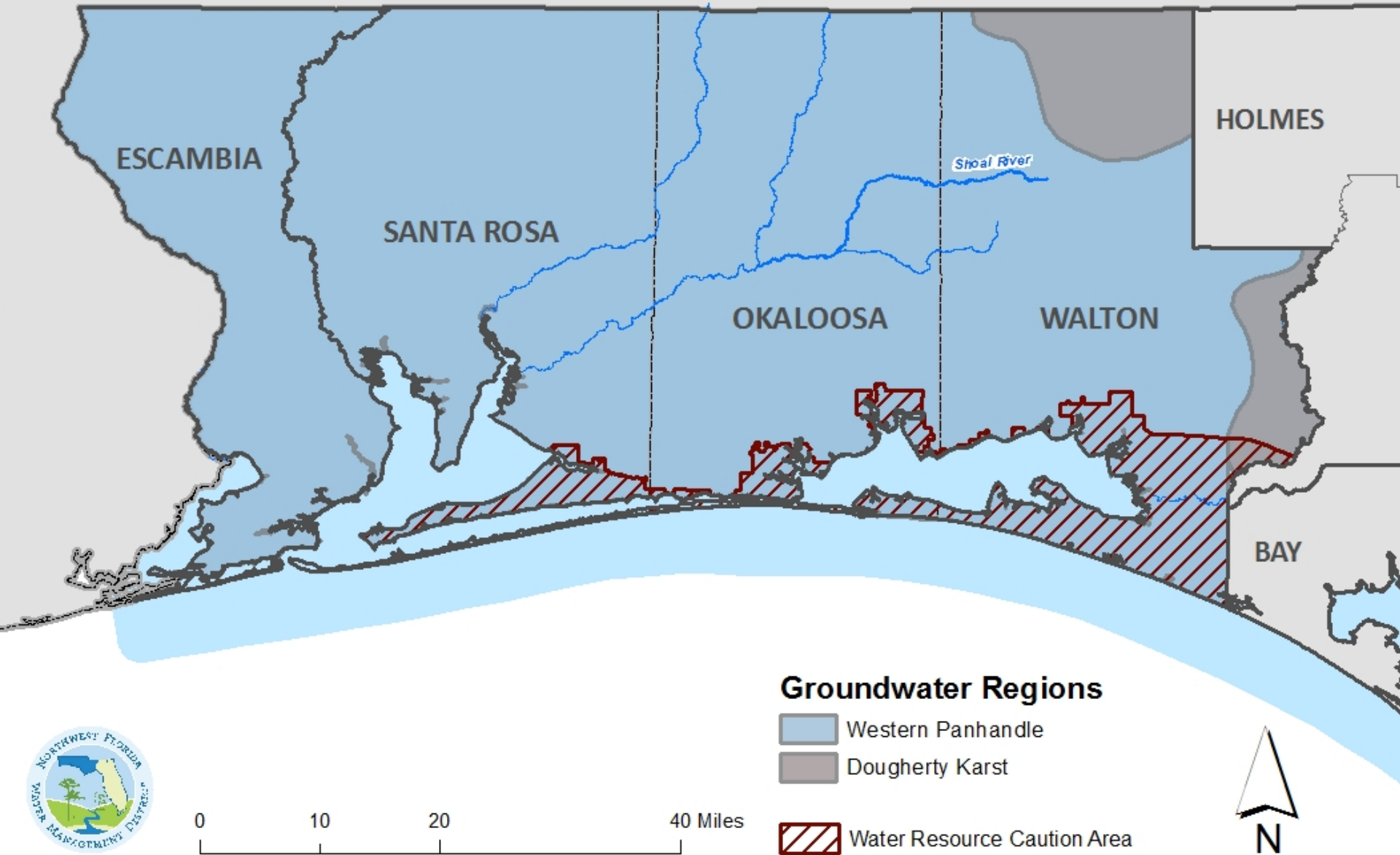
Examine changes and trends in:

- Streamflow
- Consider precipitation

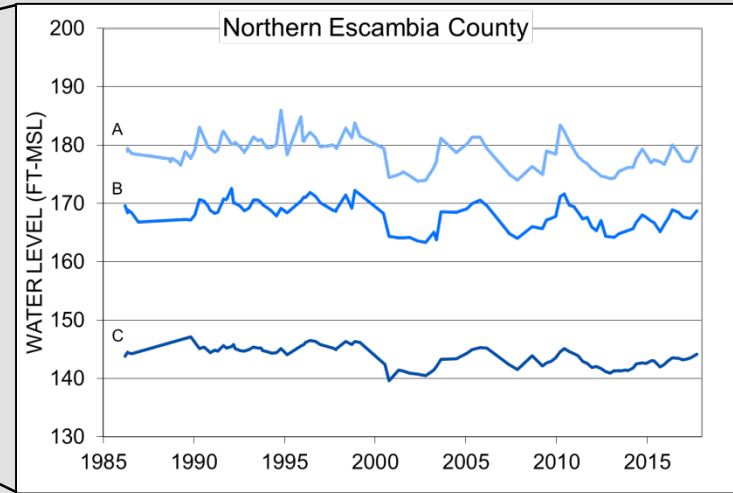
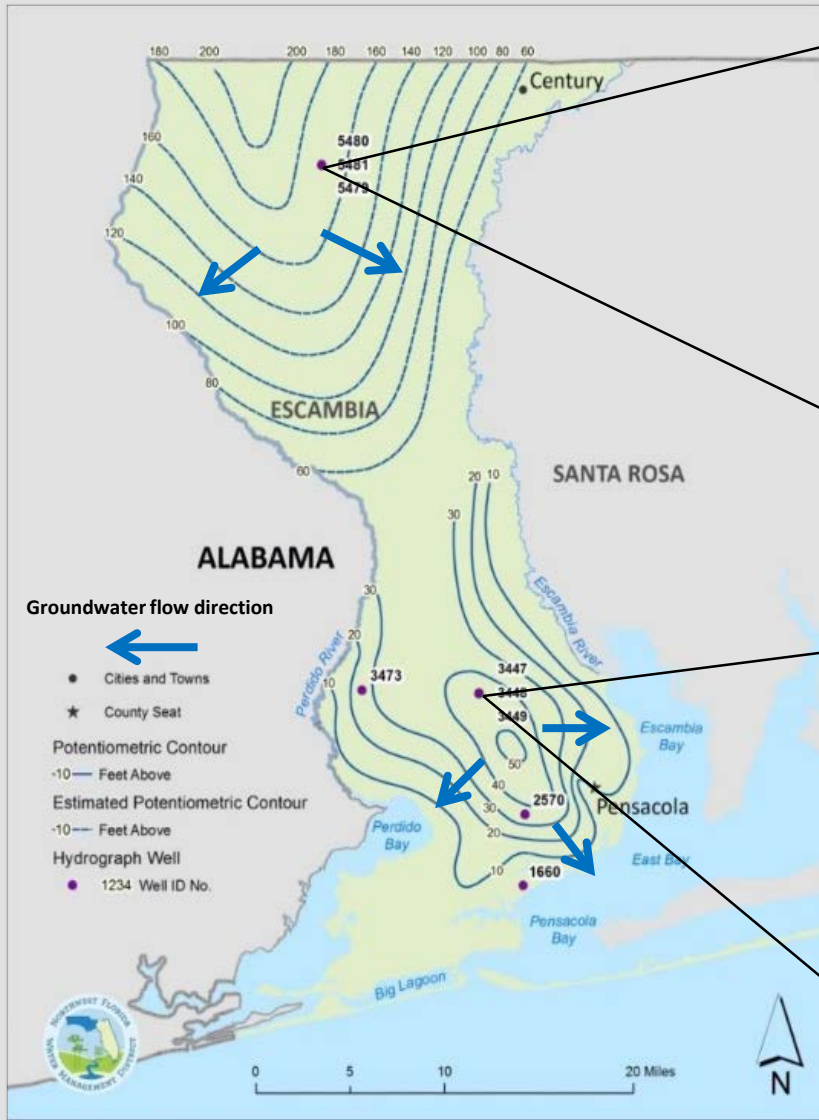




