# Water Utilities and Climate Change Workshop

Tampa Bay Water

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WRF Project 4228 Workshop
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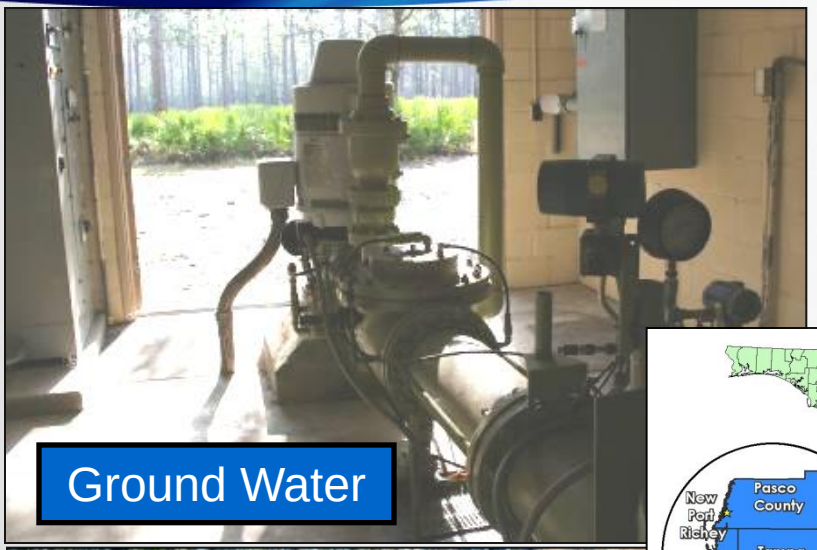
West Palm Beach, FL

