

**Reconciling Interstate Water Compacts with
Groundwater Use:
Lessons from the Past Fifty Years of Litigation**

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What Lies Beneath:

*Reasons to Care (and be Excited) about Groundwater
Use and Management in the Southwest (and elsewhere!)*

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Colorado Law/Getches-Wilkinson Center

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Burke W. Griggs

Washburn University Law School

Woods Institute for the Environment, Stanford

burke.griggs@washburn.edu

50 Years in 30 Minutes? No Problem.

ALLEN: I've been taking a speed-reading course. I read *War and Peace* in two days.

WOMAN: Oh really? What is it about?

ALLEN: It concerns Russia.



The Classical Period of Interstate Water Litigation, 1902-1949 (textbook version)

1. Equitable Apportionment (and reticence)
 - A. *Kansas v. Colorado I* (1902-1907) (no decree)
 - B. *Colorado v. Kansas* (1943-44) (no decree)
 - C. *Wyoming v. Colorado* (1911-22) (Laramie River Decree)
 - D. *Nebraska v. Wyoming* (1945) (North Platte Decree)
2. Resolution by Compact (1922-1949) (most common)
 - A. Compacts without explicit federal involvement
 - B. Compacts with explicit federal involvement
3. Congressional Apportionment (the outlier!)
 - A. The Rio Grande, 1900's
 - B. *Arizona v. California* (1963) (Colorado, Gila Rivers)

The Classical Period, 1902-1949 (non-textbook version, pt. 1)

- Extreme Legal Positions:
 - Colorado:
 - Prior Appropriation → it's all taken! (*KS v. CO*, 1902-07)
 - The Harmon Doctrine → it's all ours! (*Id.*, *WY v. CO* [1911-1922, 1940's])
 - Kansas: (*KS v. CO*, 1902-1907, *CO v. KS*, 1940's)
 - Common law riparianism → it's all ours!
 - (Failure to quantify forces change in KS water law)
 - The United States (Morris Bien)
 - Federal Claims to all unappropriated water → Embargoes on Federal land to protect future Reclamation Projects
- SCOTUS rejects/renders irrelevant most of these.

The Classical Period, 1902-1949

(non-textbook version, pt. 2)

- Extreme Hydrological Positions:
 - Colorado in *KS v. CO*, 1907: the “two rivers” theory:
 - First river: a mountain river, from Leadville to Holly
 - Second river: a plains river, from Coolidge, KS to the Gulf of Mexico
 - Plausible up to a point (Pueblo?)
 - Conveniently accords with Colorado’s legal position
 - Kansas: one continuous river
 - Accords with Kansas’ legal position of riparianism
 - Ignores the real hydrological differences across the Basin.
 - Ignores irrigation-induced discontinuities in western Kansas.
- SCOTUS: this is one river.
 - Why? Contemporary USGS reports about the Basin. Explicitly recognizes the hydrological connection between GW and SW.

Interstate Water Relations, 1902-1949

(irresponsibly short version)