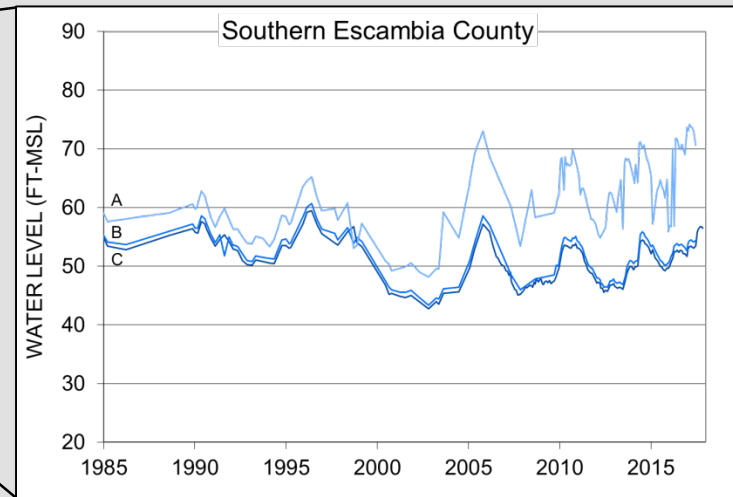
Region I and Region II



Escambia County - Region I

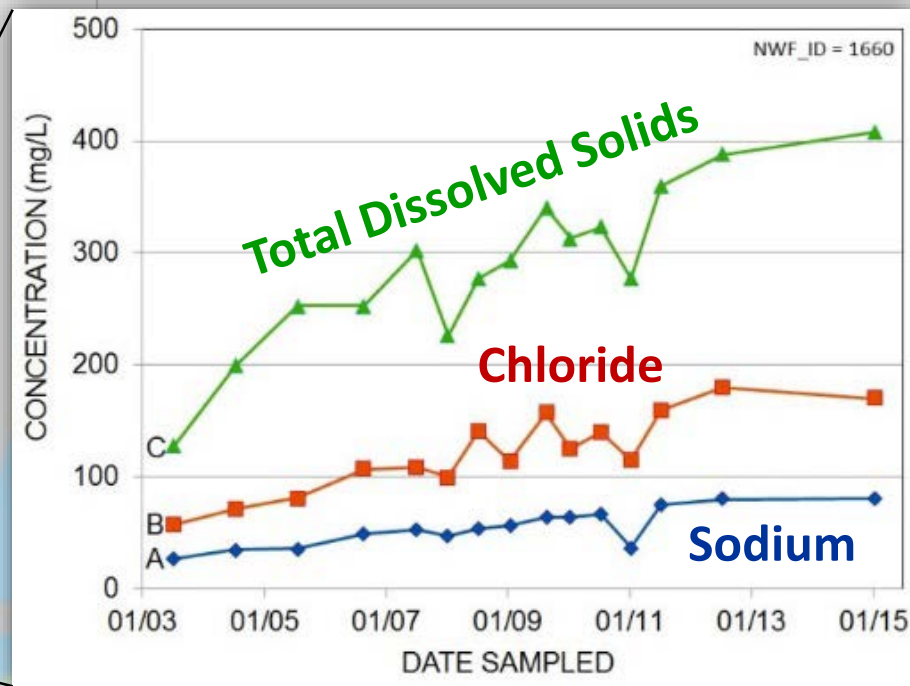
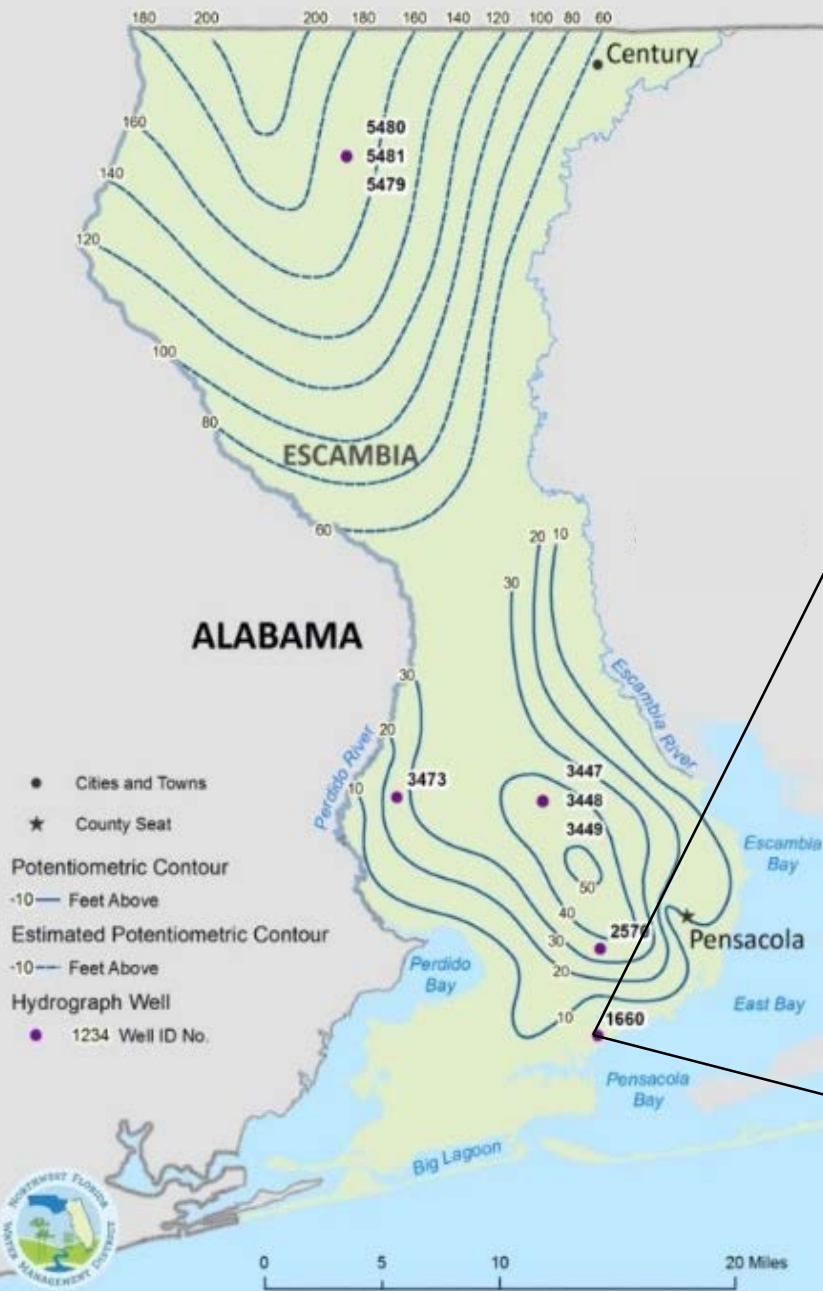


Water Level Trends



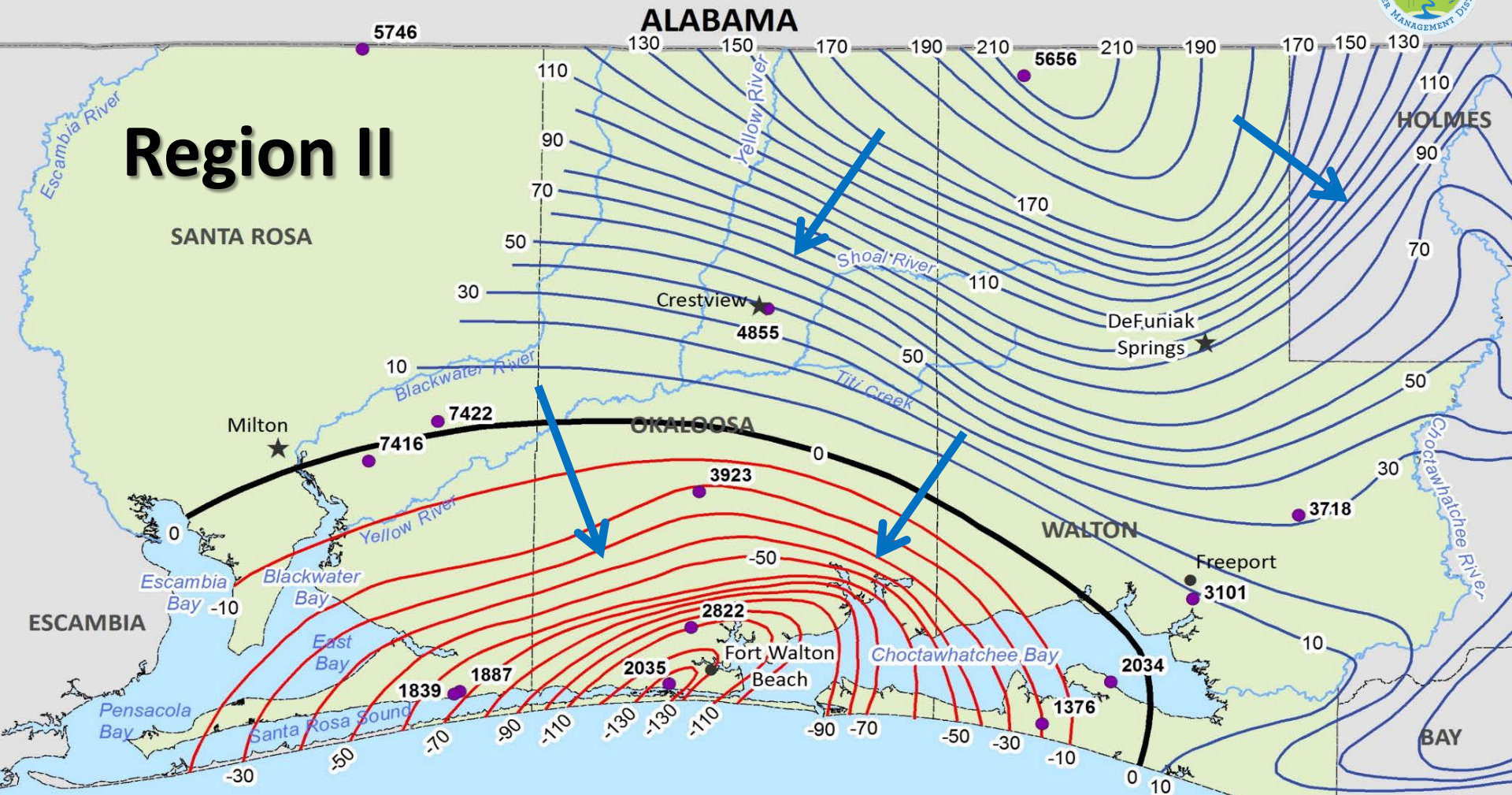


Region I Water Quality Trends





Region II



Potentiometric Contour

-10 - Feet Above MSL

0 - Mean Sea Level

-10 - Feet Below MSL

Hydrograph Well

● # Well ID No.

