



ADAPTIVE GOVERNANCE and WATER CONFLICT

**Water Resource Issues in the A/C/F Basin:
Working Together for a Better Future
Soil and Water Conservation Society, 17 May 2007**

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reflections about...

1. The many faces of water
2. Fragmented Authorities
3. Adaptive Governance as an opportunity
4. Five Challenges

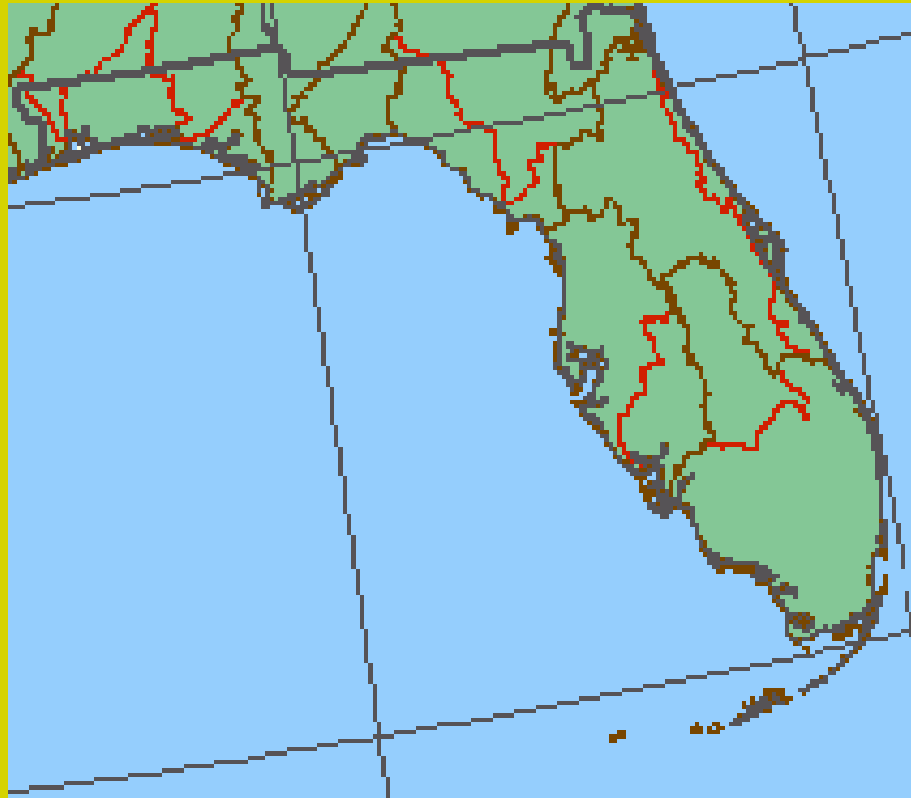


Water Policy: Major Domains

- **Water Resources**
 - Drinking Water
 - Domestic/Municipal Supply
 - Navigation
 - Recreation
 - Agriculture
 - Industrial withdrawals
 - Flood Prevention
 - Flood Mitigation and Response
- **Water Quality**
 - **Point Sources**
 - Sewage plants
 - Industry
 - **Non-point Sources**
 - Agriculture
 - Forestry
 - Urban Stormwater
 - Mining
 - Construction
 - Septic tanks
- **Habitat**
 - Public lands
 - Fisheries