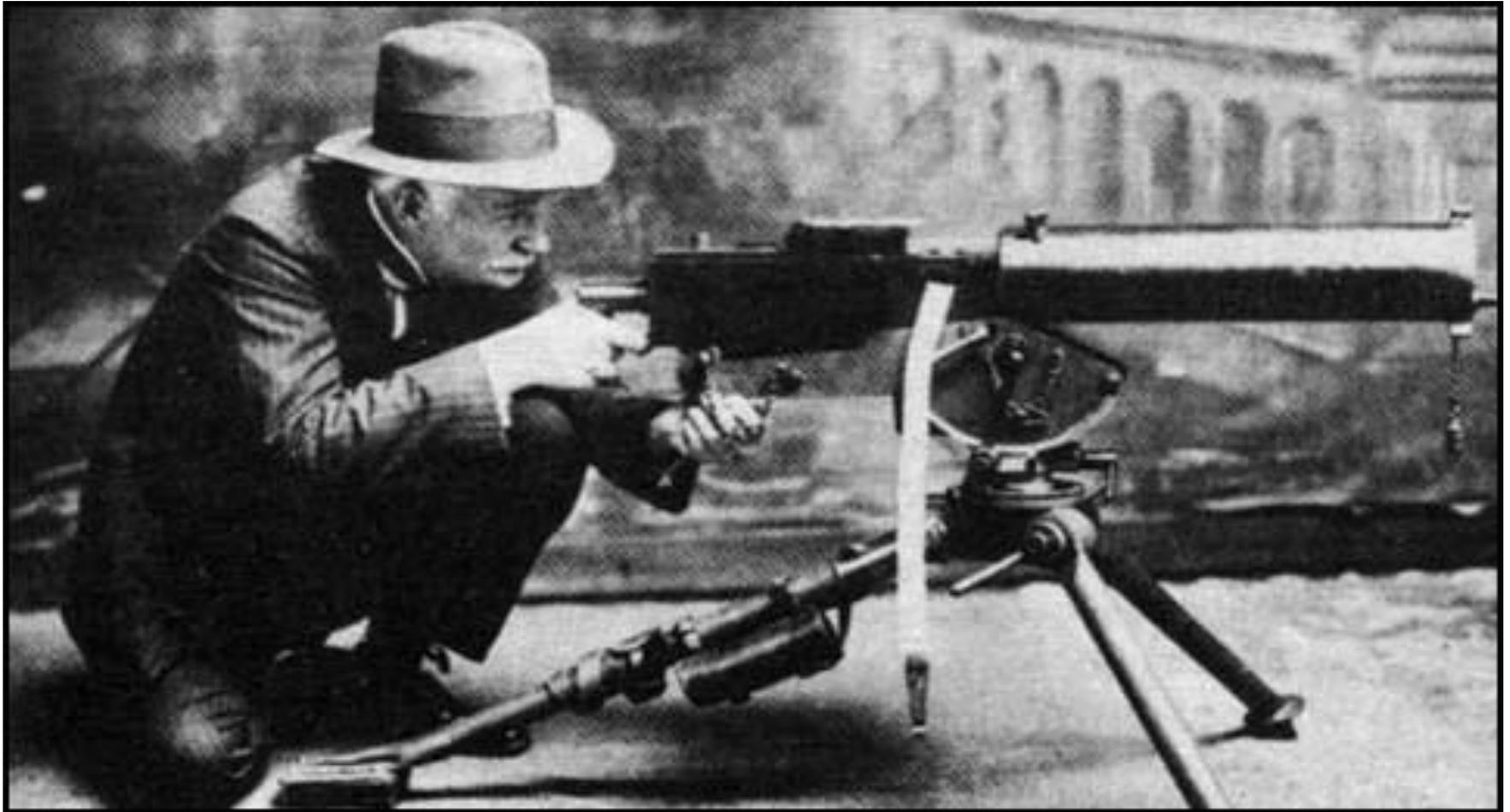
- 1902. Reclamation Act; Kansas sues Colorado over the Arkansas
- 1907. *Kansas v. Colorado*: power of the court to apportion according to benefits. (But no apportionment!)
- 1922. *Wyoming v. Colorado*: Court apportions the Laramie River by applying the doctrine of prior appropriation across state lines; → motivates early compacts
- 1938. *Hinderlider* secures the Compact mechanism
- 1930's-40's. Reclamation becomes a significant interstate player during the Great Depression; requires Compacts as a condition for federal investment in interstate basins
- 1939-49. 6 interstate compacts: Rio Grande, Republican, Belle Fourche, Upper Colorado, Arkansas, Pecos
- 1944. Pick-Sloan Act.
- 1945. *Nebraska v. Wyoming* sets the rules for non-compacted interstate basins. (But decrees remain rare.)

Peace in our time?

(Neville Chamberlain, 1938, holding the Rio Grande Compact)



Technological revolutions render traditional warfighting obsolete.



John M. Browning and his water-cooled Machine Gun, ca. 1910

Western water fights are no different.



Frank Zybach's first center-pivot irrigation system, near Strasburg, Colorado. He started with a low pipe that was later raised to run over corn fields. UNL.