# Regional Public Water Supplier



Ground Water

Desal Water


Surface Water

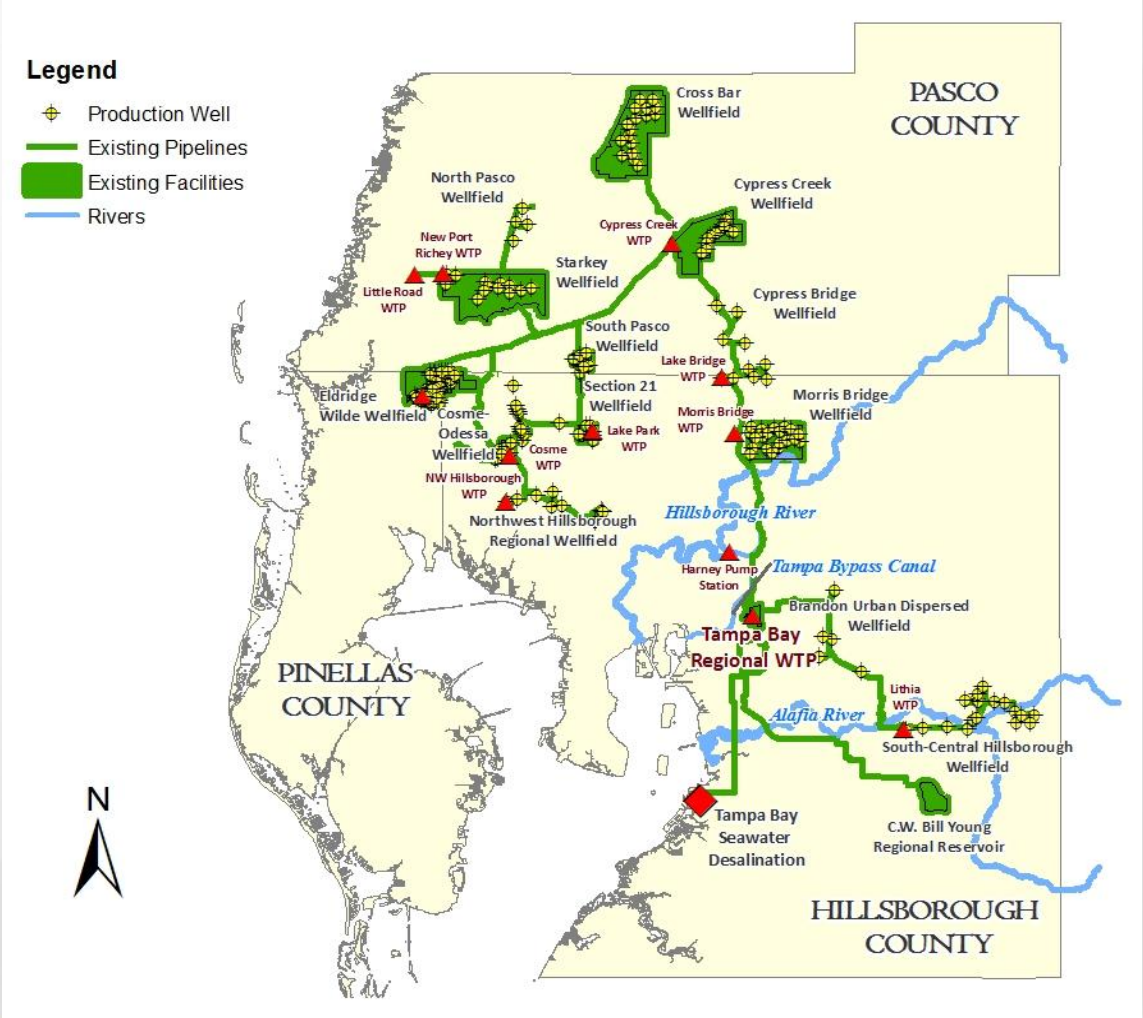
15 BG Reservoir

# Tampa Bay Water's Diverse and Integrated Water System

**2.4 Million Residents**

**220-250 mgd annual average**

**Seasonal to multi-year climate variable climate**

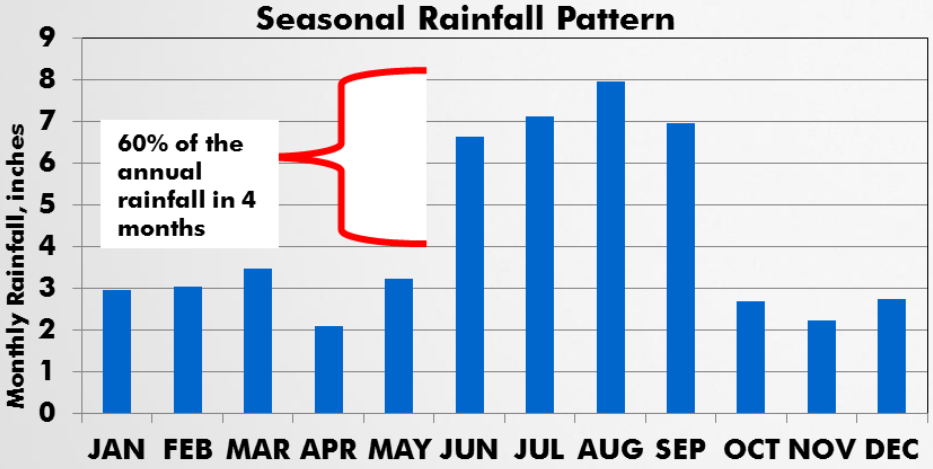


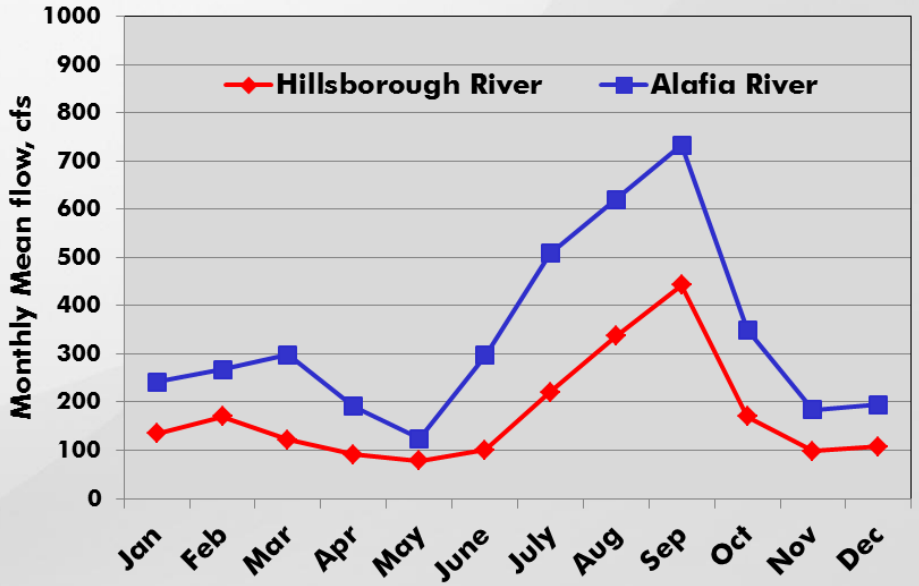
# Decision Making Actions Influenced by Climate Factors

