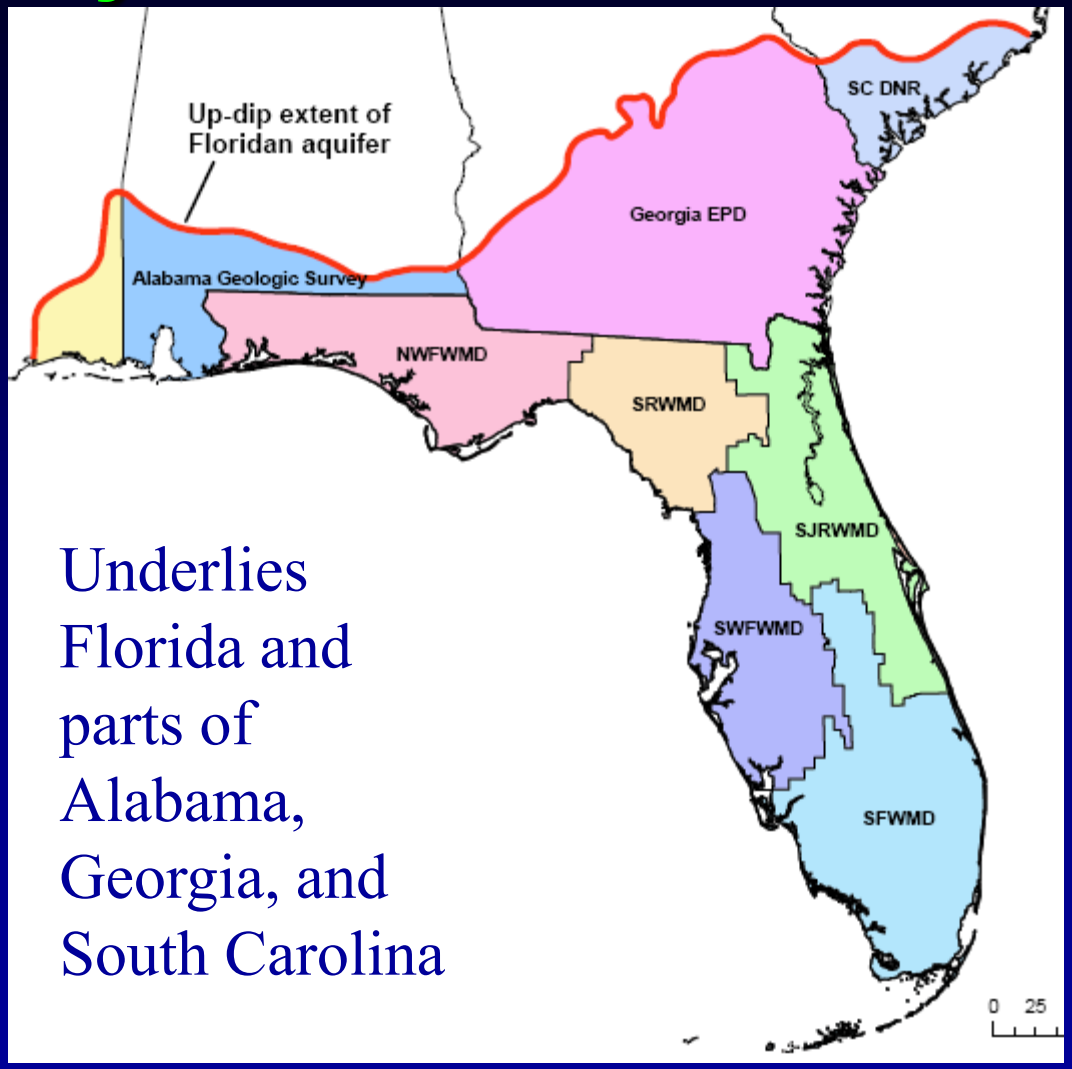
Water Supply in Northeast Florida

Presentation Outline

- Floridan aquifer system observations
  - Regional Drawdown
  - Geology
  - Local area water level data
- Water resources management moving forward

Extent of the Floridan Aquifer System

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



Underlies Florida and parts of Alabama, Georgia, and South Carolina

From: USGS FAS GW Availability Update Presentation, 1/7/11

Declines in Floridan Aquifer System Water Levels from Predevelopment Conditions Through 1980