Litigating the Groundwater Revolution

- *Texas v. New Mexico* (1974-1987, Pecos River Compact)
- *Kansas v. Colorado* (1984-2009, Arkansas River Compact)
- *Kansas v. Nebraska & Colorado I* (1998-2003, Republican River Compact)
- *Montana v. Wyoming & North Dakota* (2008-2018, Yellowstone River Compact)
- *Kansas v. Nebraska & Colorado II* (2010-2015, Republican River Compact, again)

Extreme Legal Positions, pt. II: The United States

- *United States v. New Mexico*, 438 U.S. 696 (1978). The primary/secondary distinction for reserved water rights for public lands.
- Krulitz Interior Opinion (1979): USA has the right to unappropriated waters necessary to carry out purposes of public lands. The federal “non-reserved water rights theory.” (The second coming of Morris Bien?)
- Krulitz opinion restricted by (Colorado’s own) Clyde O. Martz (1981)
- Krulitz opinion reversed by Olson OLC opinion, 1982.

Extreme Legal Positions, pt. II:

Kansas v. Nebraska & Colorado I (1998-2003)

- Republican River Compact allocates “virgin water supply” of the basin; it does not explicitly refer to groundwater.
- Kansas: Compact includes all groundwater, because **all** surface and groundwater connected. (as under KS water law)
- Nebraska: Compact does not restrict pumping, because it does not mention groundwater (and Nebraska law does not regulate pumping)
- Colorado: Compact governs alluvial groundwater, but not Ogallala groundwater. (As under the CO 1965 and 1969 Groundwater Acts)
- Special Master (and Court): Compact includes the effects of groundwater pumping. (*Note how that finding wisely avoids both hydrological taxonomy and the happy harmony of the states’ respective legal positions and their intrastate laws.)

Extreme Legal Positions, pt. II:

Montana v. Wyoming & North Dakota (2008-2018)

- Montana: the YRC governs groundwater, and so Wyoming has violated the Compact by allowing excessive groundwater pumping, including that for coal-bed methane development.
- Wyoming: the YRC does not govern groundwater, because it never mentions “groundwater.” (Thanks, Nebraska!) But see the Niobrara
- Special Master Thompson (and the Court): The YRC governs groundwater; Wyoming’s argument ignores the intent of the parties, SCOTUS cases, contemporary state law cases, and contemporary hydrology. Nice try, Wyoming.

Extreme Technical Positions, pt. II: Groundwater Modeling

- *Texas v. New Mexico* (Pecos River litigation)
 - States construct competing models
 - Special Master Meyers threatens his own
 - States then agree to a shared modeling approach
- *Kansas v. Colorado* (Arkansas River litigation)
 - States construct competing models (and attack each other's); 200/270 trial days concerned modeling and modeling inputs
 - Kansas rebuilds its case (and model) after a lead Kansas expert suffers a nervous breakdown on the stand
 - Colorado drops its model
 - States eventually agree to the modified H-I Model
 - Model itself not the only modeling fight; extensive litigation on modeling inputs

Collaborative/Pre-existing Groundwater Models

- *Kansas v. Nebraska & Colorado I*
 - Special Master McKusick finds that the Compact must account for depletions to VWS caused by pumping. This is a clear instruction.
 - States and USGS collaborate in building a MODFLOW model in response to the Special Master's finding. Shared modeling, shared data.
- *Montana v. Wyoming & North Dakota*
 - Montana attempts to transpose the BLM Powder River Basin Model to the Tongue River and fails.
 - Could it have built a Tongue River Model? Not without Wyoming data.

Remedies and Damage\$

- Equitable Remedies
 - Injunction: good luck. Will likely be deemed unnecessary in light of other relief.
 - Specific remedies:
 - Hard limits on groundwater pumping (*KS v. CO*)
 - rejected in *KS v. NE*.
 - Rewrite settlement agreements: accepted in *KS v. NE*
 - River Master: rare (Pecos, Delaware)
- Damages:
 - In water or in money, and can be retrospective.
 - Can include prejudgment interest.
 - Disgorgement of ill-gotten gains, under certain (exceptional?) conditions.

