

# Suwannee River Water Management District Water Supply

A photograph of a river with clear, shallow water flowing over rocks and sand. The background shows a wooded area with trees and fallen branches.

Alachua County League of Women Voters, October 12, 2011

# SRWMD Per Capita Water Use

# Change in Per Capita Use Over Time....

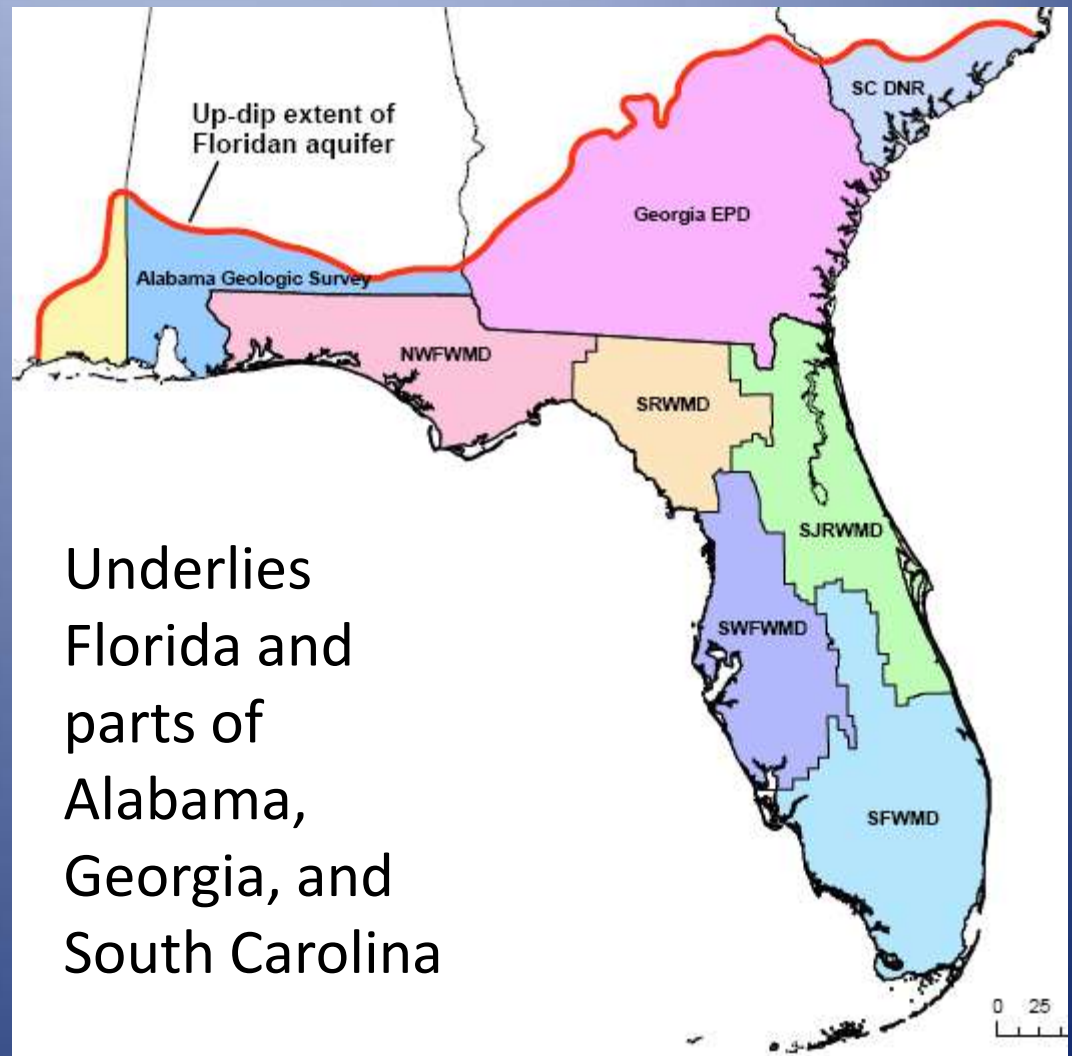
- ....Not Much!
  - Public supply water use Districtwide in 2010: approx. 23 mgd (AG 127, I/C/Inst. 85 mgd)
- Residential per capita within PS service areas
  - 65 to 70 gpd (not much lawn watering)
- Gross per capita (all uses within service areas)
  - 110 to 120 gpd