● Cities and Towns

★ County Seats

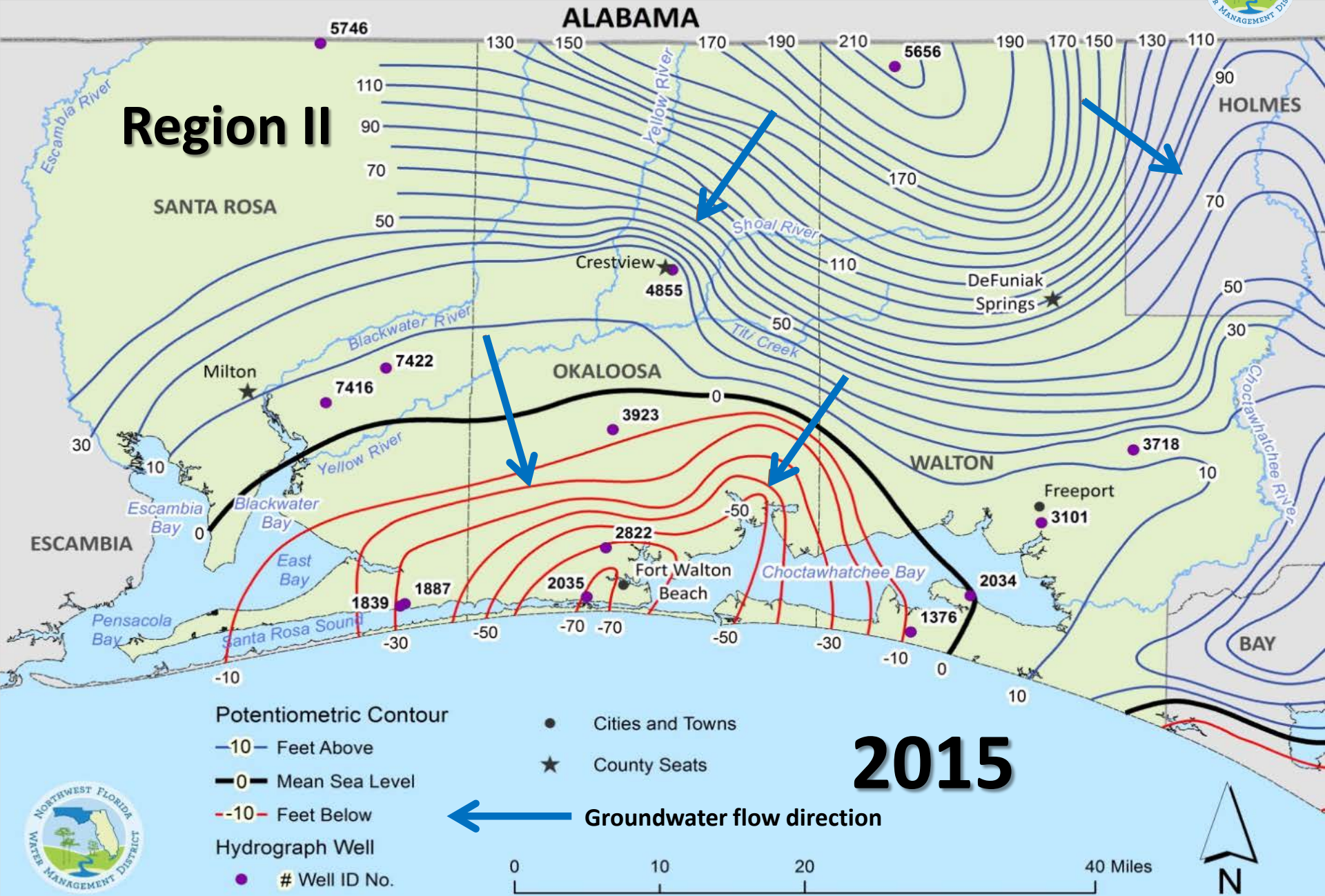
2000

← Groundwater flow direction





Region II



Potentiometric Contour

-10- Feet Above

-0- Mean Sea Level

--10- Feet Below

Hydrograph Well

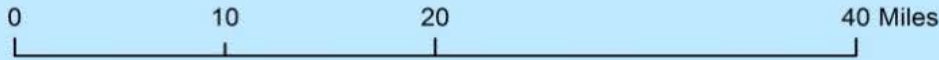
● # Well ID No.

● Cities and Towns

★ County Seats

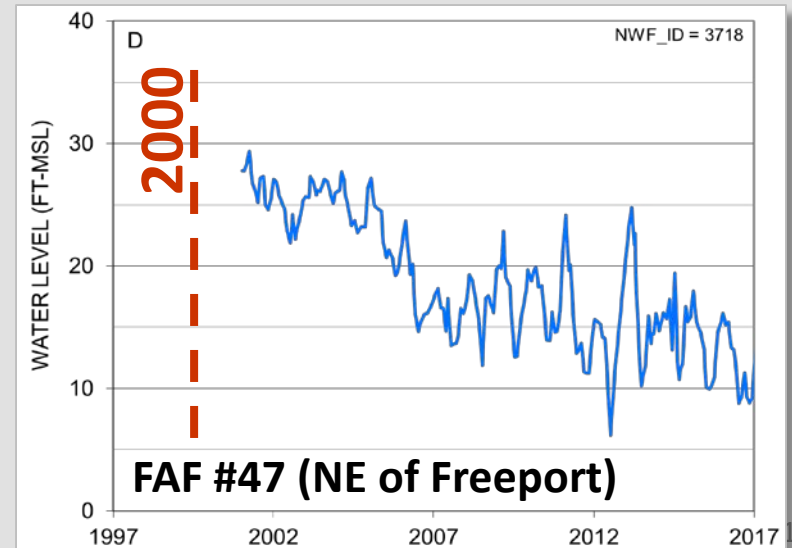
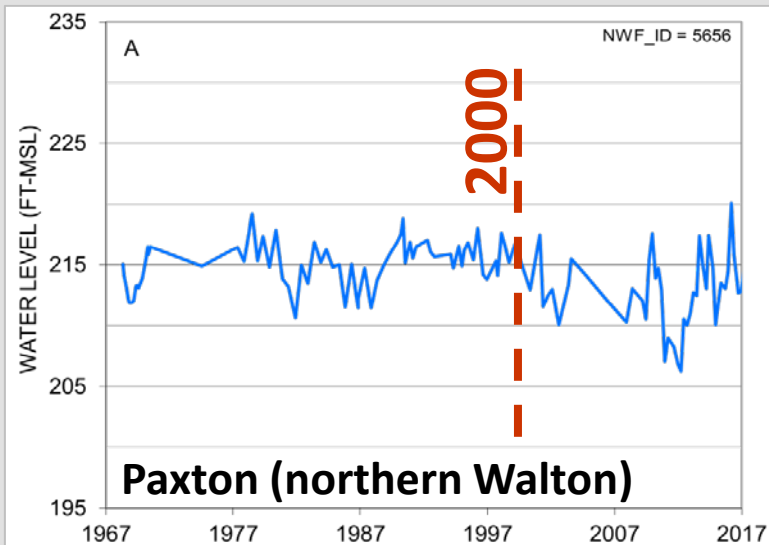
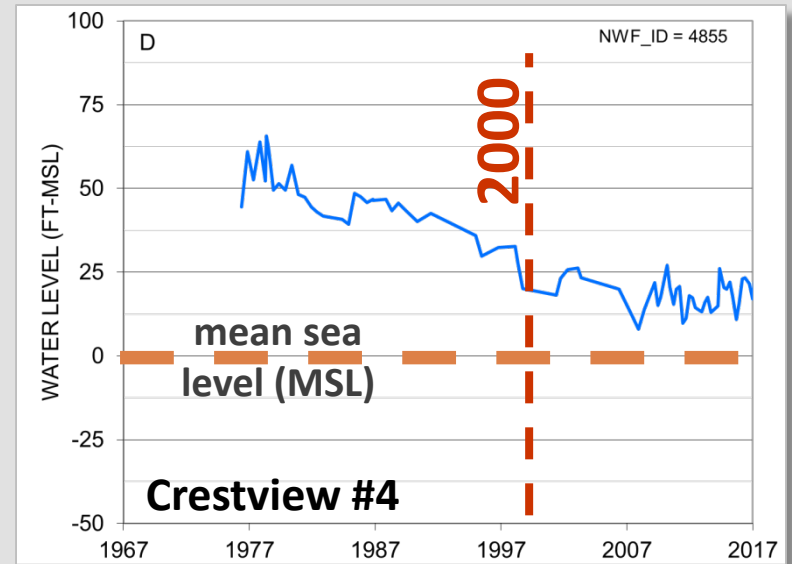
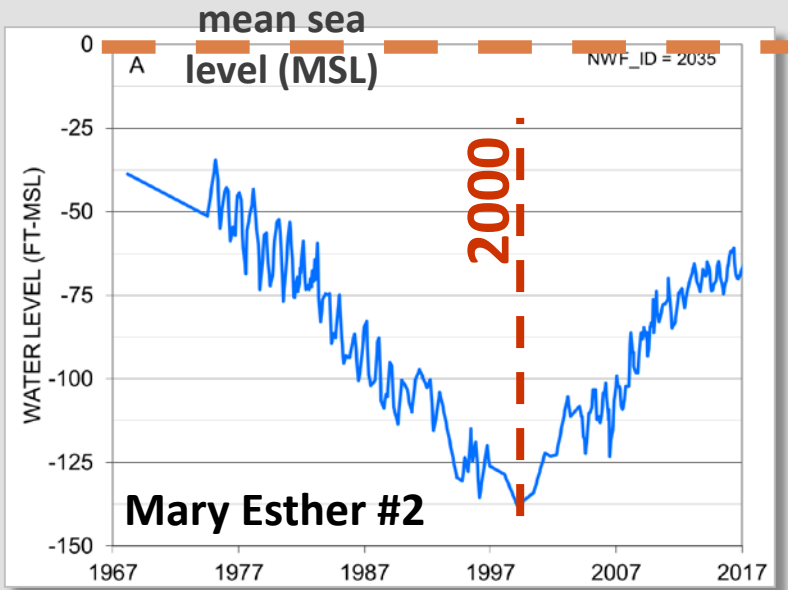
2015