Costs of Compliance

- So far, much greater than damage awards.
- *Texas v. New Mexico*:
 - Stipulated damages: \$14 million
 - Costs of compliance: over \$100 million
- *Kansas v. Colorado*:
 - Court-awarded damages of \$35 million
 - Costlier retirements/reductions in pumping
- *Kansas v. Nebraska & Colorado*:
 - 2-year damage award of \$5.5 million
 - Costs of compliance: over \$200 million (CO and NE)

Methods of Compliance

- Reduce groundwater pumping
 - Effectiveness depends on location:
 - Climatic location: deficit irrigation or not?
 - Hydrological location: degree of connection to river
- Reduce irrigated acreage
 - State- and locally-financed retirements
 - Federal subsidies (esp. CREP; query: is this fair?)
- “Augmentation” pipelines
 - To meet delivery requirements
 - To balance out allocation limits
 - Preferable to reductions in pumping or acreage; but does augmentation treat the symptom and not the disease?

Interstate Litigation as a Forcing Tool for state law groundwater reform

1. Kansas rewrites its water law completely in the wake of *CO v. KS* (1943). Good.
2. Arkansas River Basin (post *KS v. CO*): rules reduce CO pumping by as much as 50%. Good.
3. Nebraska, post *KS v. NE & CO I*:
 - A. Amends its bifurcated water laws for surface and groundwater.
 - B. Problem: it still subordinates surface water rights to groundwater pumping in times of shortage.
 - C. *Hill v. State*, 894 N.W.2d 208 (Neb. 2017): holders of surface rights going back to the 1890's have no claim in times of shortage against relatively recent groundwater pumping.
 - D. Why? NE's jurisdictional split. **First in time, last in right.**

The State of Play after the Groundwater Revolution: Compact Cases

- Groundwater whose pumping affects interstate streamflows is part of the compact water supply.
- Groundwater can be used as a surrogate for streamflows through augmentation.
- The engagement of Reclamation and the United States generally is uneven and unpredictable.

Pending Interstate (Groundwater) Cases

- *Texas v. New Mexico & Colorado*, No. 141 Orig.
 - Rio Grande Compact, 2014-
- *Florida v. Georgia*, No. 142 Orig.
 - Apalachicola-Chattahoochee-Flint Basin, 2014-
- *Mississippi v. Tennessee*, No. 143 Orig.
 - the Sparta/Memphis sub-aquifer of the Mississippi Embayment Regional Aquifer System, or “MERAS”, 2015-

Texas v. New Mexico & Colorado

(background)

1. Rio Grande Compact and its explicit reference to the Rio Grande Project Act
2. Jurisdiction of NM State Engineer
3. Agreement between Elephant Butte I.D. (NM) and El Paso Water Improvement District No. 1 (TX) over reservoir management; Reclamation agrees. NM State Engineer opposes.
4. Disputes over Compact accounting.
5. 2014: Texas files in the Supreme Court.

Texas v. New Mexico & Colorado

(simplified)

1. Texas's Complaint:
 - A. NM has committed Compact violations
 - B. NM has violated the Rio Grande Project Act
 - C. Seeks Dec Judgment, Injunction, and Damages
2. New Mexico's response: or, **Extreme Legal Positions, pt. III:**
 - A. Compact does not require NM to deliver water to the Texas line.
 - B. Compact does not require NM to prevent below-dam GW diversions, or limit post-Compact GW development there
 - C. NM law, not the Compact, governs the distribution of water released from EBR within NM.
3. USA, EBID, and EPWID all move to intervene

TX v. NM & CO: Special Master Report

(2/9/17)

1. Texas has stated a claim: denies NM MtD
 - A. Compact requires NM to relinquish control of water delivered to Elephant Butte Reservoir
 - B. Compact and Rio Grande Project Act are an integrated whole.
2. Compact confirms Texas's argument that NM cannot recapture water released from EBR.
3. Doctrine of equitable apportionment also prohibits NM from recapturing water post-release from EBR.

TX v. NM & CO: Special Master Report

(2/9/17)

1. On USA's motion to intervene:
 - A. Rio Grande Project Act does not elevate USA's claim into Compact claims.
 - B. But, recommends that the Court exercise its 28 U.S.C. 1251(b)(2) power to hear the USA's claims.
2. Denies EBID's and EPWID's motions to intervene.
 1. Their parent states adequately represent them.
 2. Again: Special Masters not interested in resolving intrastate disputes.