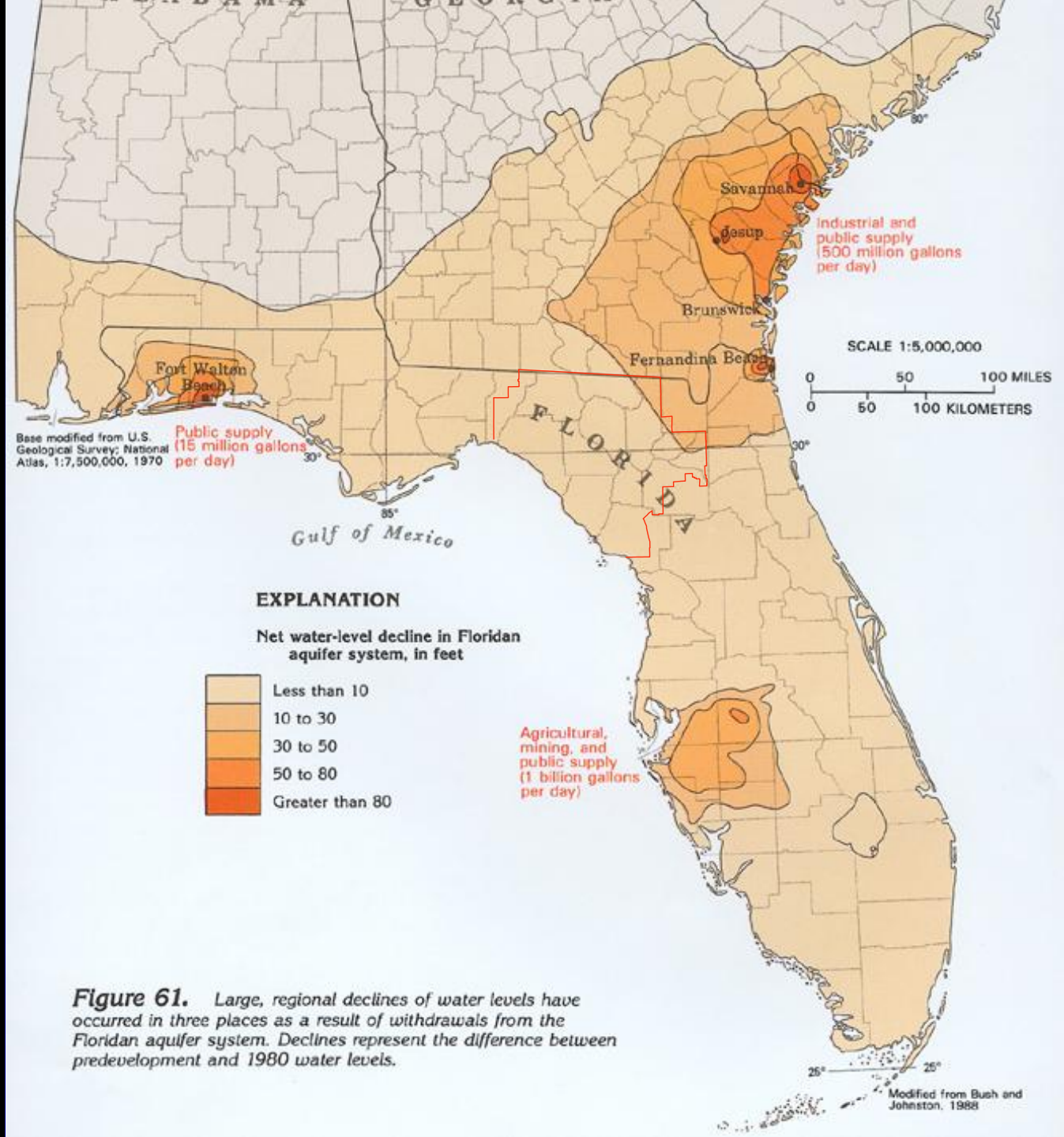
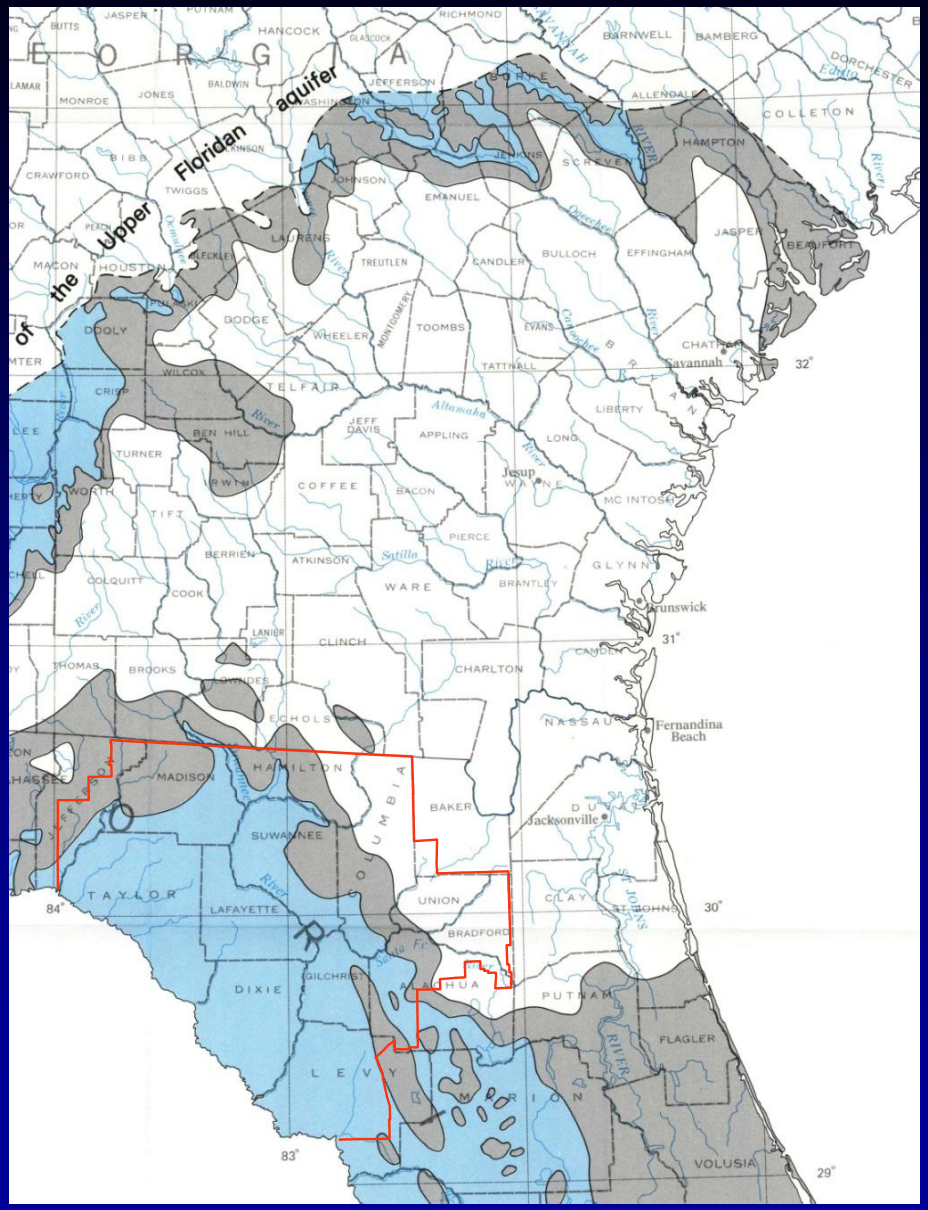