← Groundwater flow direction



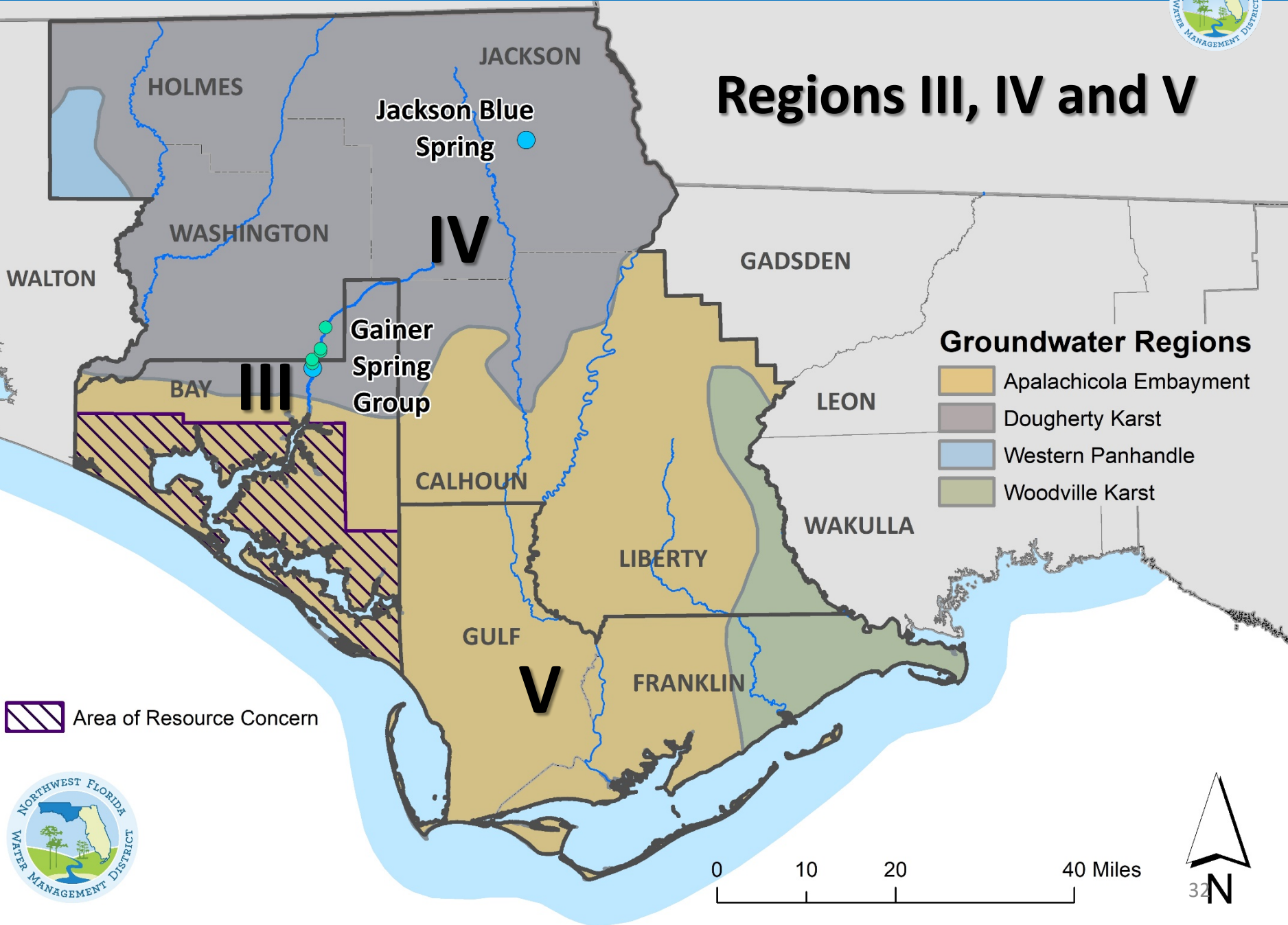


Region II Water Levels

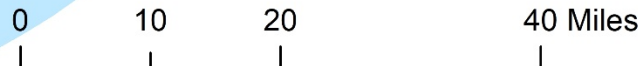




Regions III, IV and V

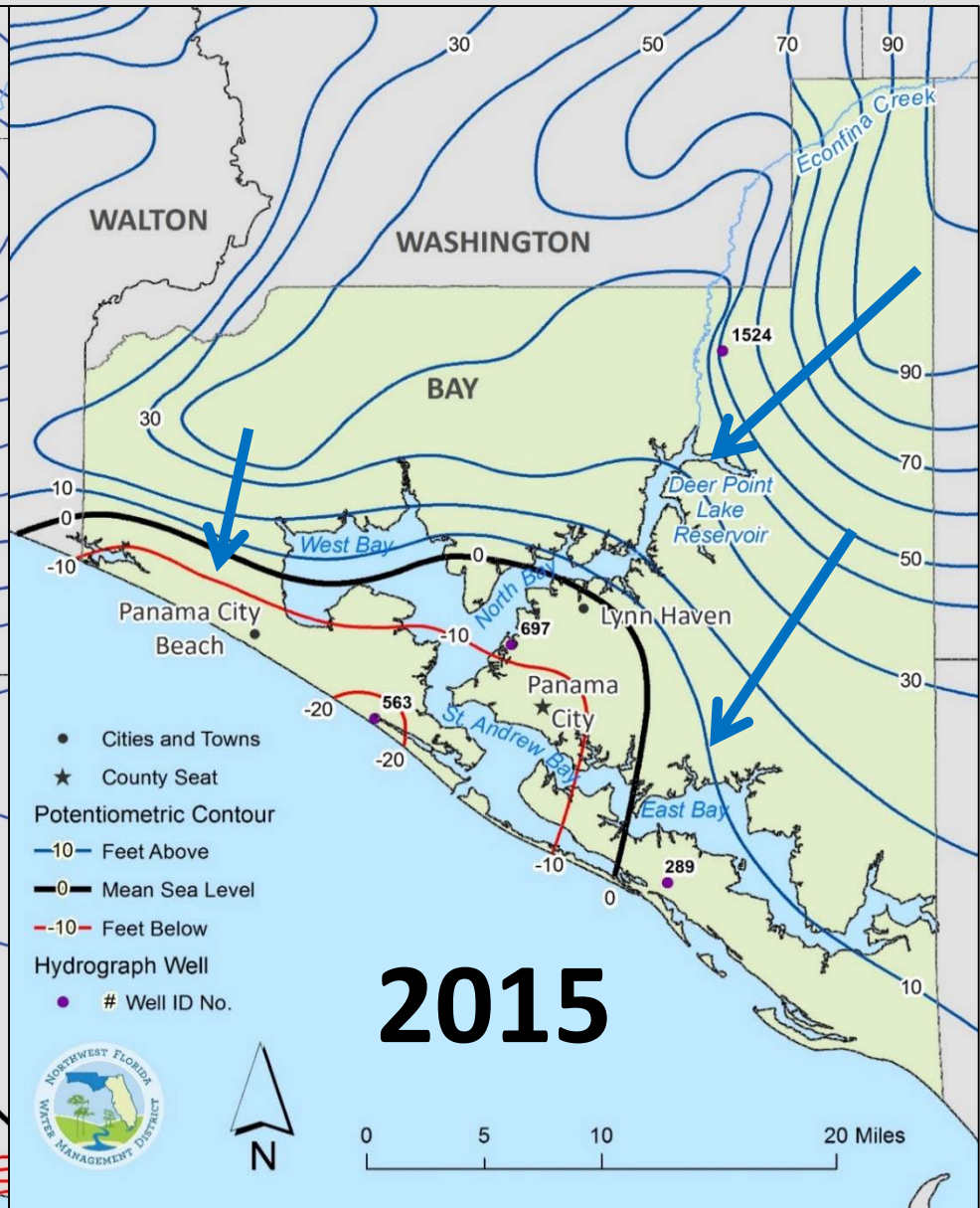
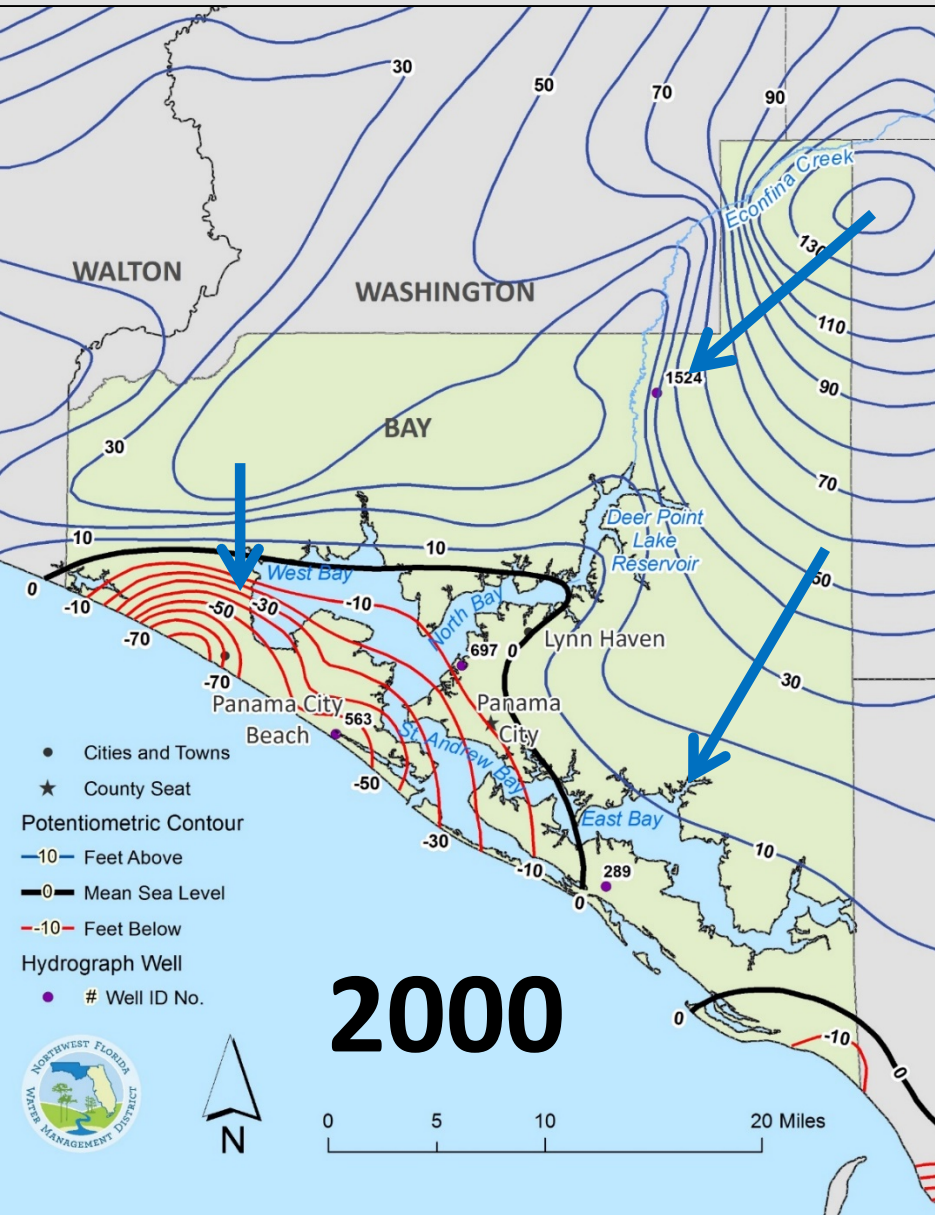


Area of Resource Concern





Bay County - Region III



Region III - Bay County Deer Point Lake Reservoir

CONCERN



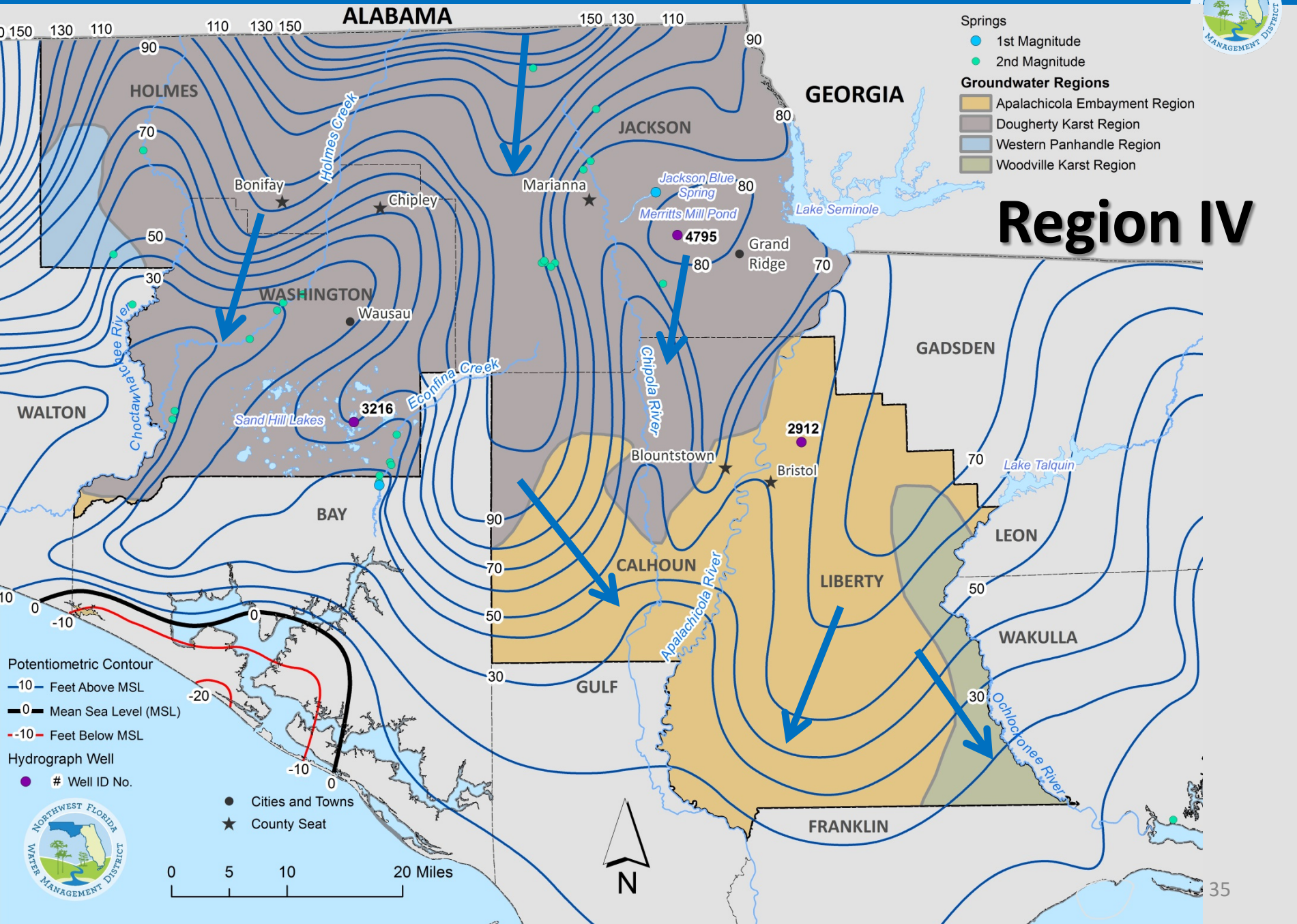
Impacts from Potential Storm Surge

SOLUTION



Alternative Pump Station, Econfina Creek

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT



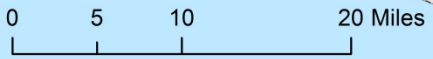
- Springs
- 1st Magnitude
 - 2nd Magnitude

- Groundwater Regions
- Apalachicola Embayment Region
 - Dougherty Karst Region
 - Western Panhandle Region
 - Woodville Karst Region

Region IV

- Potentiometric Contour
- 10— Feet Above MSL
 - 0— Mean Sea Level (MSL)
 - 10— Feet Below MSL
- Hydrograph Well
- # Well ID No.