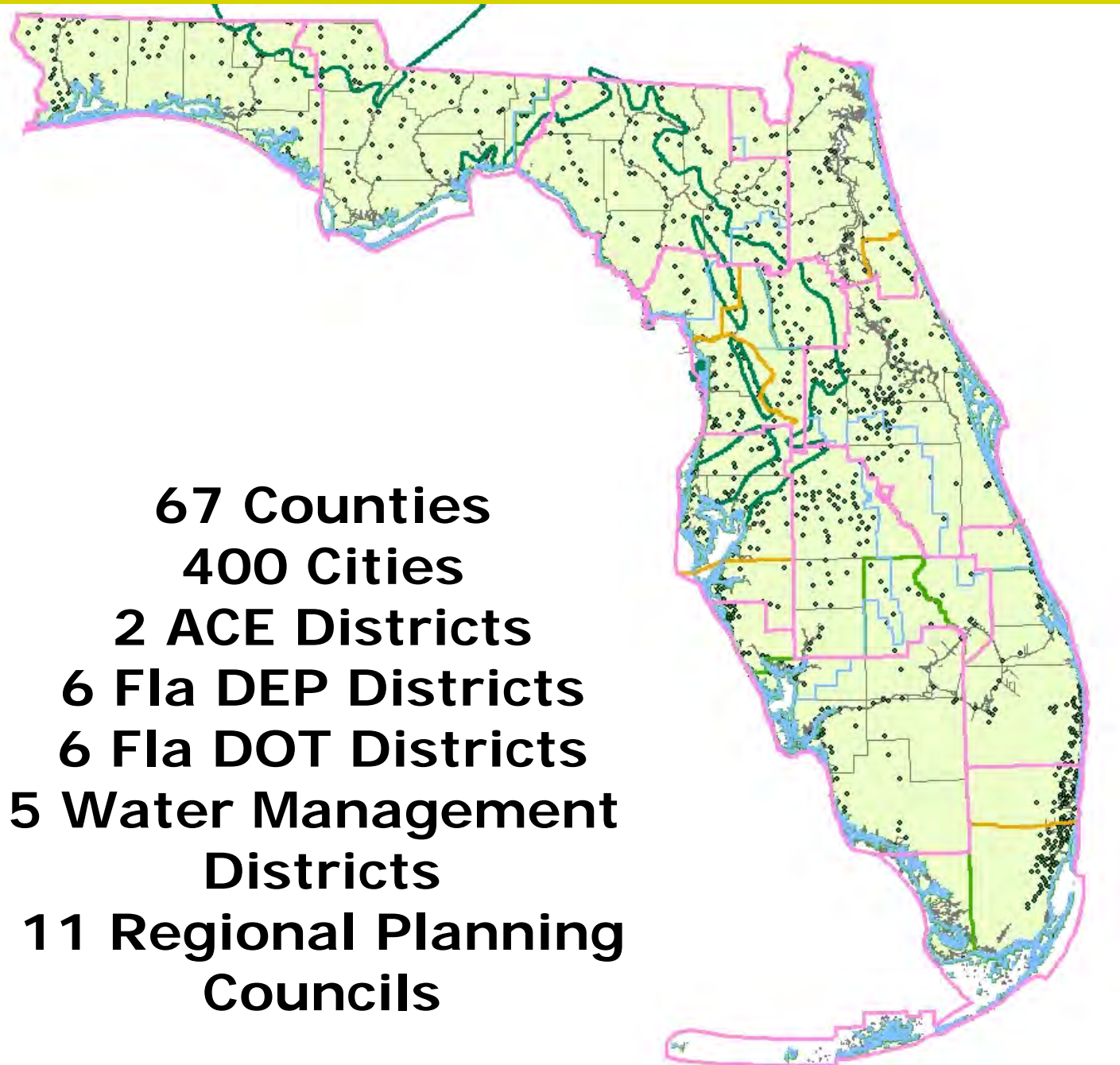


Water Resources in Florida



River Basins





67 Counties
400 Cities
2 ACE Districts
6 Fla DEP Districts
6 Fla DOT Districts
**5 Water Management
Districts**
**11 Regional Planning
Councils**

Not Shown on Previous Map

- **Federal**
 - **EPA**
 - **Dept Interior**
 - US Park Service
 - Bur Reclamation
 - Fish and Wildlife
 - USGS
 - **Dept Agriculture**
 - US Forest Service
 - Nat Res Conservation Service
 - **NOAA**
 - National Marine Fisheries Service
 - Marine Mammal Protection Commission
 - National Ocean Svce
- **State**
 - **Dept Agriculture and Consumer Services**
 - **Fish and Wildlife Conservation Comm**
 - **Dept Health**
 - **Dept Community Affairs**
 - **Land and Water Adjudicatory Comm**
 - **26 Metropolitan Planning Organizations**
 - **Regional Water Supply Authorities**
 - **1,600 Rural Water utilities**
 - **Sewage districts**
 - **Judicial Branch**
 - **Alabama**
 - **Georgia**