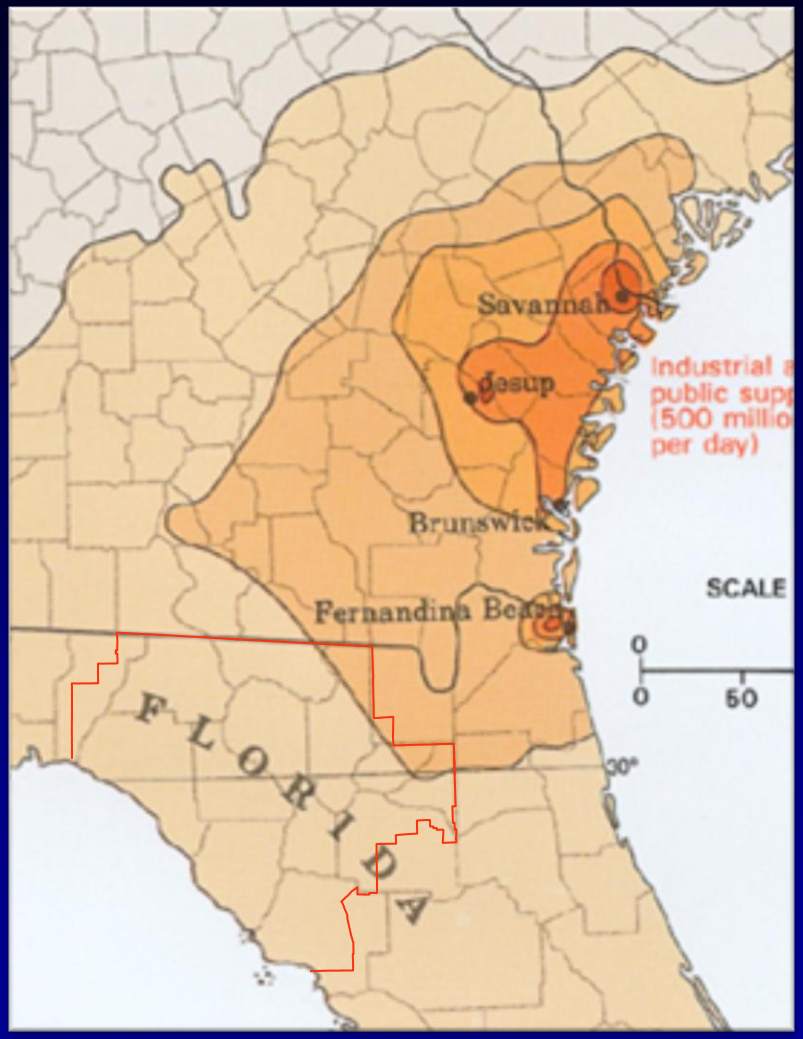
Figure 61. *Large, regional declines of water levels have occurred in three places as a result of withdrawals from the Floridan aquifer system. Declines represent the difference between predevelopment and 1980 water levels.*