Texas v. New Mexico & Colorado,

SCOTUS decisions so far

- 3/5/2018, 138 S.Ct. 954
 - Allows the USA to intervene: the first time a non-party has been allowed to enforce the terms of an interstate compact. Why?
 - Reclamation's importance (contracts and mgmt.);
 - Treaty with Mexico.
 - Punts on two important issues:
 - Can the USA bring suit to enforce a Compact?
 - Silence on Special Master's historical analysis
- 4/2/2018, 138 S.Ct. 1460 (Mem.)
 - Discharge of SM Grimsal and replacement by SM Melloy of Cedar Rapids, IA.

Florida v. Georgia: the ACF Basin



Florida v. Georgia, no. 142, orig.

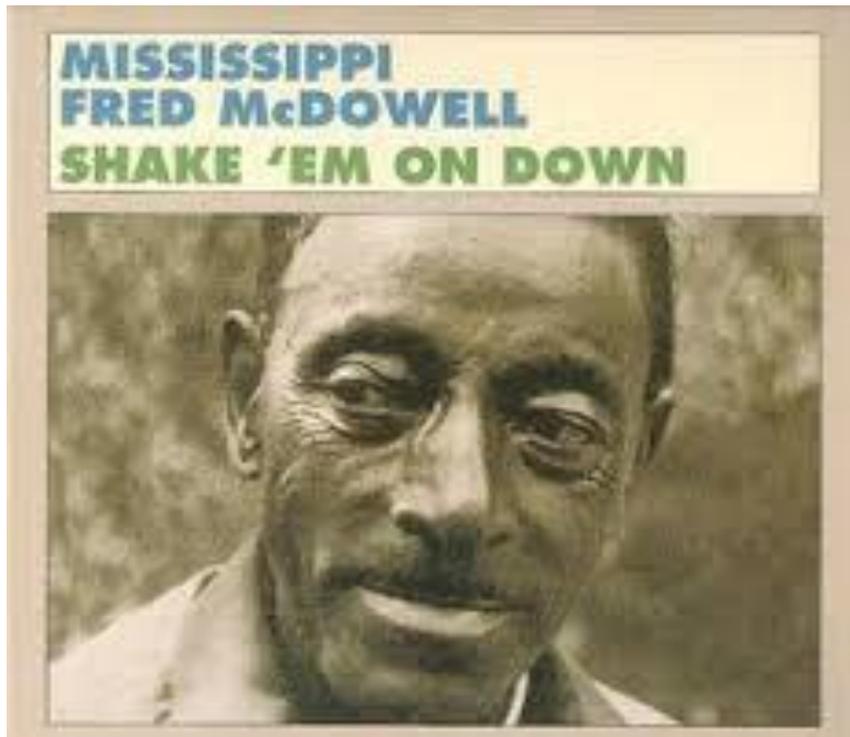
- FL's claim: upstream consumptive use in the ACF Basin, including groundwater pumping, has harmed FL; seeks an equitable apportionment.
- GA's response: FL's harms are self-inflicted, or inflicted by the Corps. Because the Corps manages the Basin, especially the Chattahoochee.
- Corps: not a party to the litigation.
- 17 days of trial, 2016. Corps conspicuously absent.