- Long range Planning (5 Years and beyond)
  - **Demand forecasting / supply availability**
  - **Vulnerability assessments (reliability)**
  - **Long range water supply needs**

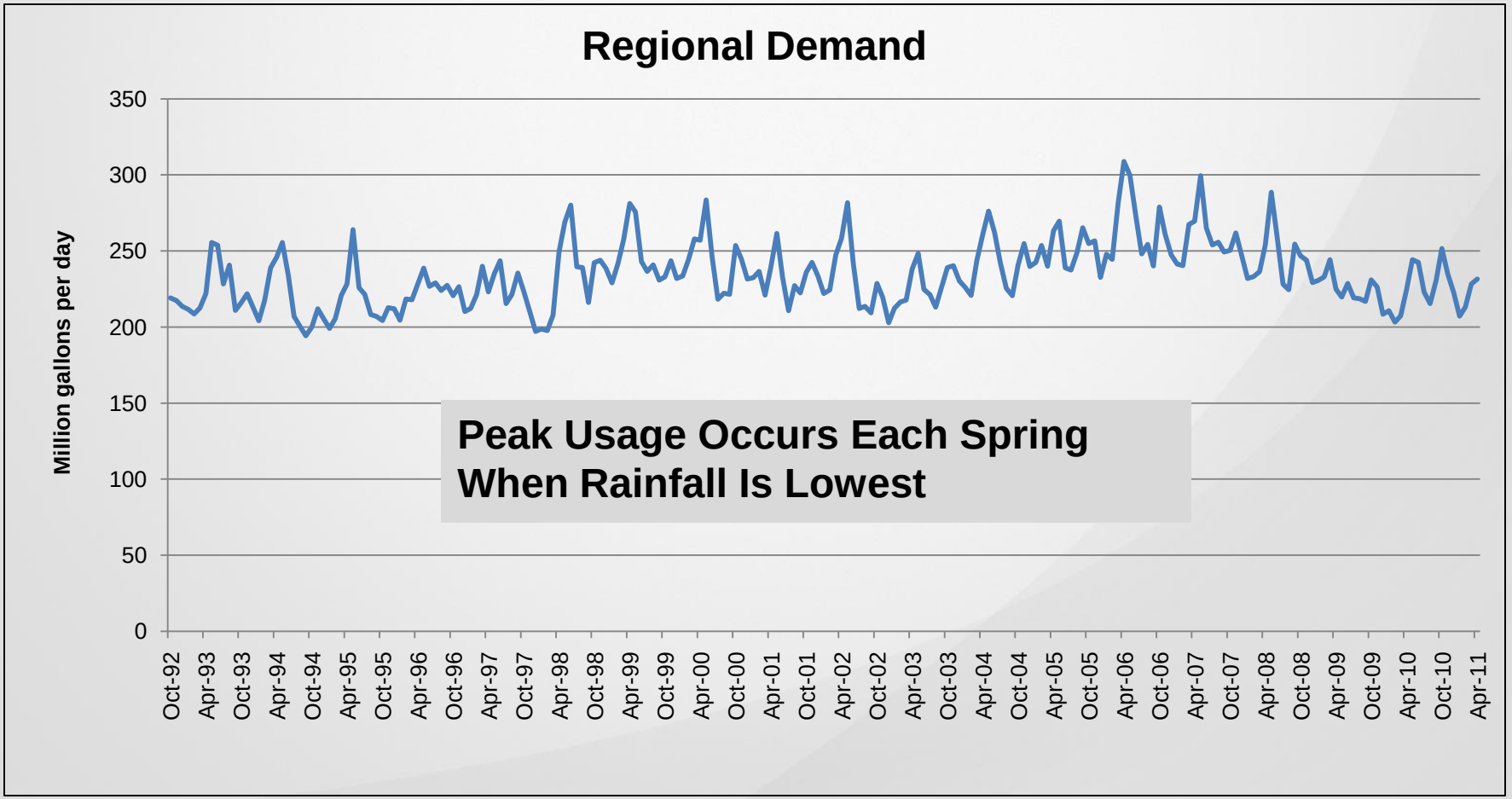
- **Operational (Weekly to Annual)**
  - **Weekly forecasting demands and supply**
  - **Monthly / seasonal supply allocation**
  - **Annual budgeting process**