Upper Floridan Aquifer Confinement

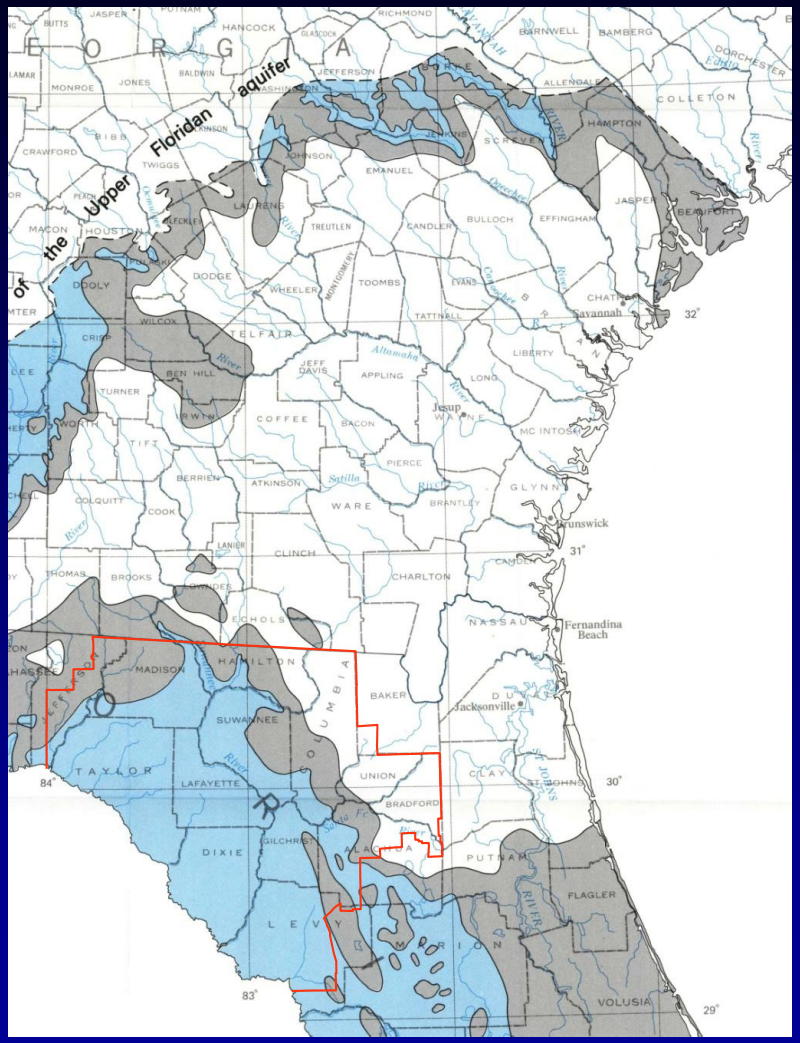


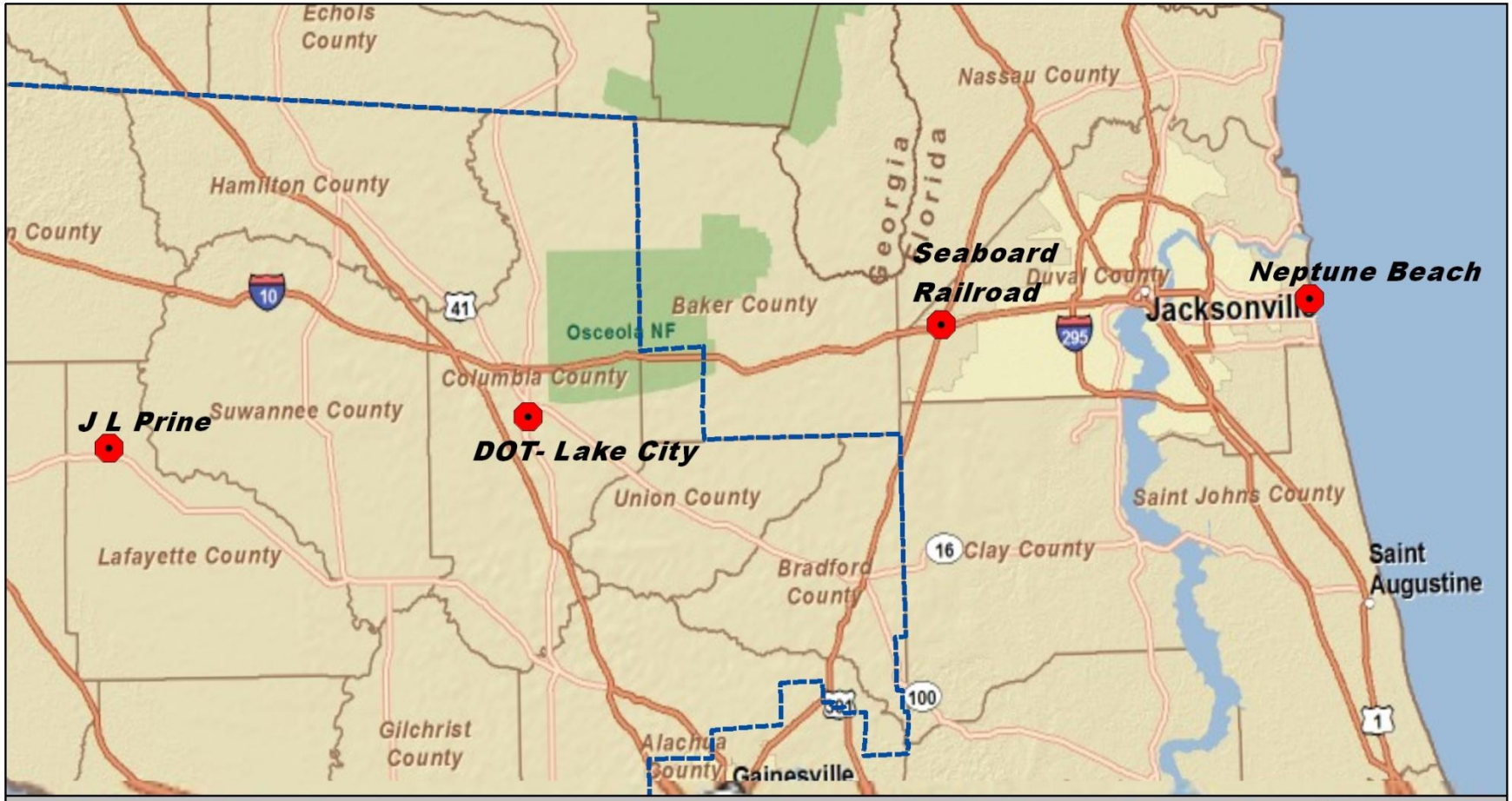
From: USGS Professional Paper 1403-C, Plate 1, 1988