- Cities and Towns
- ★ County Seat

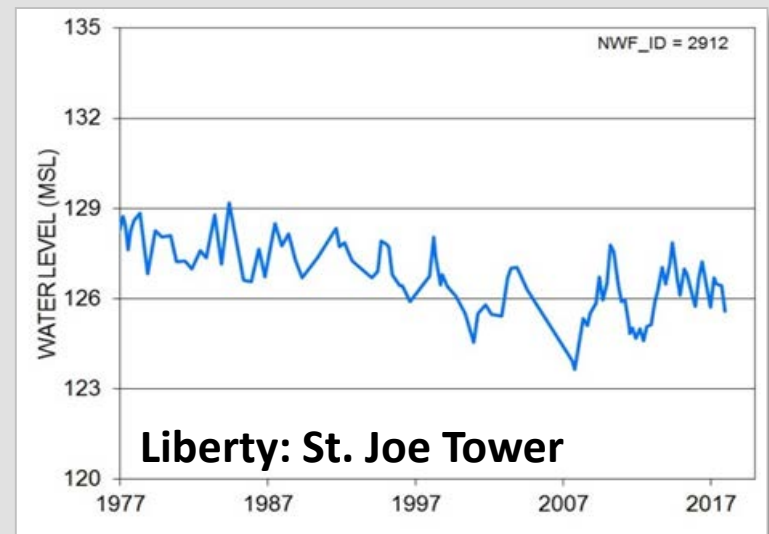
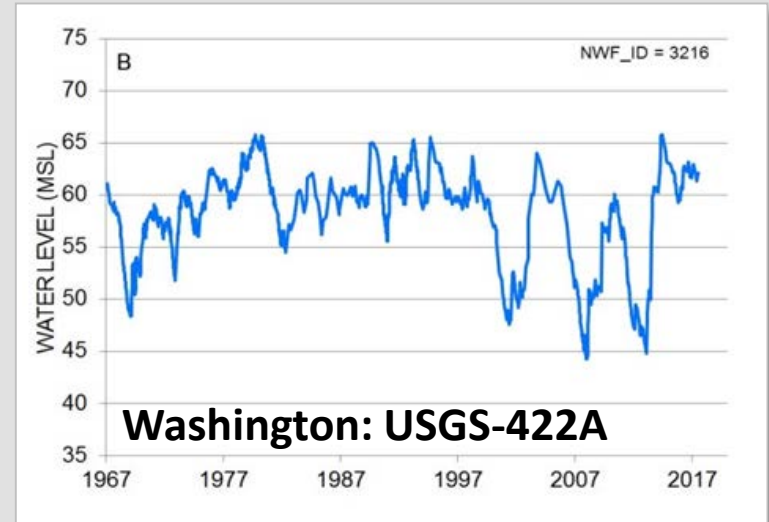
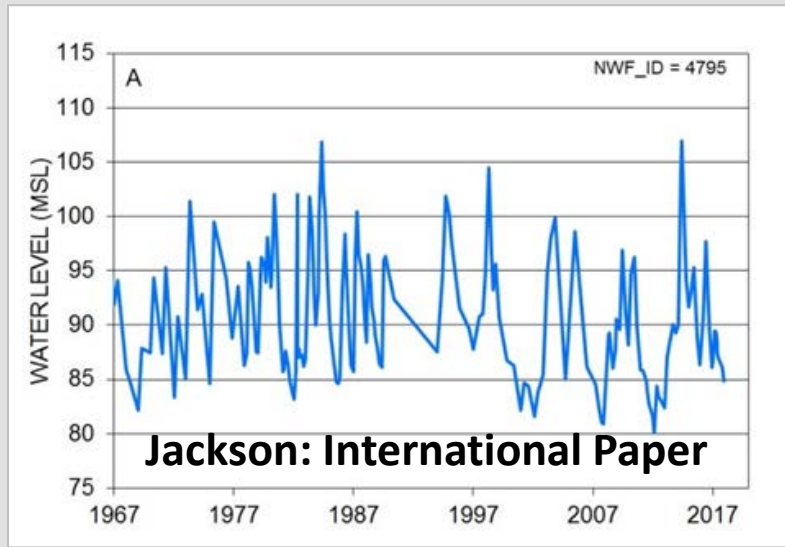




Region IV Groundwater Resources

Dougherty Karst Plain

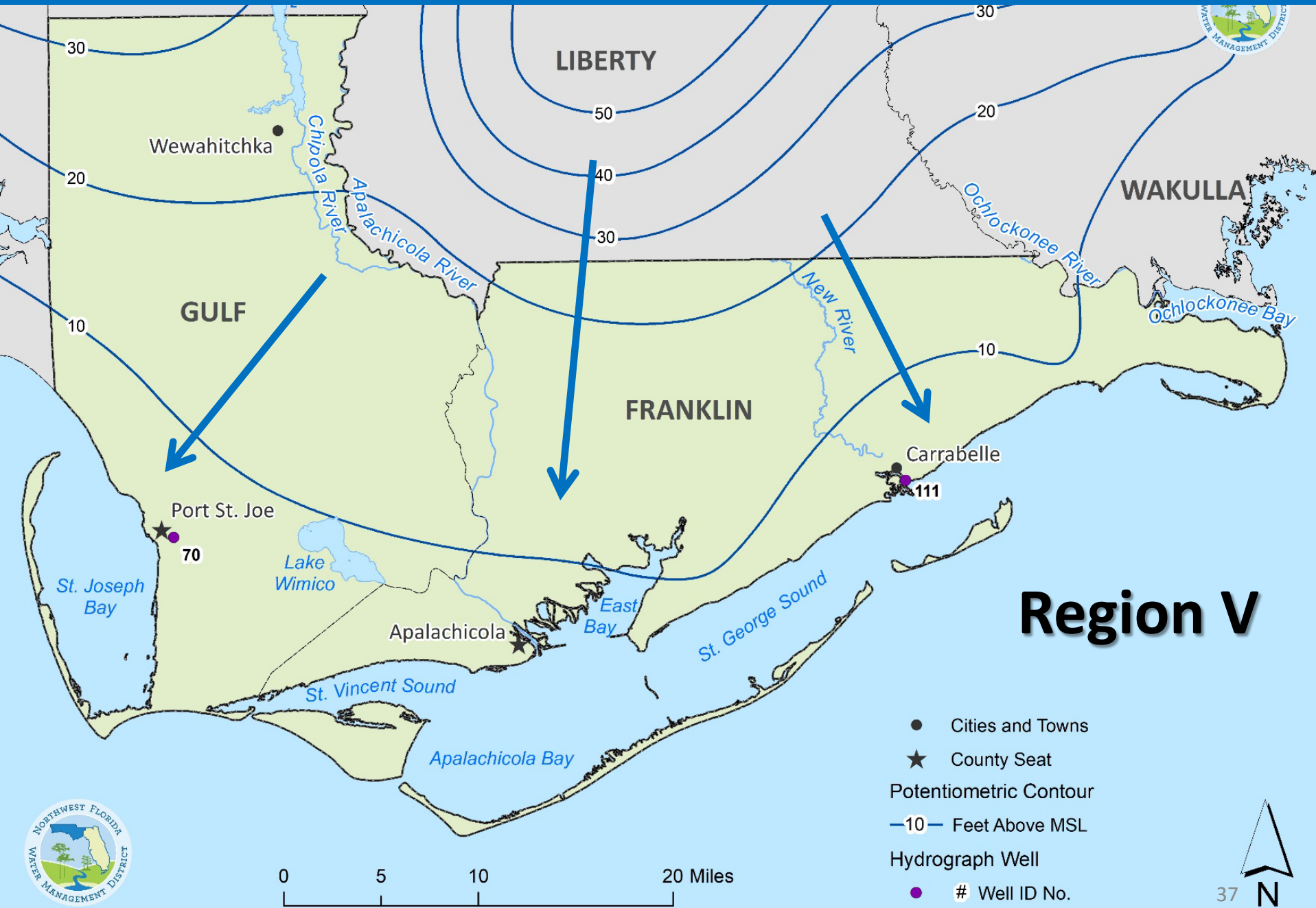
- Jackson, Holmes, and Washington counties