# Why Climate Variability is Important

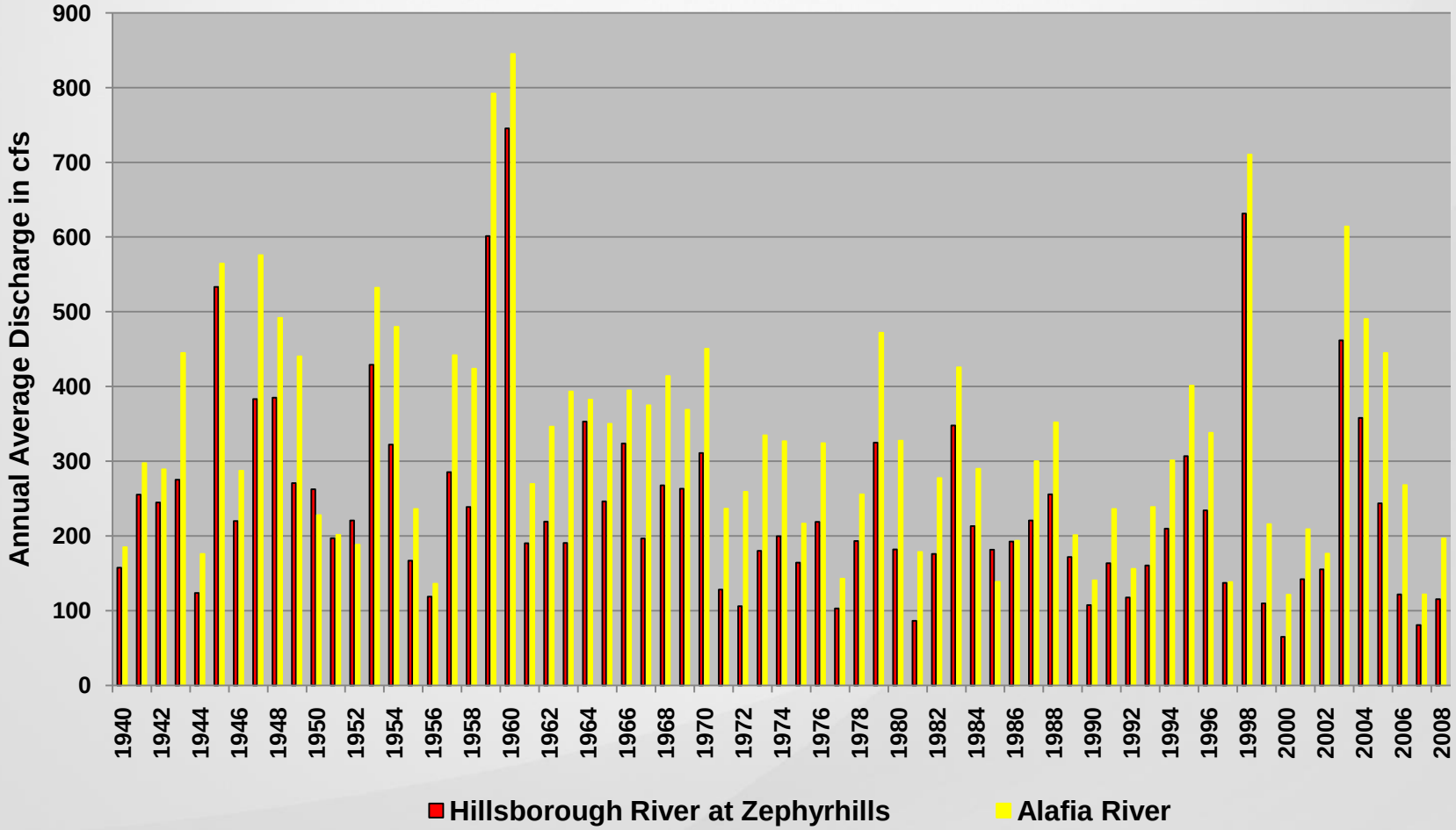


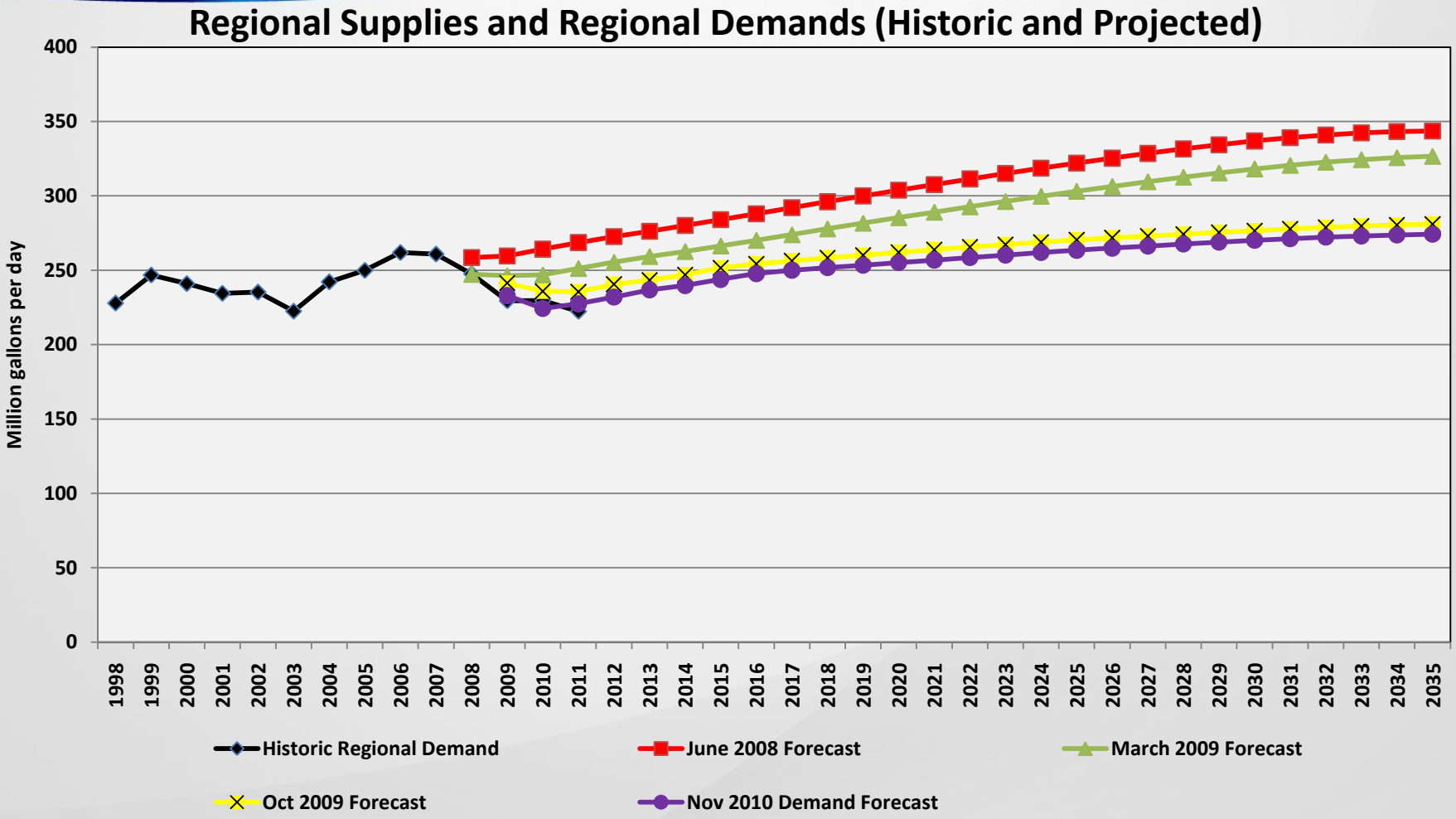