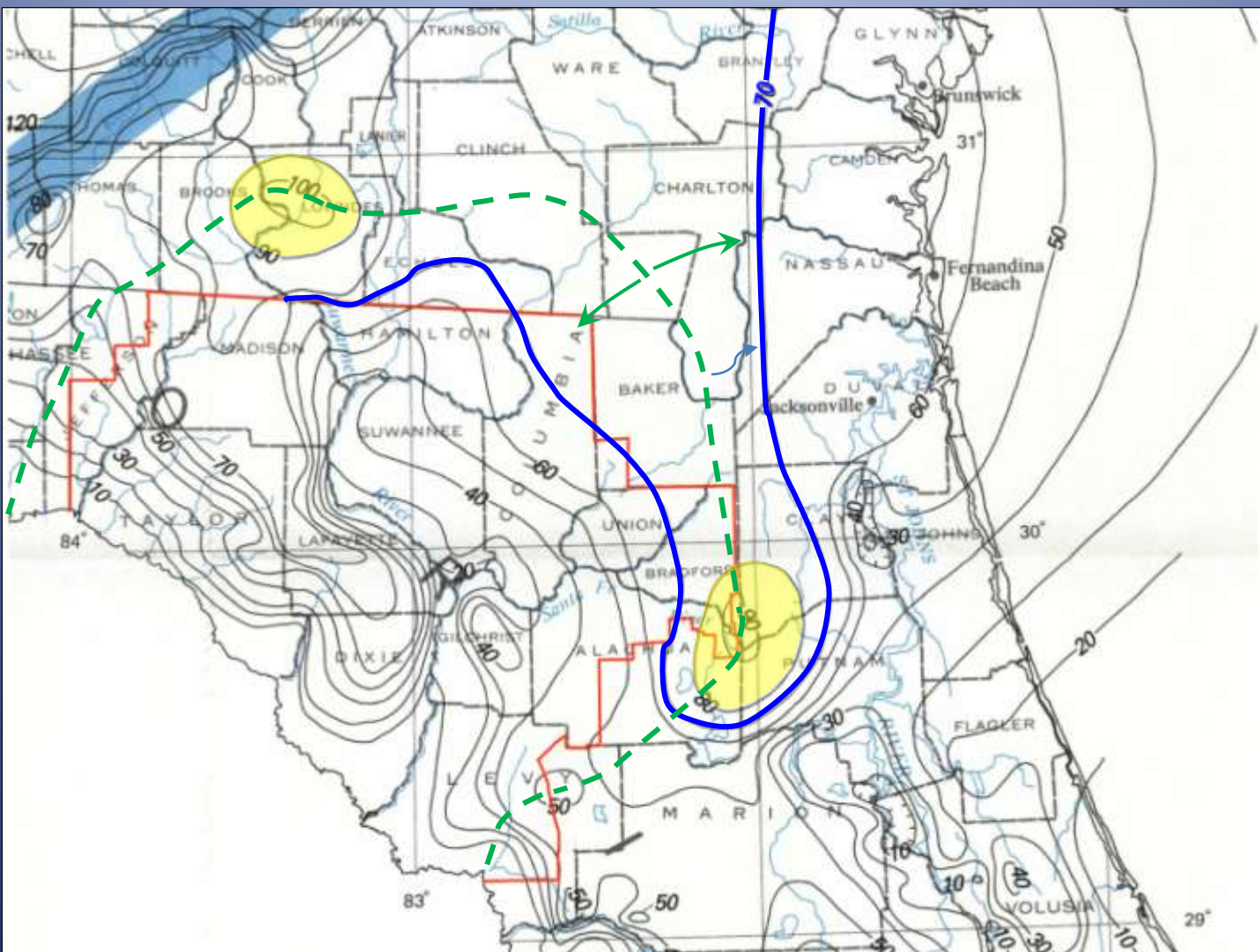
# Groundwater Level Changes Over Time

# Extent of the Floridan Aquifer System

- Underlies an area of about 100,000 square miles
- Groundwater withdrawals averaged 3.6 BGD in 2000