Apalachicola Embayment

Calhoun and Liberty counties

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

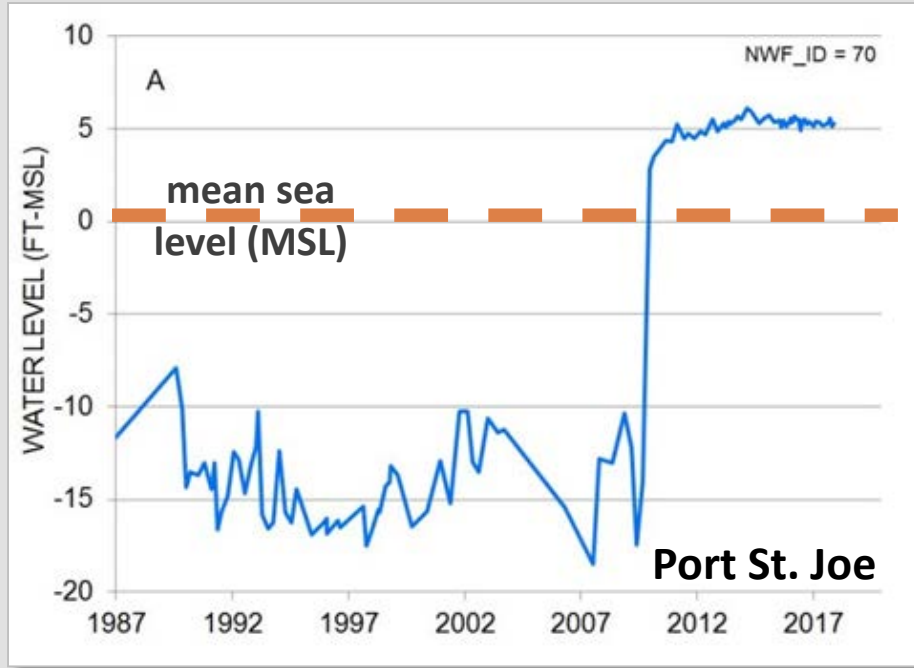


Region V

- Cities and Towns
- ★ County Seat
- Potentiometric Contour
- 10— Feet Above MSL
- Hydrograph Well
- # Well ID No.



Region V Ground and Surface Water Resources



CONCERN

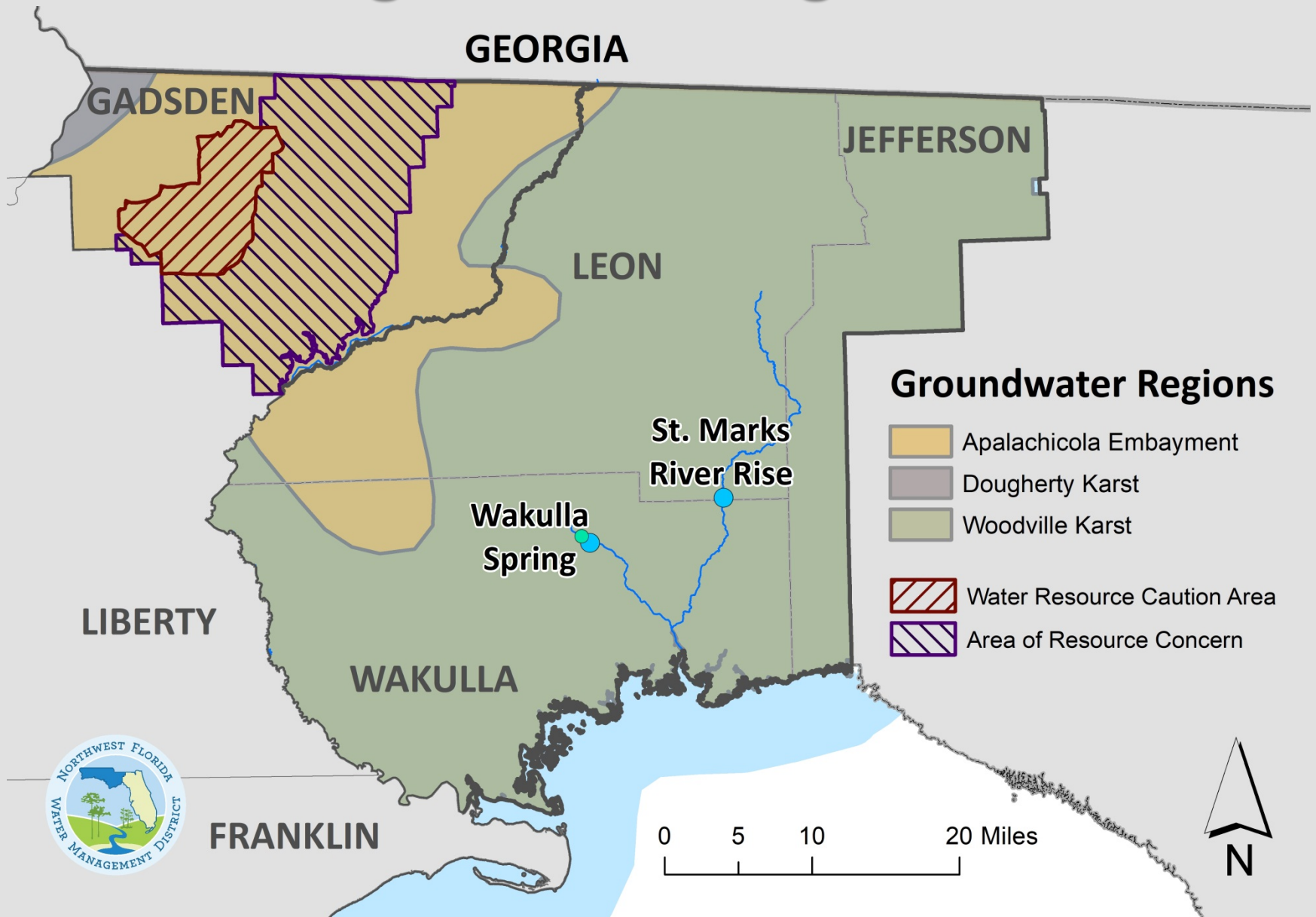
Recovery and stabilization of coastal groundwater levels



St. Joe Surface Water Treatment Plant

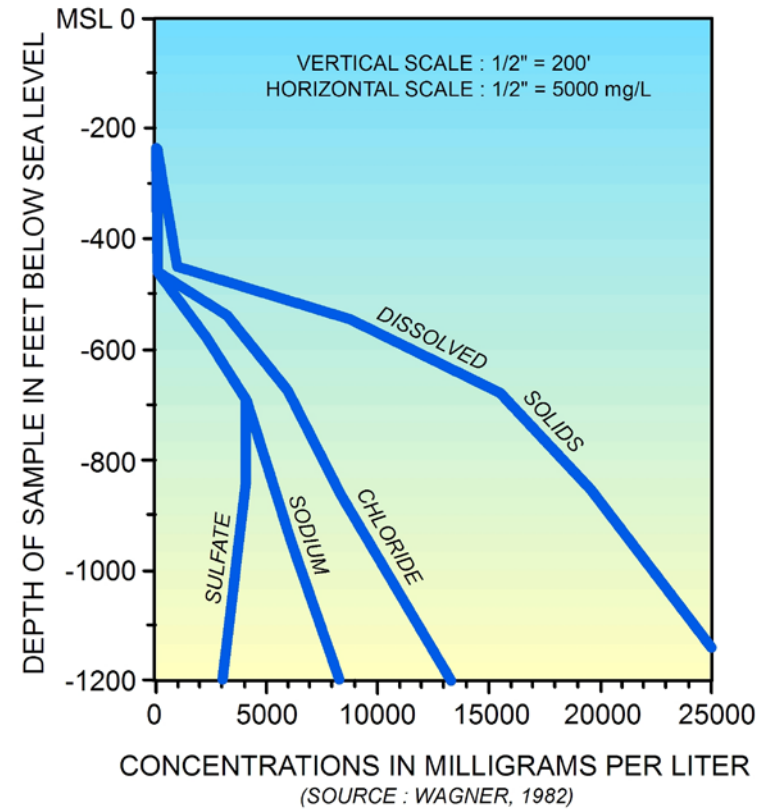
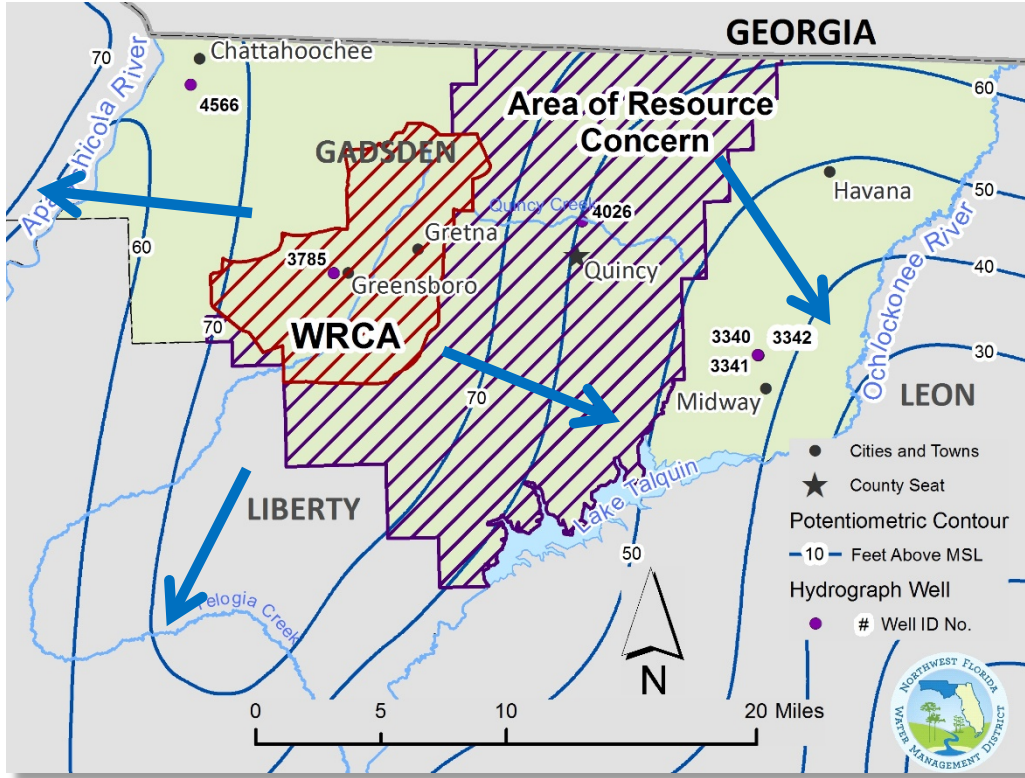