# Seasonal Variability in Demand



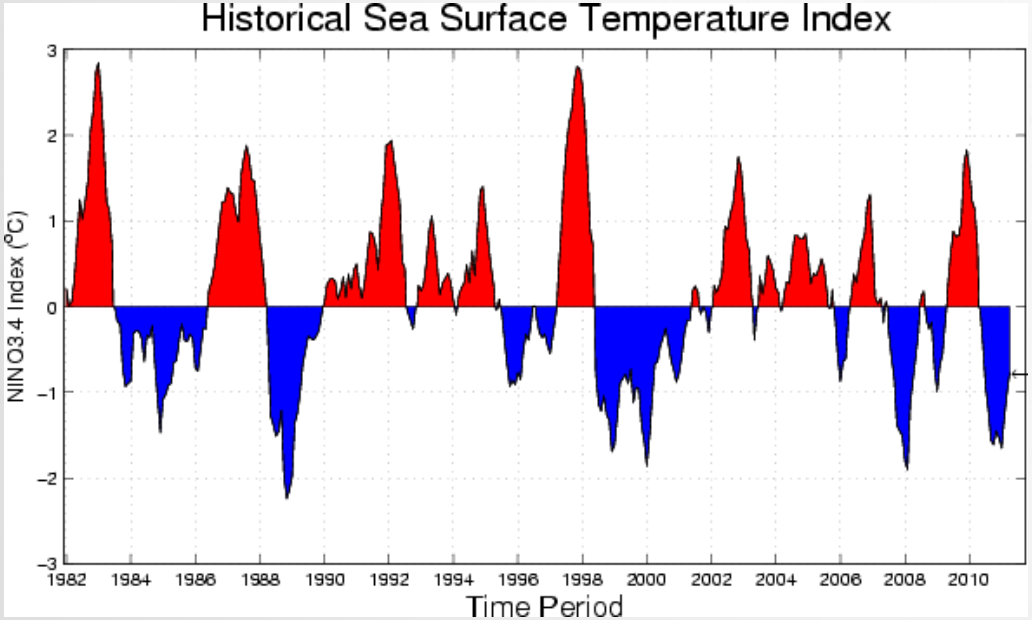
# Changes in Climate May Increase Annual