# INTERSTATE WATER APPORTIONMENT: AN OVERVIEW OF OPTIONS AND EXAMPLES

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# Outline

- Goal:  Illustrate the variety of choices
- Case Study Examples:
  - Delaware River
  - Western Compacts
  - ACT / ACF (Georgia, Florida, Alabama)
  - Great Lakes
- Some Concluding Observations

# Which Examples are Relevant?

- Eastern Interstate Disputes About Water Quantity Addressed Via Litigation
- ~~Eastern~~ Interstate Disputes About Water Quantity ~~Addressed Via Litigation~~
- Limitations of this approach:
  - Not all innovation comes from disputes
  - Case studies only tell you what has already been done (and not what is possible)
  - No case is exactly like the Catawba
  - The Catawba is perhaps better described as an interbasin (not interstate) dispute

# Three Ways to Apportion Interstate Rivers

- Equitable Apportionment
  - Occurs in the Supreme Court
  - Only done is 3 basins (Laramie (1922), Delaware (1931) and North Platte (1935))
  - Unsuccessful in 5 others (Arkansas (1902), Connecticut (1931), Walla Walla (1936), Colorado (1936), and Vermejo (1982))
- Congressional Action
  - Only 1 example: Lower Colorado River (1928)
- Compacts
  - Roughly 2 dozen examples

# Delaware River: Timeline

- Early 1900s: NYC wanted to export water
- 1920s: 2 failed interstate compacts
- 1931: Equitable Apportionment
- 1951: Another failed interstate compact
- 1954: New Equitable Apportionment
- 1961: Delaware Compact and Commission
- 1983: Good Faith Agreement

# Delaware River: Some Lessons

- Going to court leveled the playing field
- Equitable apportionments (for better or worse) are not final
- Compacts and court actions are not mutually exclusive options
- Provisions to deal with drought and other emergencies are essential

# Western Compacts

- 22 examples (usually focused only on apportionment)
- Enacted through a 5-part process:
  - (1) Congress authorizes the states to negotiate a compact,
  - (2) state legislatures appoint commissioners,
  - (3) the commissioners meet, usually aided by a federal chairman, to negotiate and sign the agreement,
  - (4) the state legislatures ratify the compact, and
  - (5) Congress ratifies the compact.

# Allocation Formulas. Two key considerations:

- **Hydrologic Standards**: Four approaches:
  - (1) systems based on maintaining minimum flow levels at state lines (or other useful gauging stations),
  - (2) approaches based on reservoir storage,
  - (3) formulas allocating fixed or percentage-based rights to consumption or diversion (the most common approach), and
  - (4) a requirement for upstream states to deliver downstream a minimum *volume* (rather than a constant *flow* rate) over a lengthy time period.
- **Time Scale**: Four approaches:
  - (1) constant requirements (same standard in effect at all times);
  - (2) seasonal requirements,
  - (3) annual requirements (i.e., typically a "water year" standard); and
  - (4) a multi-year requirement.

# Compact Administration

- Most (18 of 22) provide for commissions; 14 have a federal member (but only a voting member in one case)
- Problematic compacts are those that are technically flawed (e.g., based on incorrect assumptions about flow) and those that omit key variables (e.g., groundwater-surface water interactions, emergency situations, environmental issues)
- Most commissions can only make unanimous decisions

# Lessons About Compacts

- Compacts provide stability, but often at the expense of flexibility. Once an apportionment is made, don't ever expect a change.
- Apportionment is often defined too narrowly.
- Formulas should not be based on fixed volumes (percentages are better) and should make provisions for dealing with unforeseen events and complications. (This is an argument in favor of having some sort of commission.)
- Compacts can help resolve interstate conflicts, but they often do nothing to resolve intra-state (but interbasin) conflicts.
- Compacts, in theory, can be a building block upon which more sophisticated agreements and administrative arrangements evolve, however in practice, this generally doesn't happen.