FL v. GA: Special Master's Report

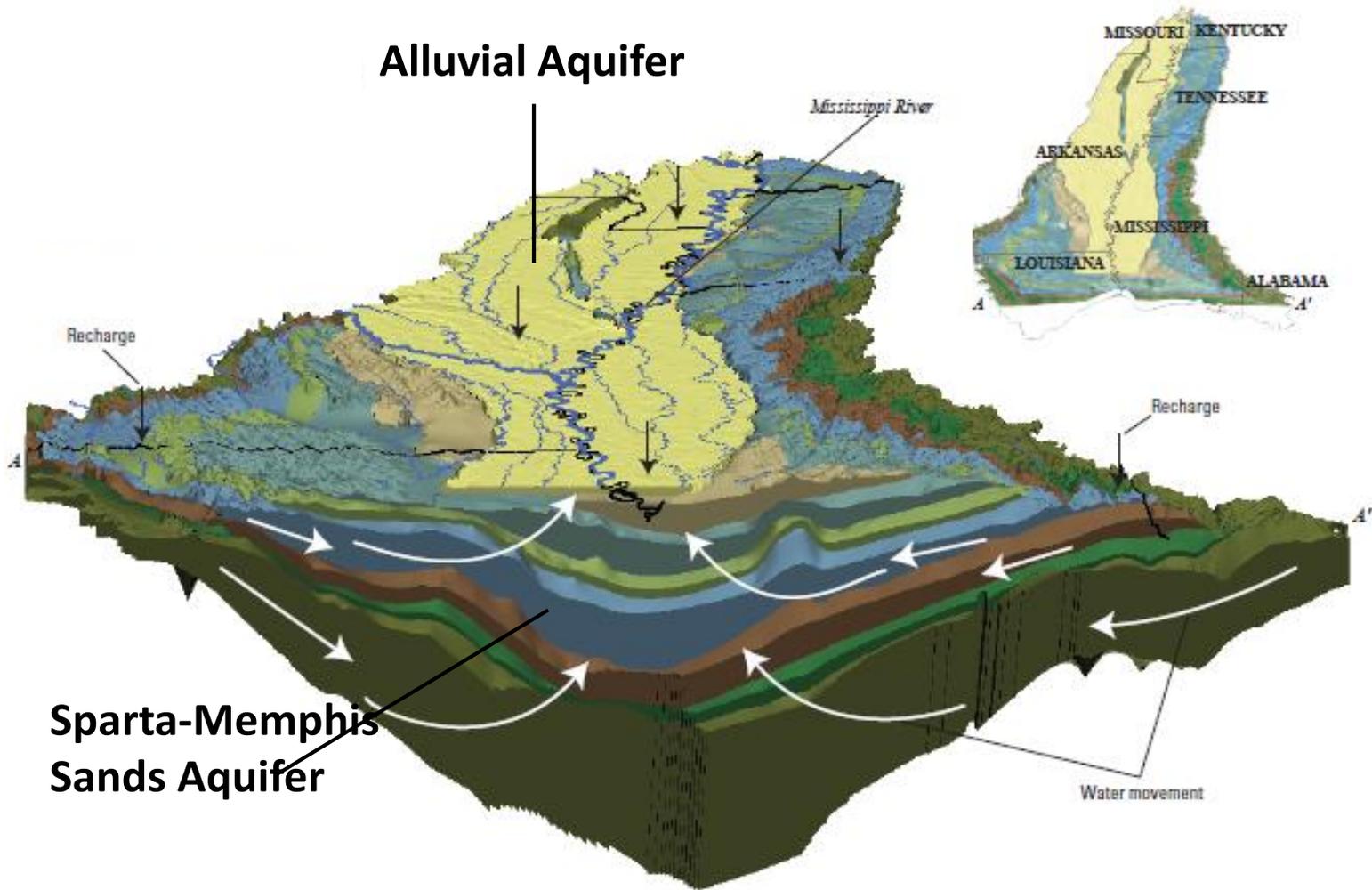
(2/14/17)

- Upstream development in GA has probably harmed GA. (10x increase in groundwater irrigation; GA granting GW permits even in drought emergencies.)
- But the Corps effectively controls the Basin, especially the Chattahoochee; any reduction in GA's consumptive use would not result in increased flows to FL, because of the Corps' statutory and regulatory commitments.
- And, because the Corps is not a party, no decree can mandate any change in Basin operations.
- Therefore, recommends dismissal without an equitable apportionment.
- Justice Breyer, at oral argument, January 4, 2018: "What are we supposed to do here?"

Mississippi v. Tennessee:
a new fight over a precious resource.