Streamflow Variability



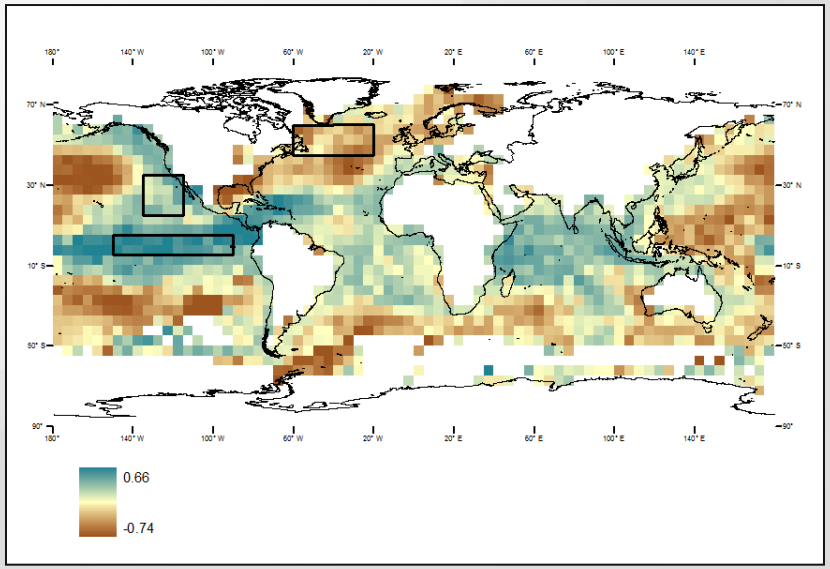
# Highly Variable Demands and Uncertain Projections