Historically, we added new levels of management responding to new user problems:

- **Late 19th Century: Navigation and Sanitation agencies**
- **Early 20th Century: Flood Control agencies; Irrigation agencies; Land Reclamation agencies**
 - 1927: Central & South Florida Flood Control District
- **1950s: Water Resource Planning agencies**
- **1960s & 70s: Environmental Protection agencies; Land Planning agencies; Regional Planning agencies**
 - 1961: Post-Donna: SoWestFla WMD
 - 1971: Post-drought: WMDs for full state
 - 1972: Non-point source planning
- **1980s: State Water Policy; Local Growth Management**
 - Kissimmee Rv Resource Planning and Management Committee
- **1990s: TMDL legislation; Landowner rights protections; Comprehensive Everglades Restoration Plan; Marine Mammals legislation; Tri-state Water War**



Multiple Fragmentations in Authority

- Geographic
 - Supply, Flooding, Quality, Ecosystem
 - User Communities
-
- **NO COMPLETE UNIFICATION IS POSSIBLE!**



Traditional Governance Pattern: New Problem: New Agency

- **New agency for new demands for water use**
 - Define rights of water users
 - Provide infrastructure
- **Result: many specialized agencies**
 - Water supply
 - Drainage and stormwater runoff
 - Water quality
 - Habitat conservation/restoration
 - ...



New Water Conflicts

- **Success of Specialized Agencies**
- + **Growth**
- + **Natural System Capacity Limits**

- = **Agency Externalities and Conflicts**

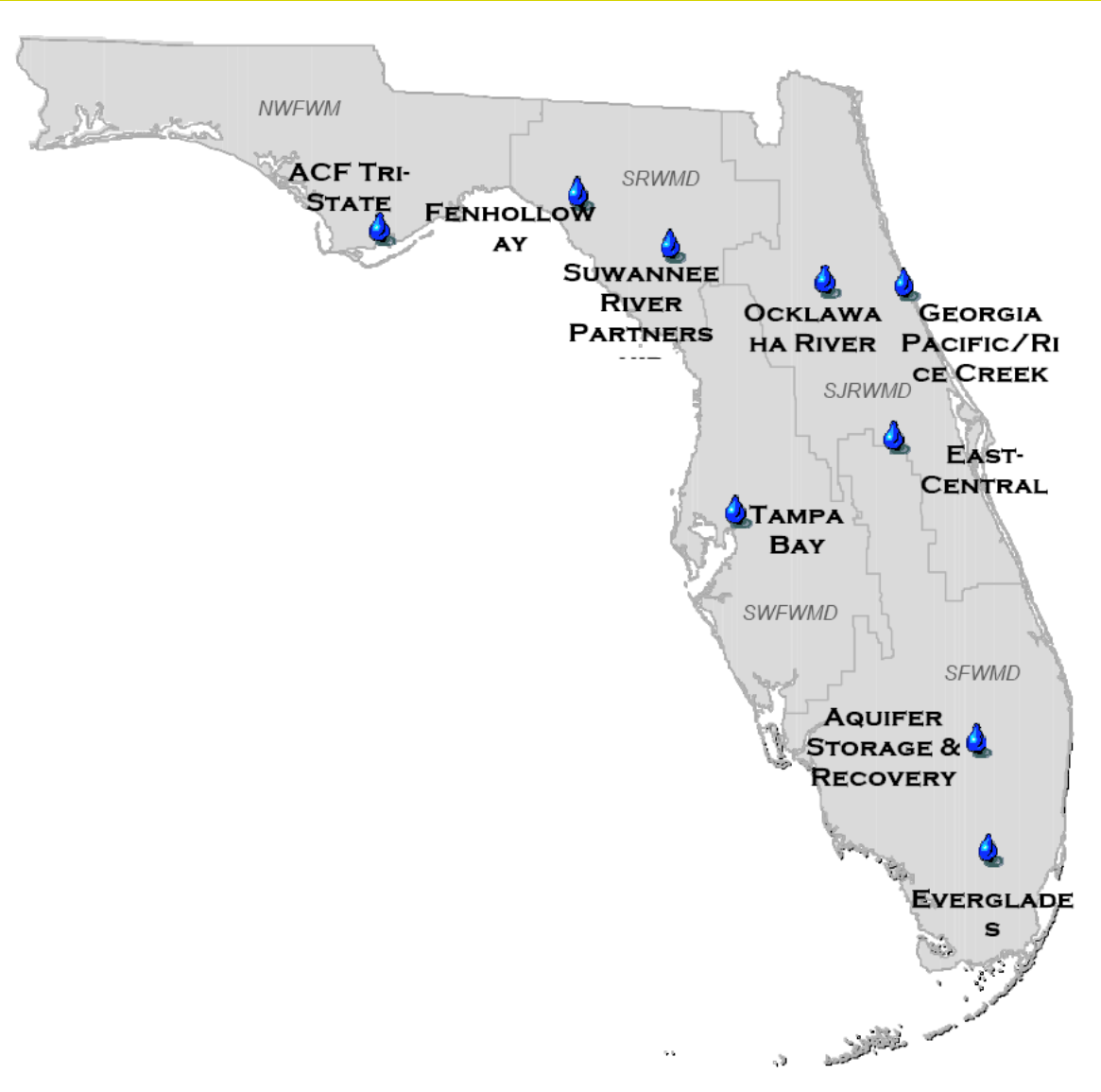
- **Responses: BATTLES or COLLABORATION**