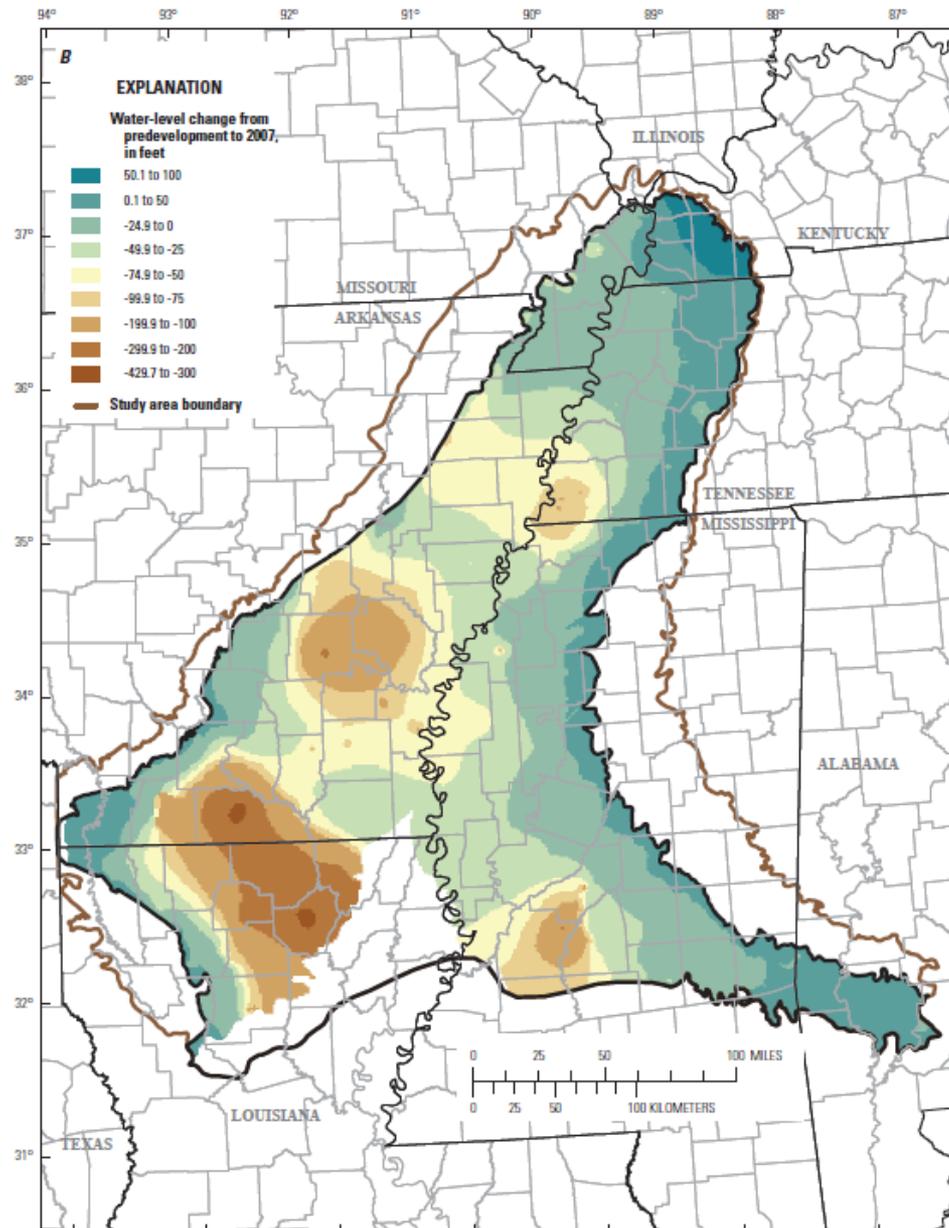


Mississippi Embayment Regional Aquifer System (MERAS)



***Conceptual Groundwater Flow Prior to Development
(USGS Professional Paper 1785)***

GW-Level Declines within the MERAS



*Water-level changes
in the Sparta-
Memphis Sands
(confined) aquifer,
predevelopment
through 2007*

*USGS Professional Paper
1785*

MS v. TN: Extreme Legal Positions, pt. IV

- Mississippi:
 - Trespass by Tennessee into sovereign property
 - Conversion of Mississippi property (groundwater)
 - Violation of Mississippi water law
 - This is NOT an equitable apportionment situation.
 - Damages: \$615 million (contingency fees involved).
- Tennessee:
 - This IS an equitable apportionment situation
 - MS entitled to no relief until the Memphis/Sparta Sand Aquifer is equitably allocated.
- United States: mostly agrees with Tennessee (but not a party to the litigation).

Mississippi v. Tennessee:

Extreme Technical Positions, pt. III

- The Sparta Sands Aquifer (or, as it is called in Tennessee, the Memphis Aquifer) is an interstate geological formation.
- *However*, the water contained within the aquifer is not an interstate resource.
- The long-dead Colorado lawyers from *Kansas v. Colorado* (1902-07) would be proud of this “two aquifers” theory.