# ACT / ACF

- 1980s: conflicts about navigation & environmental protection
- 1983: issues largely resolved by an MOA (between AL, FL, GA and the Corps)
- 1990s: new disputes about out-of-basin diversions
- 1990: first of the lawsuits filed (Alabama sued the Corps)
- 1991 MOA, 1992 MOA, 1993 Charter: establish the Comprehensive Study
  - Broadly focused and ambitious attempt to solve many problems
  - Created an administrative structure; commissioned several studies
- 1996: Parties agree to negotiate "traditional" water allocation compacts
- 1997: Pseudo-compacts & commissions established to negotiate apportionments
- 1997-2003: period of studies, negotiations, and missed deadlines
- 2003: ACF compact collapsed
- 2004: ACT compact collapsed

# ACT / ACF Lessons

- The heart of a water apportionment compact is the formula
- Addressing the environmental flow needs of the Apalachicola Bay (Florida's main concern) did not lend itself well to the formula approach
- High level of animosity and distrust throughout poisoned process

# Great Lakes

- Region with a great deal of innovative arrangements and organizations (from the hundreds to the thousands), but only rarely focused on apportionment
- Environmental issues (sea lamprey, fisheries management, toxics) and out-of-basin diversions
- Notable international bodies: International Joint Commission & Great Lakes Fisheries Commission
- Notable interstate bodies: Great Lakes Commission & Council of Great Lakes Governors
- Pending: Great Lakes-St. Lawrence River Basin Water Resources Compact (2005) (to prohibit exports)

# Lessons from the Great Lakes

- Multiple organizations and agreements can achieve the same goals as a single, large entity or a single comprehensive agreement
- Organizations are tailored to specific roles via their memberships, physical jurisdictions, and powers

# Some Final Observations

- There is no one “right” way to resolve interstate water issues
- Most analysts agree on one point: the Supreme Court is rarely the best option
- Compacts have a lot of support, but most existing examples have real limitations
- Successful negotiations are based on *needs* and not *rights* (international lesson)
- If you are not careful, conflicts can persist for many decades

# Some Questions to Ponder

- What is the problem(s) to be solved? What are the goals of further negotiations?
- What are the opportunities/constraints associated with the existing water infrastructure and patterns of water use? Do the forums/mechanisms exist to find solutions?
- What information (and knowledge) is (and is not) currently available?
- What hydrologic parameter(s) is most relevant to the parties? What types of guarantees do water users need?
- Are the water needs of the parties static or evolving? Do the critical water needs fluctuate over the course of the year?
- If an allocation formula is needed, must it deal with all hydrologic conditions at all times and places, or just a particular location, time or situation (e.g., drought events)?

# Coordination Mechanism Design Issues

- Scope of the Mechanism
  - Substantive Scope (water; environment; broader socioeconomic activities)
  - Spatial Region (watershed; political jurisdictions; mixed system)
  - Duration (permanent; temporary/transitional)
- Role of the Mechanism (articulate new policies; establish a framework for research and/or decision-making; create a new body)
- Administrative Strategy (use existing entities; create a new entity; mixed system)
- Participants in the Mechanism
  - Level of Government (federal, state, local or other governments)
  - Types of Representatives (legislators; water officials; stakeholders)
  - Selection of Representatives (appointed; elected; associated with other positions)

# … more design issues

- Authorities / Powers
  - Types (soft: coordination, policy recommendations; hard: regulation, standard setting; balance of both)
  - Location of Power (held by participating entities; held by a new coordination mechanism body)
  - Source of Power (federal law, state law, other (e.g., MOA's))

- Source of Information and Technical Expertise
  - Independent Staff (yes; no; mixed)
  - Information Tools (models; reporting requirements; assessments; special committees; etc.)
  - Information Dissemination (annual reports; studies; data clearinghouse; etc.)

# … more design issues

- Decision-Making Methods
  - Decision Role (makes decisions; supports other decision-making bodies)
  - Decision Rule (unanimity; majority; super-majority; variable; etc.)
  - Voting Allocation (all members vote; some vote; proportional voting; etc.)

- Costs and Financing
  - Source of Revenue (direct appropriations; participating agencies; user fees)
  - Allocation of Financial Burden (equal; proportional/formula-based; etc.)
  - Expected Benefits (resolve existing problem; avoid future problems; improve efficiencies; achieve new benefits; etc.)