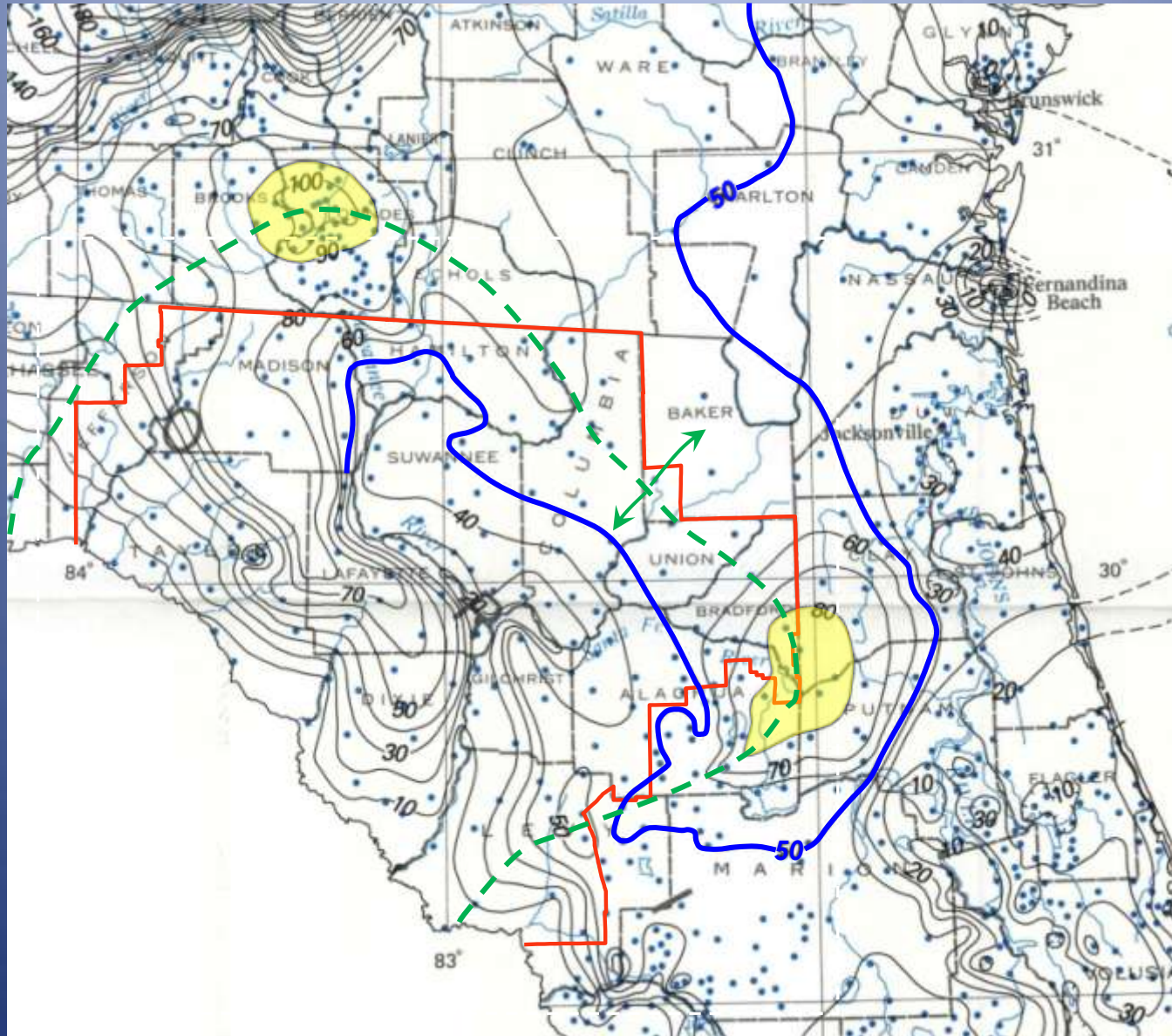


# Estimated Upper Floridan Aquifer (UFA) Pre-development Potentiometric Surface



After: USGS Professional Paper 1403-C, Plate 4, 1988