MS v. TN: Special Master's Decision

(8/12/2016)

1. Doctrine of equitable apportionment almost certainly applies here, not trespass and conversion.
2. MS's argument that the equal footing doctrine protects its interstate groundwater supplies fails.
3. However, orders hearings, given the Court's over-inclusiveness in original jurisdiction cases:
 - A. To determine "whether the Aquifer and the water constitutes an interstate resource." (Order, 4/12/18)
 - B. Hearing scheduled for January, 2019.
 - C. Whose expertise will be prominent here? USGS.

Observations across 50 years

- Extreme legal and technical positions are a recurring characteristic, even when the states should know better.
- The importance of groundwater and groundwater modeling
- The importance of historical analysis to discern the states' compacting intent
 - Used successfully by Kansas in *KS v. CO* and *KS v. NE I*
 - Special Master's independent analysis vs. the law of the case: *Texas v. New Mexico & Colorado*; did it help remove him?
- Interstate litigation as a forcing tool for intrastate legal reform, especially in groundwater
- SCOTUS decisions generating large investments in compliance systems.

5 Warning Signs

1. **In litigation: the idiot-savant defense:**

- *Montana v. Wyoming* as the best example: (1) Deny that a compact includes groundwater and recommend renegotiation; (2) misstate state law on GW-SW; (3) Defend on grounds of no GW data; then, (4) bring in an expert to attack the plaintiff state's workaround. **Effective. But proper?**

2. **Compliance methods are troubling:**

- Conflicts with the prior appropriation doctrine under state law (NM, NE inverse condemnation cases)
- Stream “augmentation”: will treating the symptom at such high doses eventually kill the patient?

3. **Anti-federal sentiment corroding the double-bargain of compacts. (state-state, state-federal)**

- New Mexico's position in the Rio Grande litigation
- RRCA Resolutions, 2016

4. **Over the long term:**

- Legal vs. Hydrological Time
- Legal Boundaries and Hydrological Boundaries

1 to 4 → 5. So what is the federal role?

- *KS v. NE & CO*: Republican Litigation
 - Reclamation manages the Basin across state lines.
 - But Reclamation not invested— **despite** its interstate investments. Nebraska surface irrigators support *Kansas*.
 - USA inconsistent and frustrating to states.
- *TX v. NM*: Rio Grande Litigation
 - Reclamation manages the Basin across state lines.
 - Here, USA moves to intervene and the Court allows it (3/2018)
- *FL v. GA*: ACF Litigation:
 - USACE manage the Basin across state lines.
 - FL likely harmed, but no resolution without the USACE
 - Assuming FL has been harmed, how can it obtain relief?
- A McCarran Amendment for Interstate Litigation? Discuss.

Who cares about these Great Plains/Llano Estacado Rivers? No one lives, skis, or kayaks there. Boring.

- Groundwater supplies connected to the Colorado River Basin plummeted by 41 million acre-feet between 2004 and 2013.*
 - At current (not Compact) quantifications, that is more than three years of the total flow of the River.
 - That is enough to supply the domestic needs of the entire U.S. population for eight years.
 - Reclamation controls the River's major reservoirs, but does not and will not control groundwater management.

*Stephanie L. Castle *et al.*, “Groundwater Depletion during Drought Threatens Future Water Capacity of the Colorado River Basin,” *GEOPHYSICAL RESEARCH LETTERS* 41.16 (2014), pp. 5904-5911.

Conclusion:

Casus Belli, over and over again.

- Showdown on the Arkansas, circa 1983:
 - ATTORNEY GENERAL STEPHAN: We have our armies massed at the border.
 - ATTORNEY GENERAL MACFARLANE: What are they going to drink?
- Thank you, residents of Kansas Territory.

Burke W. Griggs, *Interstate Water Litigation in the West: a Fifty-Year Retrospective*,

20 U. DEN. WATER L. REV. 153-216 (2017).

David Hill, 1935-2018

- Lawrence, Kansas native
- USMC, 1956-59
- Order of the Coif,
Michigan Law
- Co-founded Berg Hill
Greenleaf Ruscitti, 2001
- Honored by Colorado Bar
Association's Water Law
Section, 2016
- Second-best quail hunter in
Kansas (next to his brother)