Nine case studies of water conflicts

- Water Quality, Quantity, and Ecosystems
- Interstate, statewide, regional, single localities
- Fragmentation of authority is always present
- Innovative collaborations try to overcome fragmentation





Adaptive Governance

- **Institutions capable of**
 - shaping conflicts into resolvable issues
 - channeling them into arenas capable of resolving them
 - coordinating efforts involving previously independent systems of users, knowledge, authorities, and organized interests.



Tools of Adaptive Governance

- **Conflict Assessment**
- **Policy Dialogue**
- **Negotiated rulemaking**
- **Collaborative Planning**
- **Joint fact finding**
- **Mediated participation**
- **Intergovernmental coordination**
- **Science juries**
- **Adaptive management**

- **Sometimes just plain working together!**



Five Challenges to Adaptive Governance

- **Decision Process Design**
- **Representation**
- **Scientific Learning**
- **Public Learning**
- **Problem Responsiveness**





Decision Process Design

- Elicit clear understanding of interests
- Translate interests into compatible policy options
- Clarify relevant consequences of policy options
- Seek to reach consensus
- Accountability of representatives to constituencies



Representation

- **Include all (?) affected interests**
 - Reflect concerns of latent interests
- **Develop/ ensure *effective* representation**
- **Assess/respond to unequal resources**



Scientific Learning

- Incorporate existing knowledge in developing options
- Respond to adversarial nature of some science
- Develop specific research and monitoring program for future policy development
- Science as a process, not as a static body of knowledge



Public Learning

- **Promote user understanding of:**
 - Consequences of actions
 - System effects
 - Plan content and rationale
 - Legitimacy of decision process
- **Facilitate understanding on the part of elected and appointed officials, and leaders of user collectives.**
- **Encourage behaviors that support plan implementation.**



Problem Responsiveness

- **Efficiency**
 - How defined/measured?
 - Transaction costs.
- **Equity**
 - Inter-group
 - Interjurisdictional
 - intergenerational
- **Sustainability**

“we need to reinvent government over and over again”

- **New conflicts extend beyond specialized systems and existing rules**
- **Conflicts are indication of unanticipated consequences, inadequate institutions**
- **New conflicts involve sustainability of ecosystems, not just user rights**
- **No new “Super Agency” will replace all previous authorities**



“Where they work well, these processes create spaces where adversaries can explore together and develop agreements that leave them better off. Science advances, solutions emerge; but conflict lives on. Only now it does so with new social and political rules and structures that encourage more efficient and perhaps more equitable next steps.”



Adaptive Governance and Water Conflict

John T. Scholz and Bruce Stiftel, eds.

Resources for the Future, 2005