# Potentiometric Surface of the UFA, May 1980

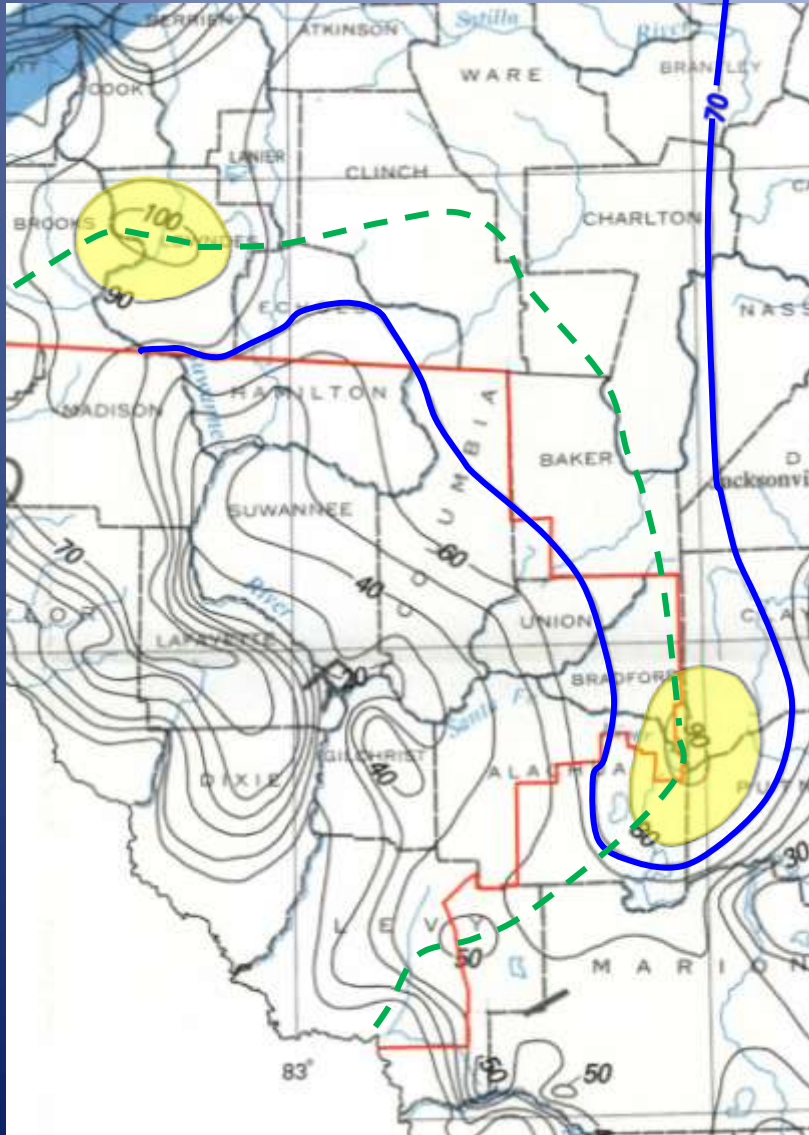


From: USGS Professional Paper 1403-C, Plate 5, 1988

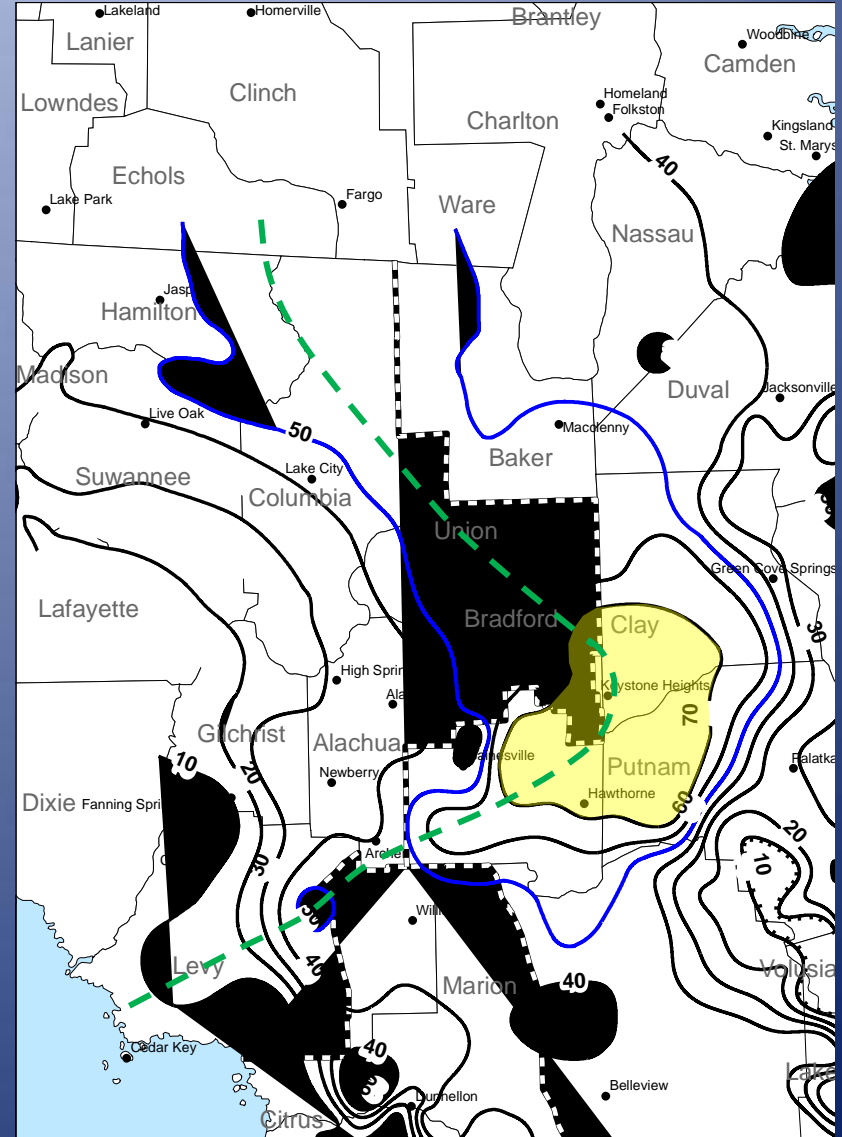