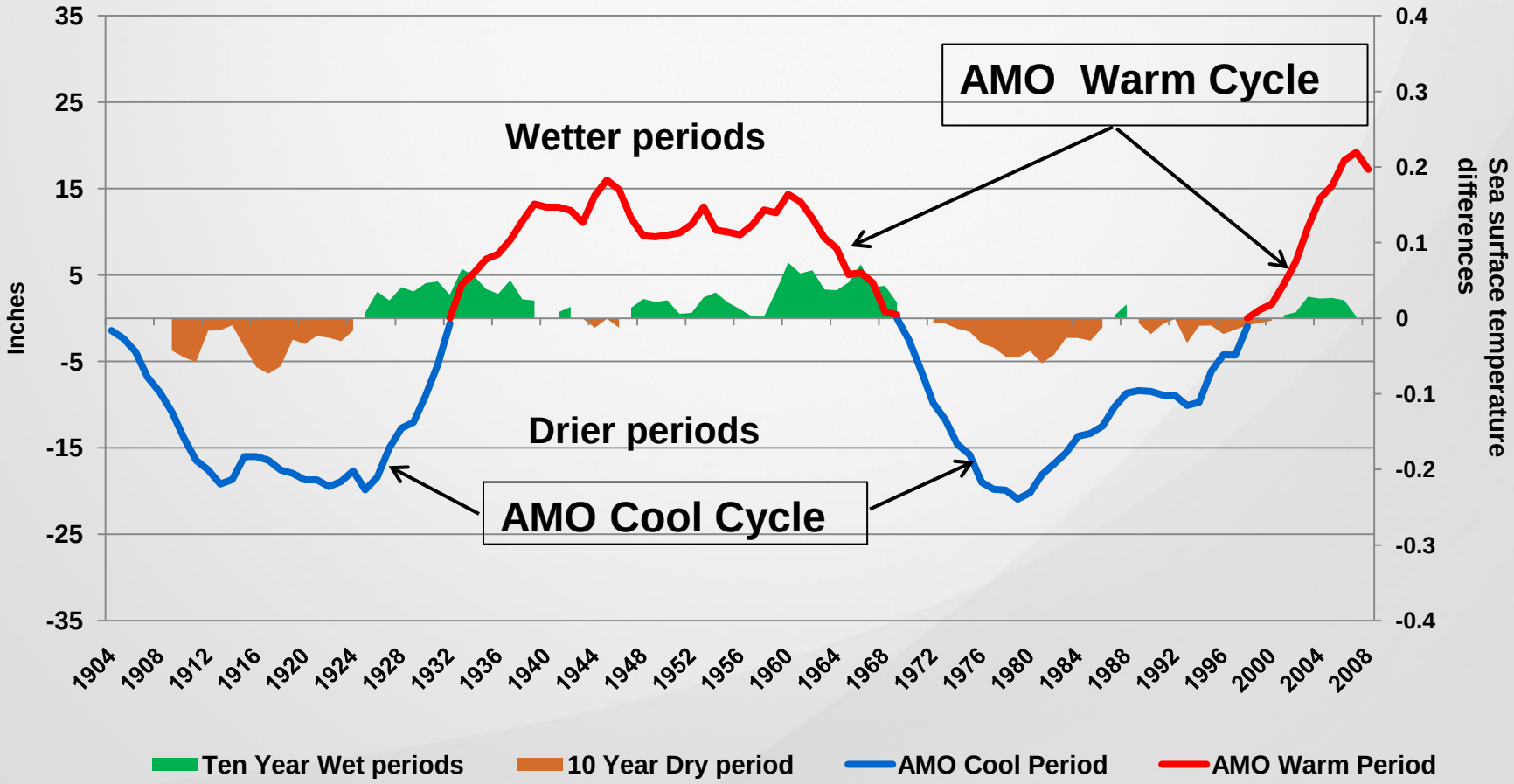
# ENSO Affects Local Rainfall Patterns




ENSO Signal Correlation



# Correlations between climate features and long term rainfall patterns



# Challenges and Issues

- Communicating the Agency's vulnerabilities to a changing climate
- Changing climate and regulations
- Making good decisions with uncertainty
- Using adaptive management for operational and planning decisions
- Customer acceptance of the agency's efforts regarding water supply reliability

# Opportunities

- Water Utilities Climate Impacts Working Group
- Research with Florida Climate Institute/UF Water Institute/SECC
- Collaboration with other utilities
- Collaboration with Water Management Districts
- Water Research Foundation projects

# Thank you

QUESTIONS?