Drawdown



Confinement





Monitor Well

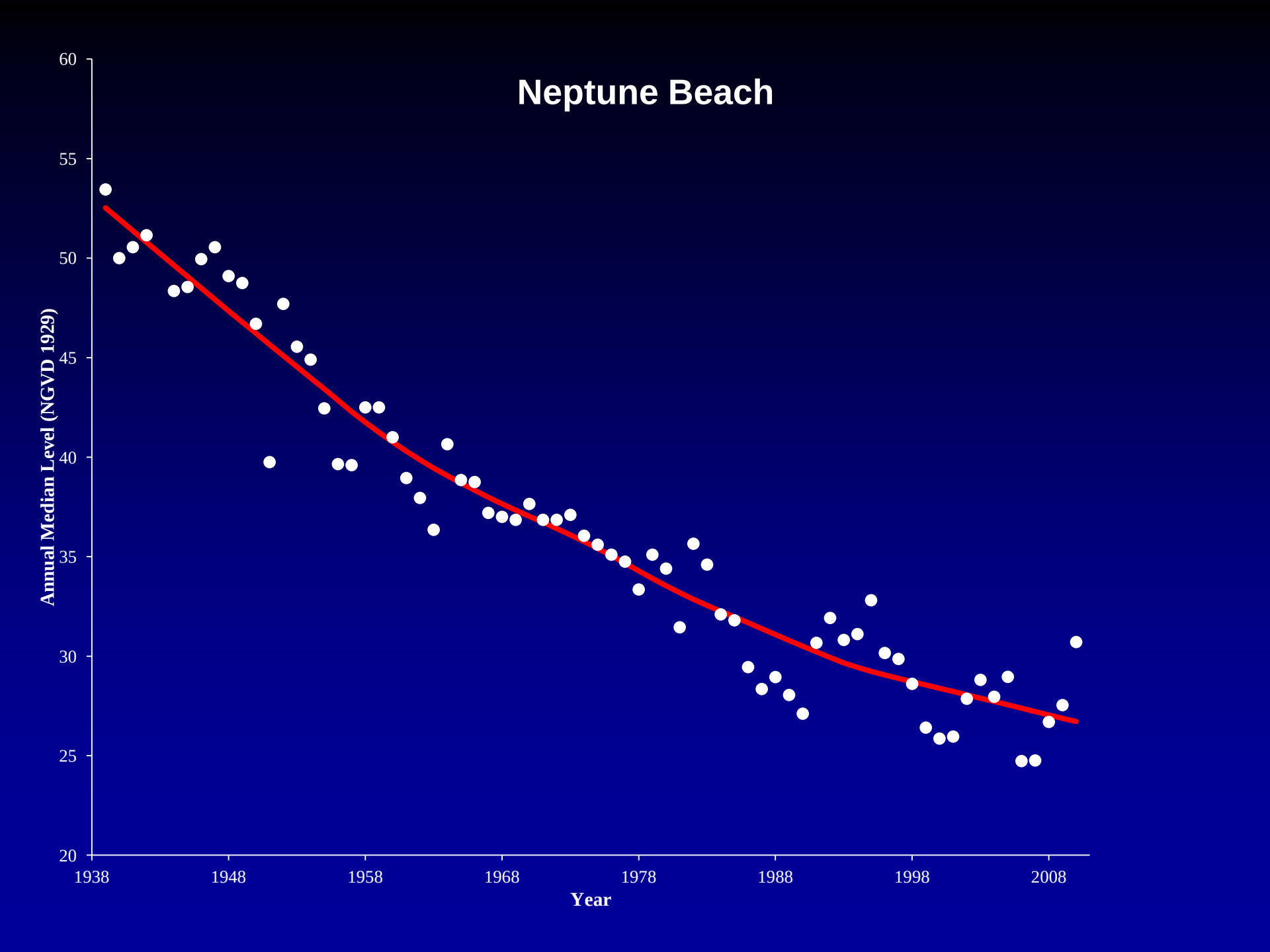
Water Management Boundary

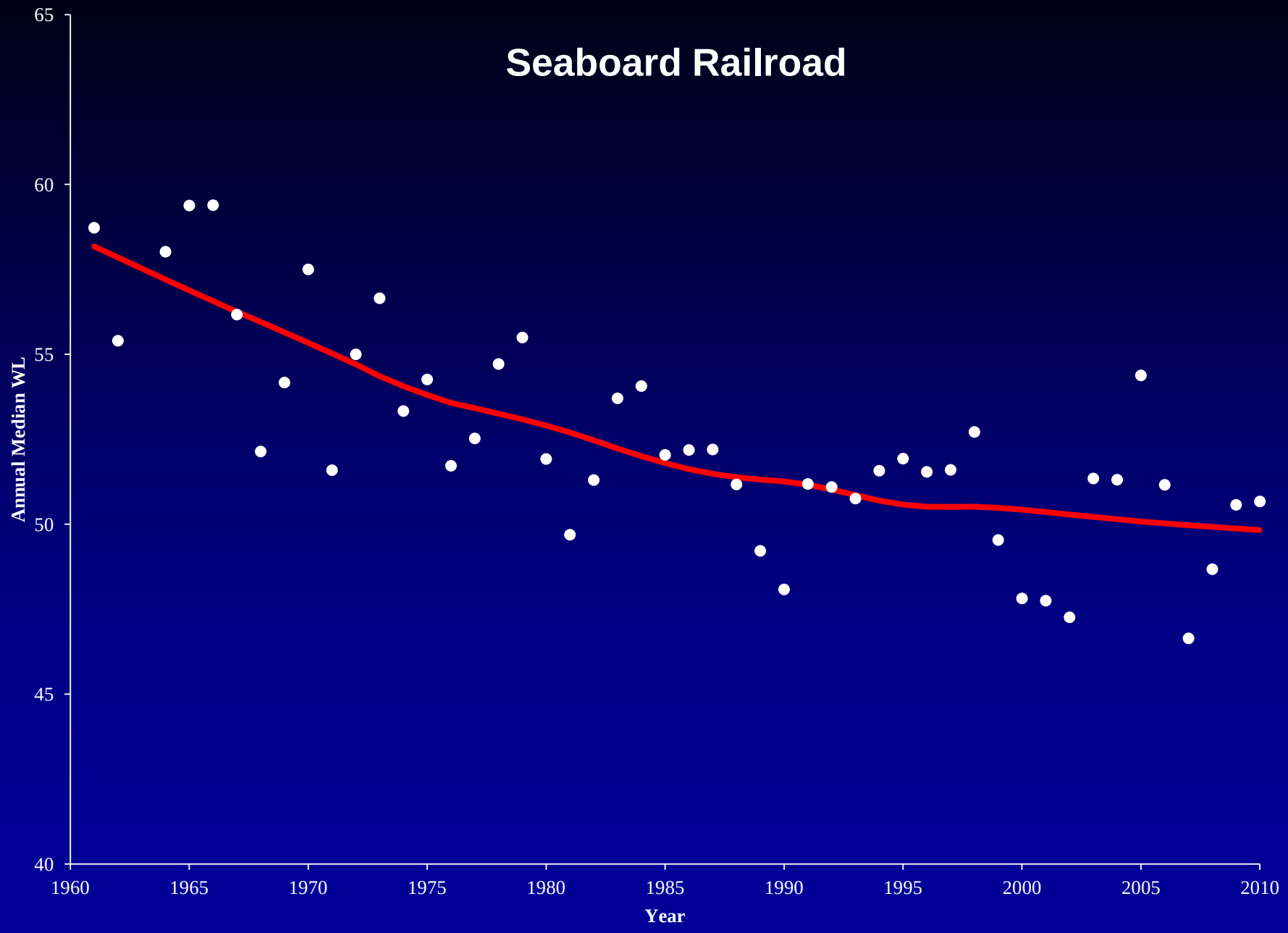
Long Term Monitor Well Locations
SRWMD/SJRWMD