# Comparison of Pre-development and 2099 UFA Pot Surfaces

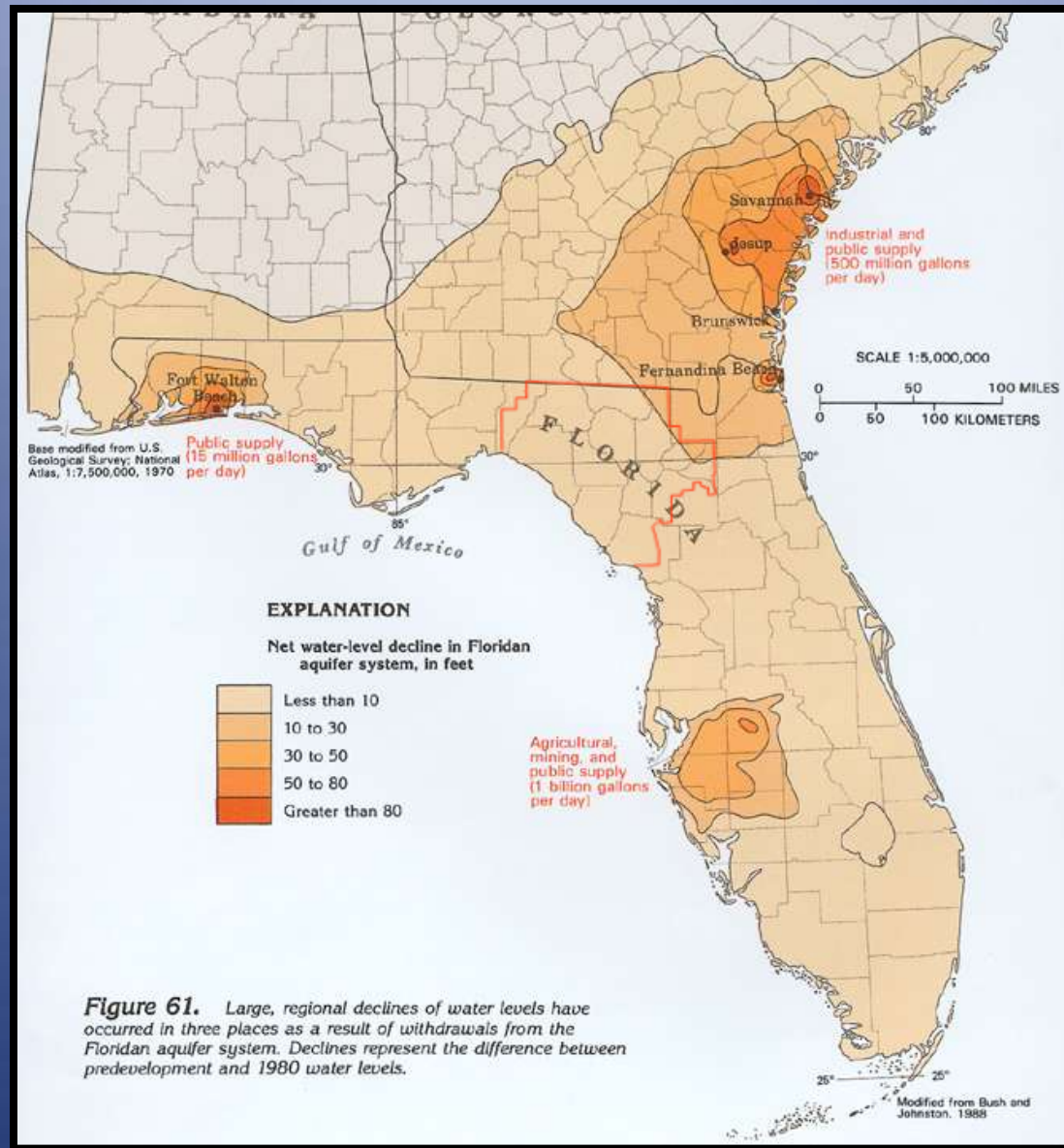
## Pre-development



## 2099

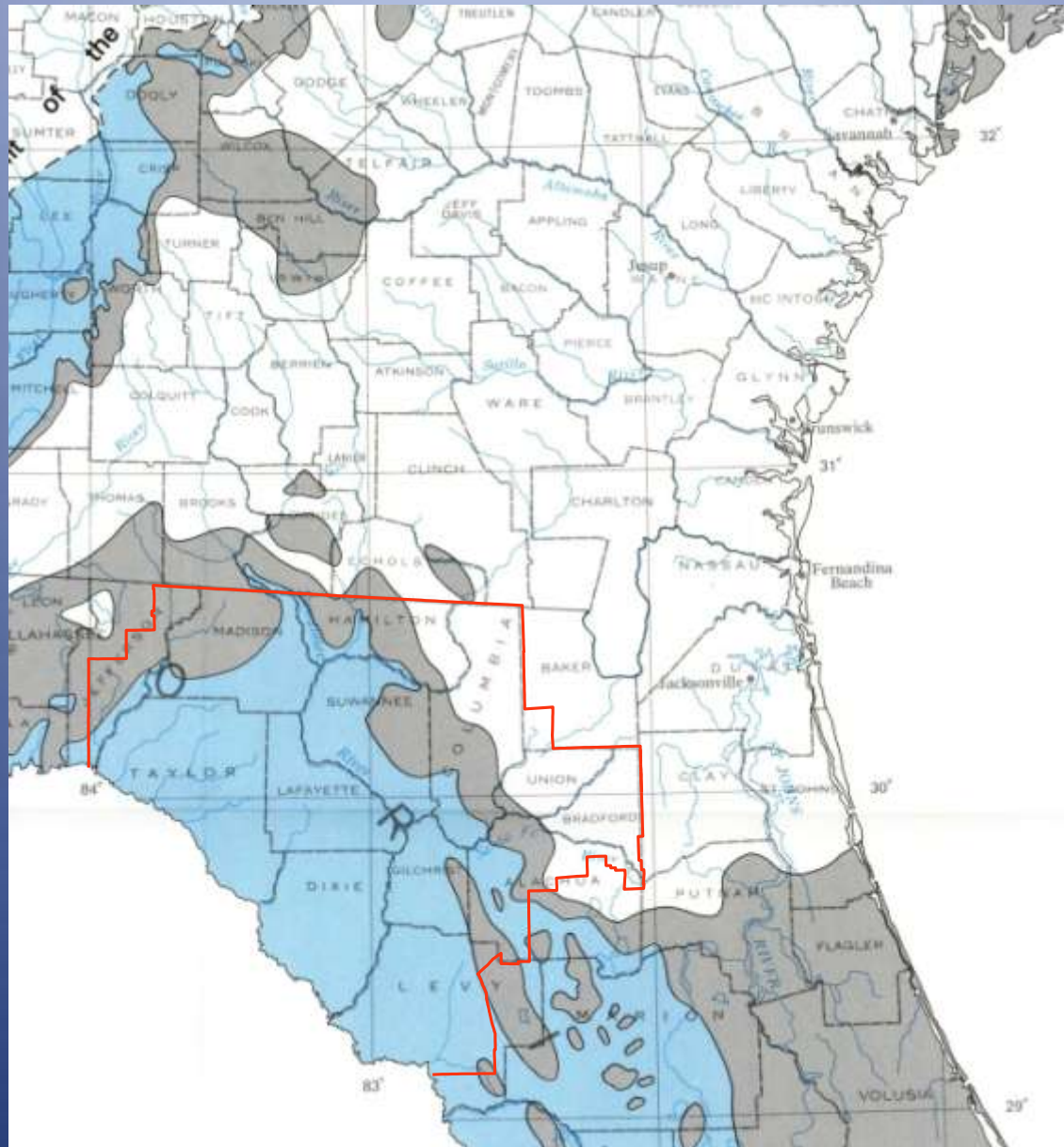