Region VI and Region VII



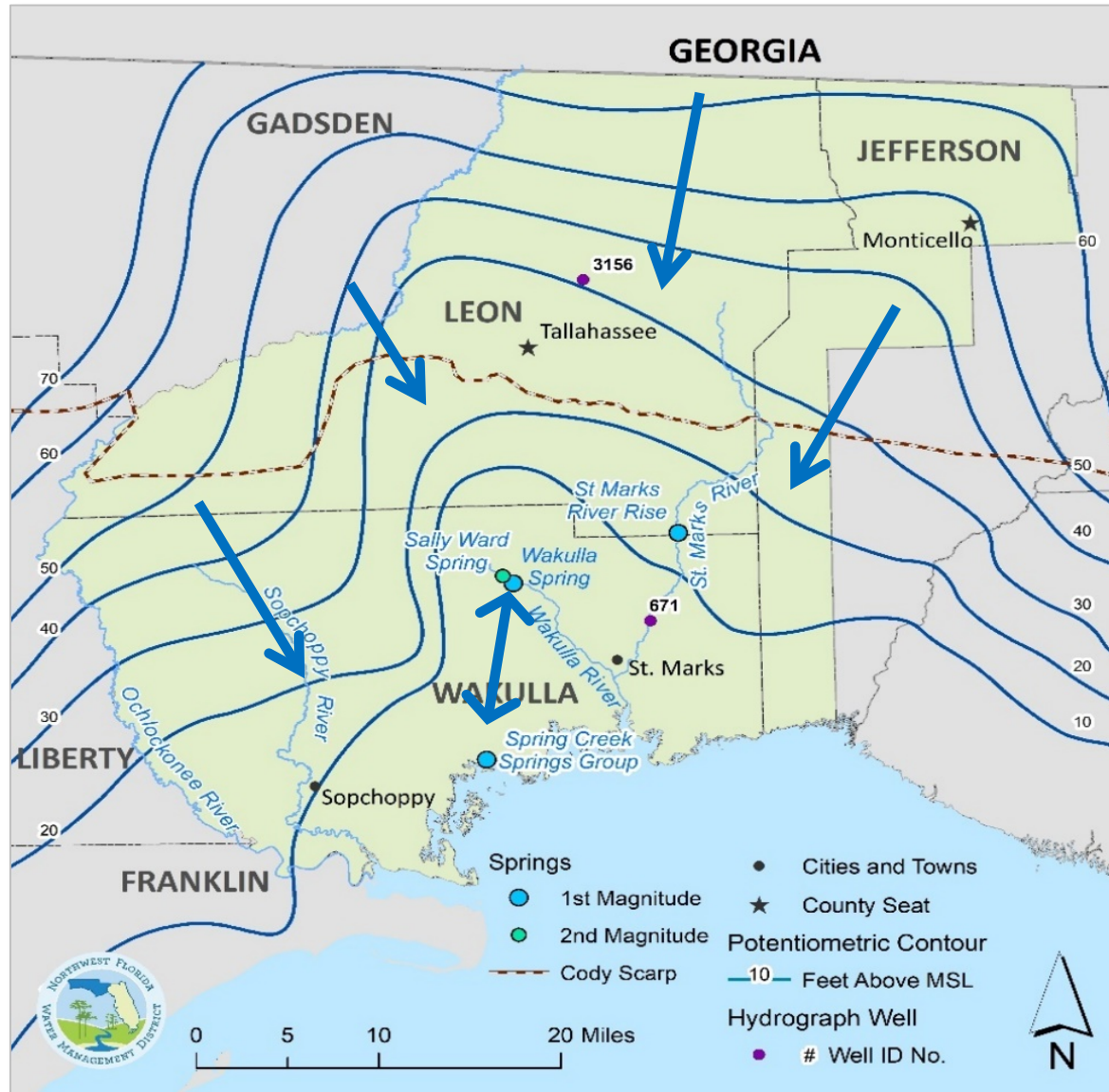


Region VI - Gadsden County





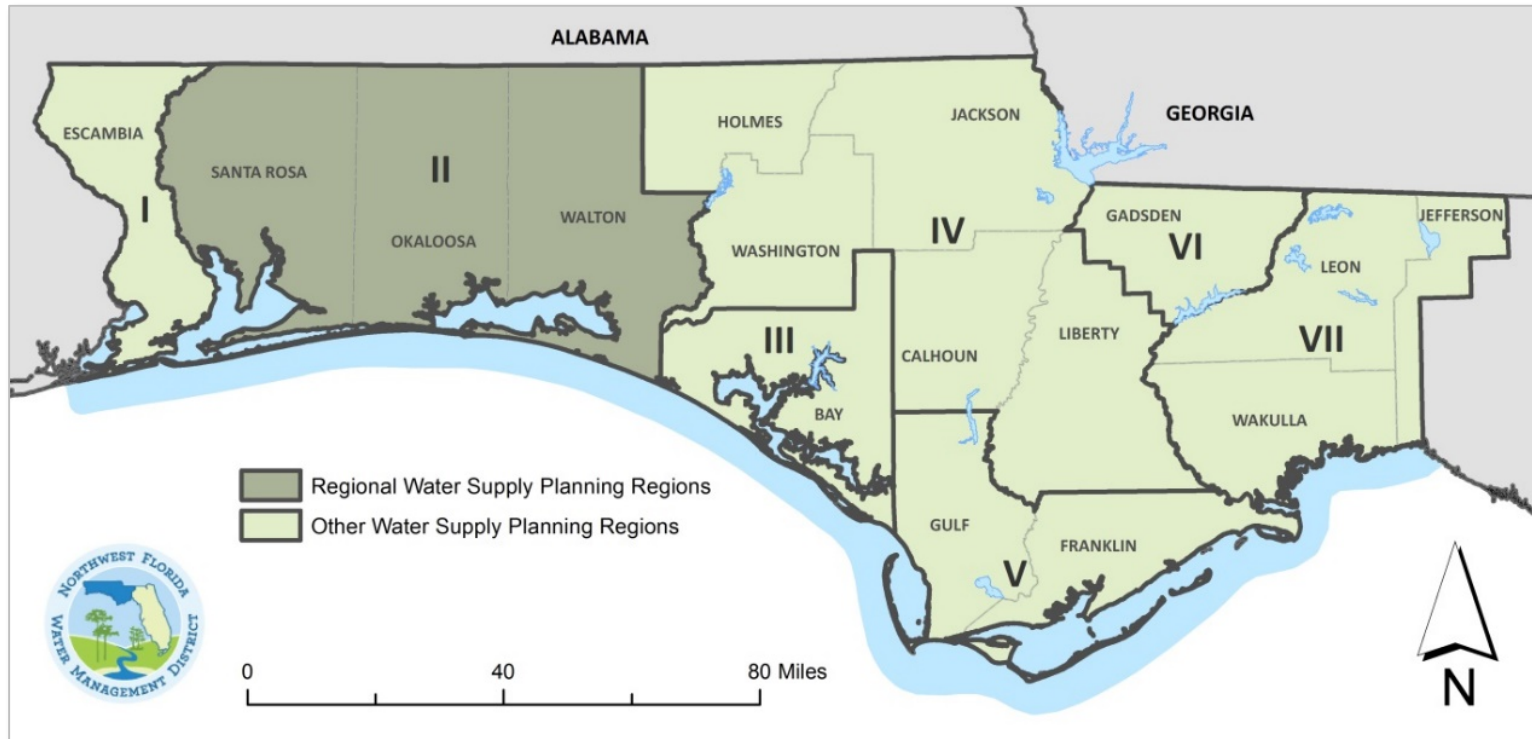
Region VII





2018 WSA - Draft Recommendations

1. Continue Region II and Discontinue Region III RWSPs



2. No other RWSPs recommended



Next Steps

- **Draft 2018 WSA Report**
www.nwfwater.com
- **Public / Stakeholder Comment Period**
- **Final WSA 2018 Report**
Governing Board Approval