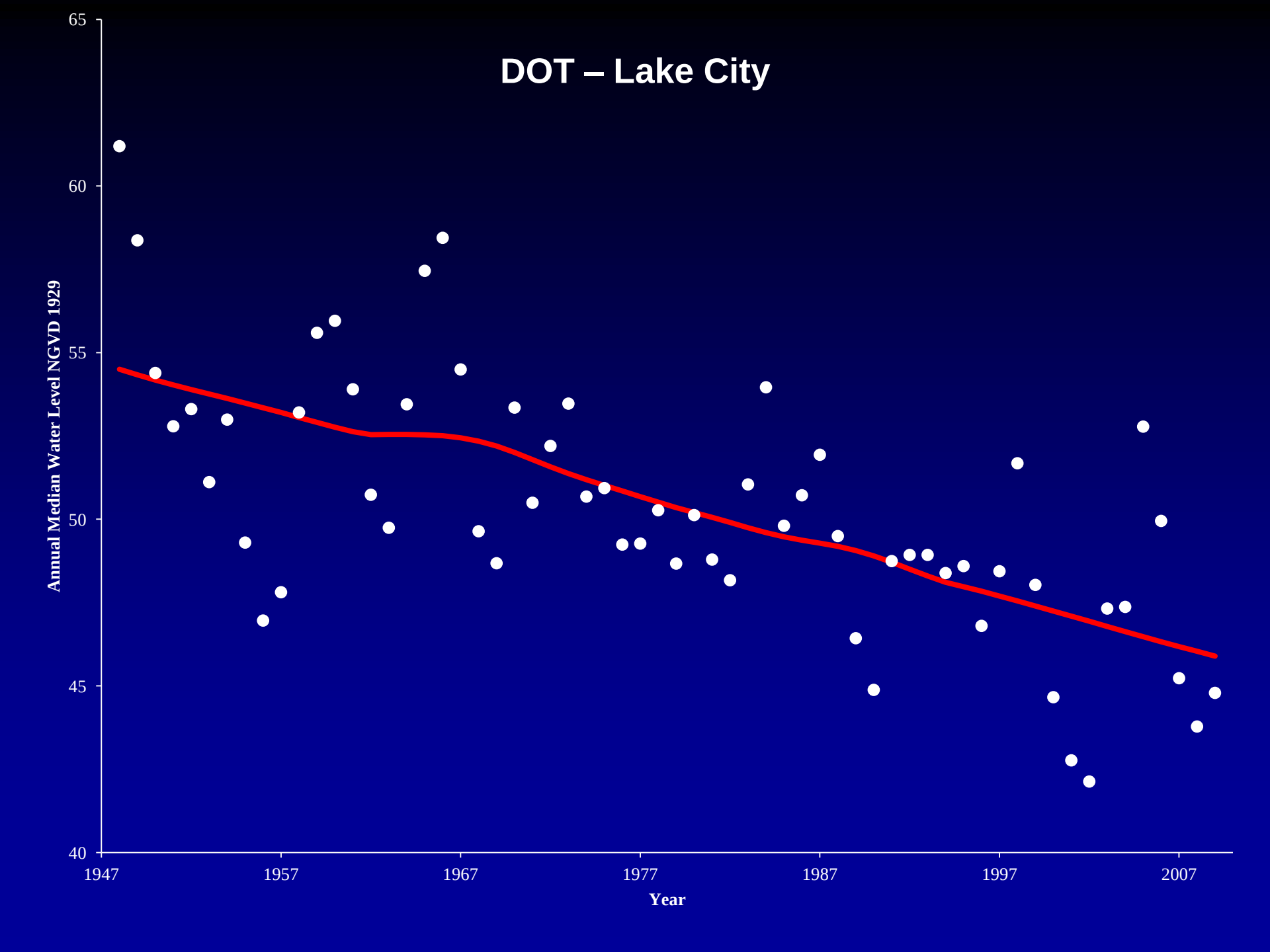
N

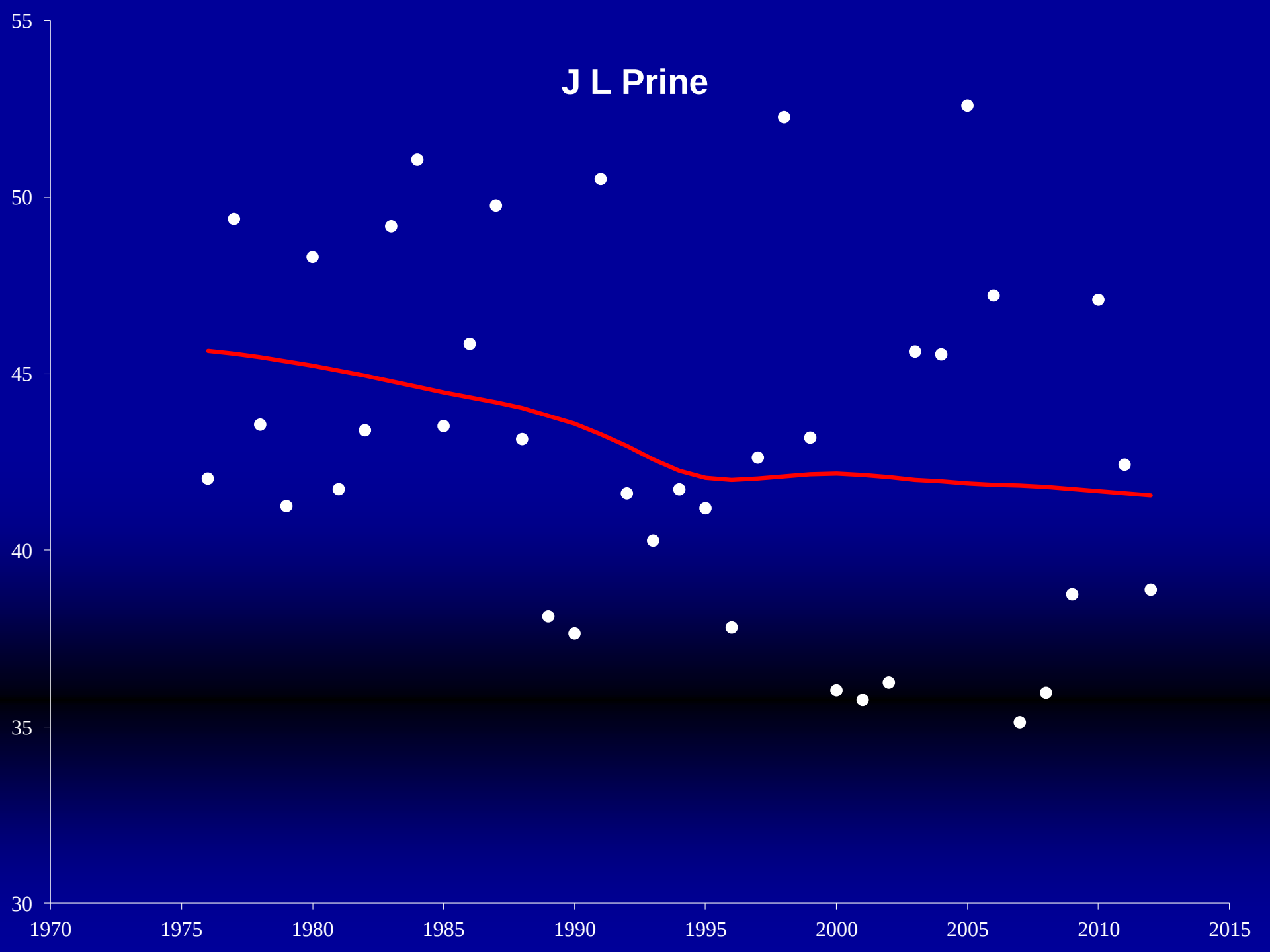
0 10 20
Miles

Note: This map was created by the Suwannee River Water Management District (SRWMD) to be used for planning purposes only. SRWMD shall not be held liable for any injury or damage caused by the use of data distributed as a public records request regardless of their use or application. SRWMD does not guarantee the accuracy, or suitability