# Decline in the Potentiometric Surface of the UFA; Pre-development to 1980 (in feet)



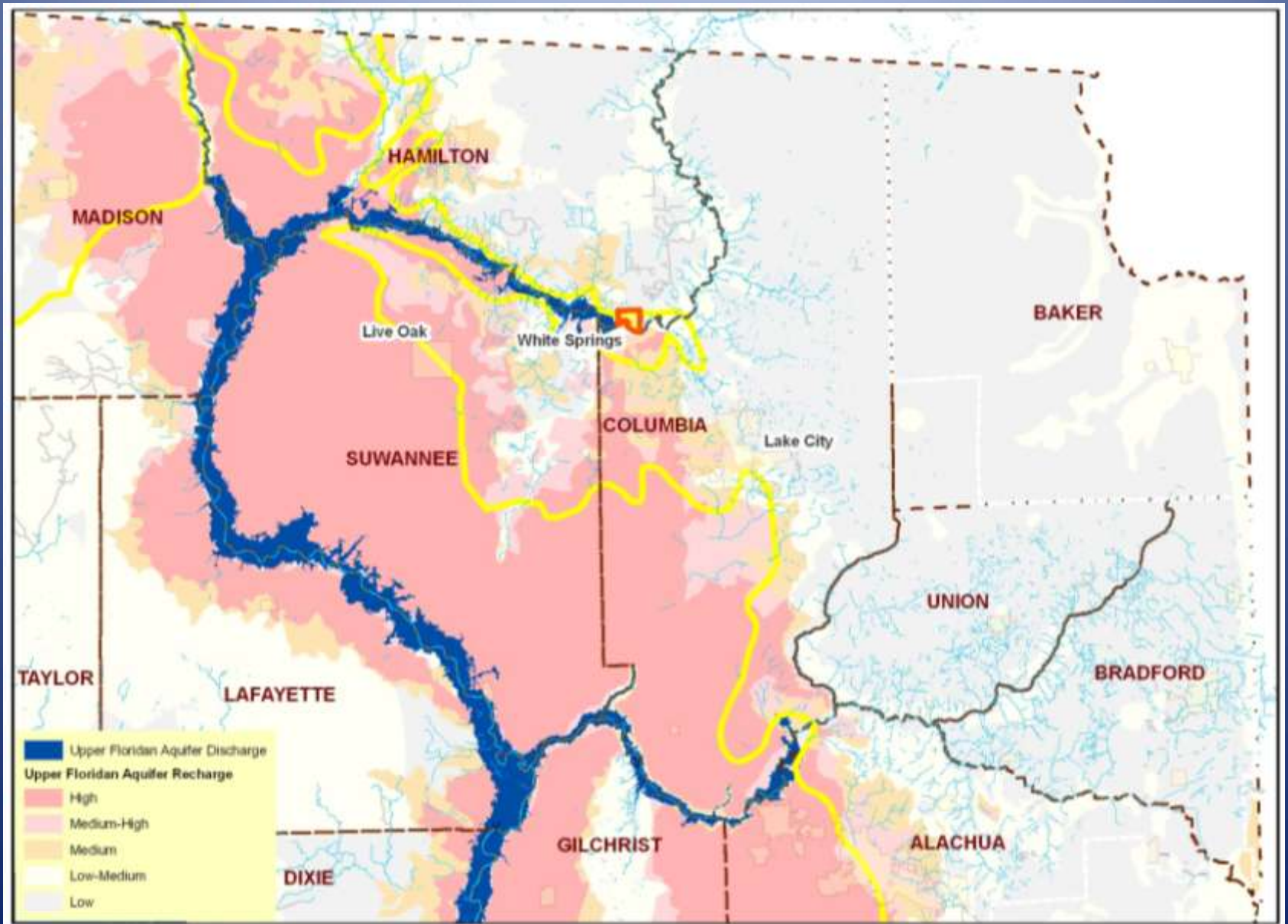
**Figure 61.** Large, regional declines of water levels have occurred in three places as a result of withdrawals from the Floridan aquifer system. Declines represent the difference between predevelopment and 1980 water levels.