for any use of these data, and no warranty is expressed or implied. For more information please contact the SRWMD at 386-362-1001.
Map Created on 1/30/2012


Neptune Beach
Annual Median Level (NGVD 1929)
60
55
50
45
40
35
30
25
20
1938
1948
1958
1968
1978
1988
1998
2008
Year

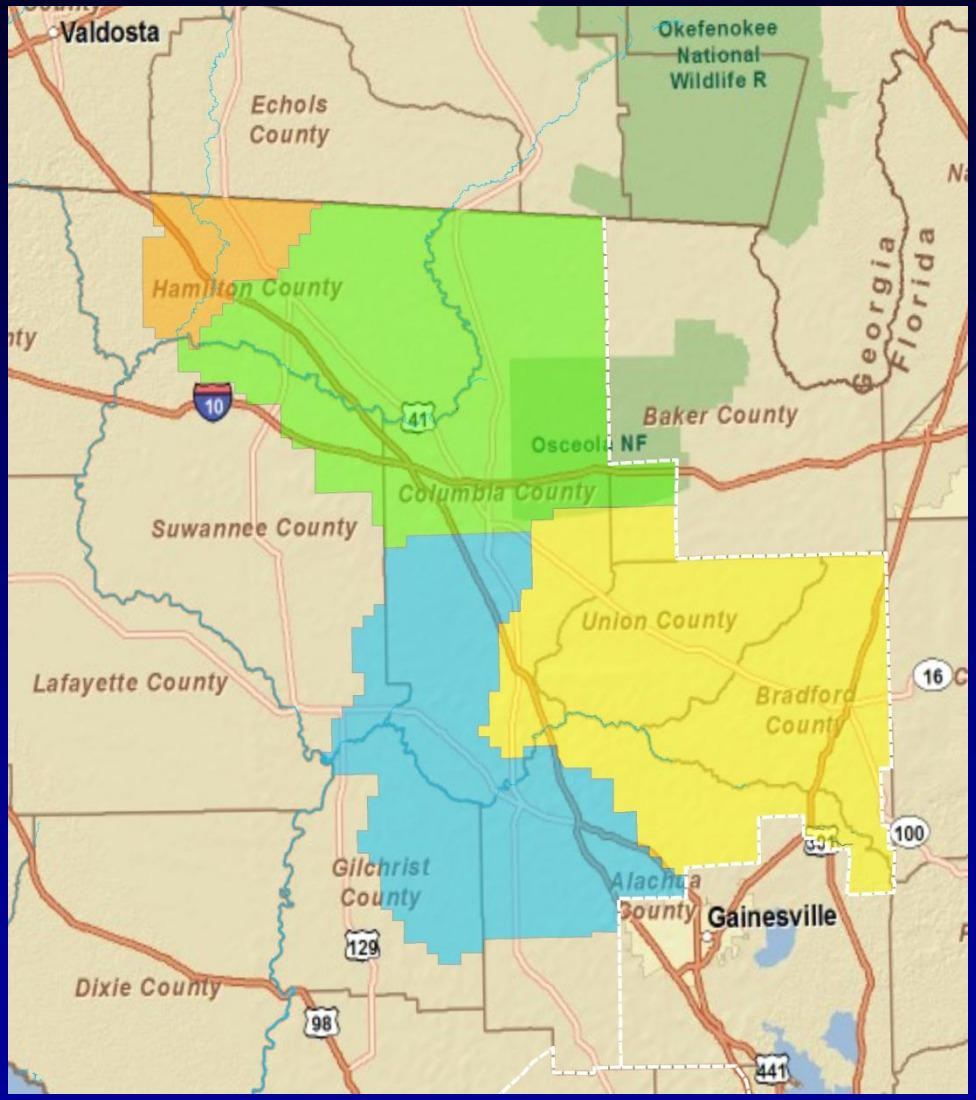

Seaboard Railroad
Annual Median WL
65
60
55
50
45
40
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
Year


DOT – Lake City
Annual Median Water Level NGVD 1929
65
60
55
50
45
40
1947
1957
1967
1977
1987
1997
2007
Year


J L Prine
55
50
45
40
35
30
1970
1975
1980
1985
1990
1995
2000
2005
2010
2015

Water Supply Planning and Alternative Water Supplies

Water Resource Caution Areas



Water Resource Caution Areas

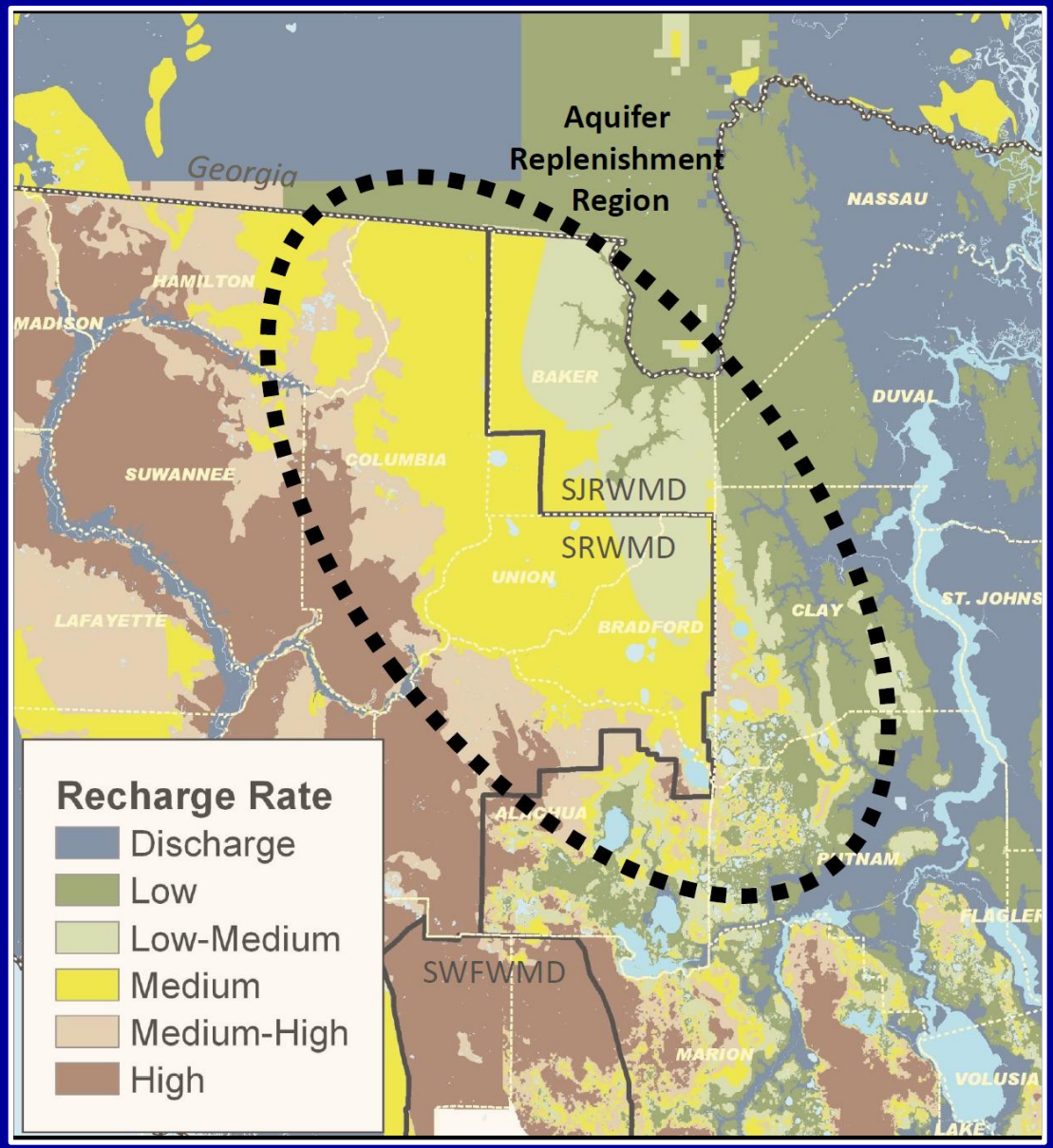
- Upper Suwannee River Region
- Alapaha River Basin
- Upper Santa Fe River Basin
- Lower Santa Fe River Basin

Future Focus

SRWMD, SJRWMD and FDEP Interagency Agreement

- Executed September 13, 2011
- Prepare report on groundwater level declines to be peer-reviewed by the NRC
- Development of joint regional groundwater flow model
- Data collection and sharing
- Develop consistent MFL process and definition of harm
- Joint development of recovery/prevention strategies
- Joint planning and implementation for recovery

Aquifer Replenishment Initiative



Aquifer Replenishment Initiative

Initiative is consistent with interagency agreement among FDEP, SJRWMD, & SRWMD

- Background:
  - Aquifer recharge identified as a key strategy for the north Florida region
- Concept:
  - Restore, protect, and maintain regional aquifer levels by capturing significant quantities of water and recharging the Upper Floridan aquifer
- Benefits:
  - Lake levels, spring flows, and wetland systems
  - Contribute to sustainability of the regional water supply
  - Maximize resources of the two WMDs through cooperative efforts

Questions?