# General Degree of UFA Confinement



From: USGS Professional Paper 1403-C, Plate 1, 1988

# UFA Recharge / Discharge



# Consequences of Regional Water Level Declines

- Existing:
  - White Sulphur Springs cessation of flow
  - Decreased flow in the Ichetucknee River
- Predicted:
  - Lower Santa Fe River and Springs
- Solutions:
  - MFLs being set on the Lower Santa Fe River and Ichetucknee
  - Working with the SJRWMD and FDEP through an Interlocal Agreement (September 2011)

# SRWMD Conservation Initiatives

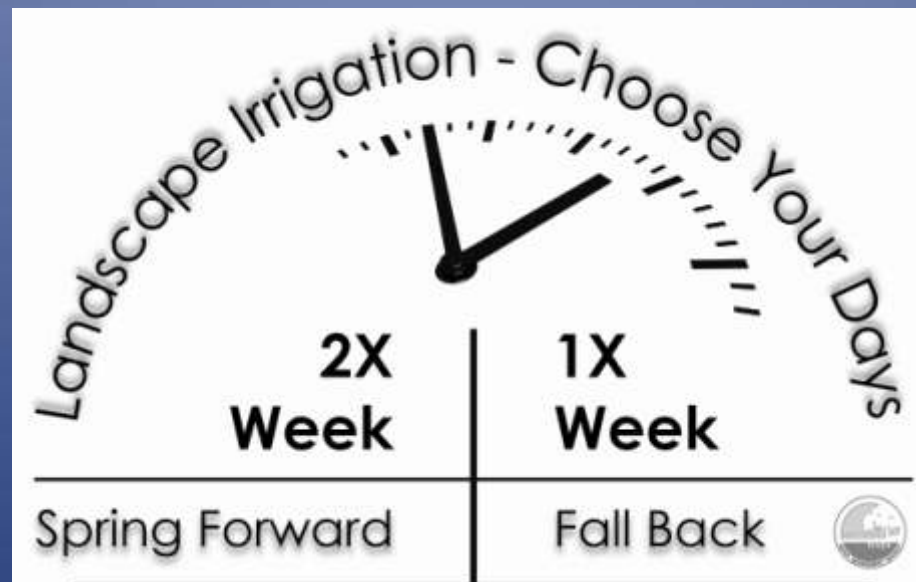
# Reducing Water Consumption for all Water Use Sectors

- Water Conservation
  - Non-Agricultural (e. g., public supply, industrial)
  - Agricultural

# Non-Agricultural Water Conservation Potential

Water-Use Category	2030 Water Conservation Potential (mgd)
Public Supply	4
Domestic Self Supply	5
Prisons	1
Industrial, Commercial, Institutional	4
Recreational (golf course)	<1
Total	14

# SRWMD Conservation Initiative



## Columbia County CHAMP Program (Water Conservation Hotel and Motel Program)

- Created by the SWFWMD (more than 450 participants in west-central FL)
- Initiated September 2011 in the SRWMD
  - 5 lodging properties in Lake City area
- Towel and linen reuse for multiple-day stays
  - Water and energy cost savings
  - Reduce detergent use
  - Replace old fixtures with water efficient fixtures when possible

# Agricultural Water Conservation

- Best Management Practices (overhead)
  - Metering
  - Efficient irrigation scheduling
  - Rain and soil moisture sensors
  - Efficient spray nozzles
  - Routine maintenance and upgrades
- Suwannee River Partnership
  - Approx. 1 billion gallons saved per growing season

# Agricultural Water Conservation Potential

<b>Agricultural Water Use in the SRWMD (2030 Low-Range Demand)</b>	<b>Overhead Irrigation Use</b>	<b>10% Reduction in Overhead Irrigation Use</b>
<b>127 mgd</b>	<b>111 mgd</b>	<b>11</b>

# Summary – Conservation Potential for the 2010 – 2030 Planning Period

<b>2010 – 2030 Planning Period Demand Increase (all user groups)</b>	<b>2030 Water Conservation Potential (non-AG and AG)</b>	<b>Surplus (+) / Deficit (-)</b>
<b>12 mgd (low-range demand projection)</b>	<b>25 mgd</b>	<b>+13 mgd</b>
<b>64 mgd (high range demand projection)</b>	<b>25 mgd</b>	<b>- 39 mgd</b>

# Additional Resources and Contacts

- [www.mysuwanneeriver.com](http://www.mysuwanneeriver.com)
- [www.sjrwmd.com](http://www.sjrwmd.com)