No. 143, Original

IN THE Supreme Court of the United States

STATE OF MISSISSIPPI,

Plaintiff,

v.

STATE OF TENNESSEE, CITY OF MEMPHIS, TENNESSEE, AND MEMPHIS LIGHT, GAS & WATER DIVISION,

Defendants.

On Bill of Complaint Before the Special Master, Hon. Eugene E. Siler, Jr.

STATE OF MISSISSIPPI'S COMBINED RESPONSE TO DEFENDANTS' POST-HEARING BRIEFS

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GLOSSARY

City of Memphis, a political subdivision of Tennessee
State of Mississippi
Memphis Light, Gas & Water Division of the City of Memphis
Post-Hearing Brief of MLGW
Post-Hearing Brief of Mississippi
Stipulated Fact
State of Tennessee
Post-Hearing Brief of Tennessee
United States Geological Survey

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Mississippi submits this combined response to the two post-hearing briefs by Tennessee and Memphis/MLGW.¹

INTRODUCTION

Mississippi's case against Tennessee, Memphis, and MLGW is an action to enforce its retained territorial sovereignty and full jurisdiction over all soils, lands, and waters found within its borders under the Constitution of the United States, and to obtain all remedies available under the Constitution. This exclusive sovereign territorial authority of each State to the exclusion of its neighboring States has been consistently affirmed by the Court, including in *Kansas v. Colorado*, 206 U.S. 46 (1907), which declared that each State possesses "full jurisdiction over the lands within its borders, including the beds of streams and other waters," *id.* at 93, prohibiting any State from imposing its own policy on any other State. *Id.* at 95.

Defendants'² commercial cross-border pumping and capture of groundwater located and found in the earth within Mississippi's borders is a direct violation of

¹ Mississippi is entitled to file a 30-page response to Tennessee's brief and a 30-page response to Memphis/MLGW's brief; but to avoid burdening the Special Master with repetitious arguments in two separate response briefs, Mississippi is submitting a combined response not exceeding its available limit of 60 pages.

² The Court need not distinguish Tennessee from its governmental subdivision because (1) the evidence establishes Tennessee's complicity with Memphis' crossborder pumping of Mississippi groundwater; and (2) governmental and proprietary function distinctions are irrelevant to this Constitutional analysis. *New York v. U.S.*, 326 U.S. 572, 583 (1946).

the Constitution in a dispute which does not involve commerce or any federal law passed by Congress. Nothing in *Kansas v. Colorado* or its progeny does or can create any cross-border water rights of any kind between States under these facts; yet Defendants cite these inapt cases and completely ignore the Constitution.

Defendants' arguments are premised on the notion that they have *rights* to groundwater located in Mississippi, beyond Tennessee's territorial boundary. But the Supreme Court in *Rhode Island v. Massachusetts*, 37 U.S. 657 (1838), emphasized the absolute prohibition against one State's violation of another State's territorial sovereignty. The Court held:

The locality of [a State boundary] is matter of fact, and, when ascertained separates the territory of one from the other; for neither state can have any right beyond its territorial boundary. It follows, that when a place is within the boundary, it is a part of the territory of a state; title, jurisdiction, and sovereignty, are inseparable incidents, and remain so till the state makes some cession.

Id. at 733 (emphases added). Mississippi has never made any such cession to Tennessee.

PROCEDURAL BACKGROUND

Defendants note the procedural history of this case, suggesting that the district court and Fifth Circuit rulings have some controlling effect here. They do not.

This case was originally filed by Mississippi against Memphis and MLGW only in the federal court in the Northern District of Mississippi. On February 6, 2008,

United States District Court Judge Glen H. Davidson issued a "Bench Opinion Dismissing Action Without Prejudice" which opened with the following:

The United States Supreme Court [has] held ... that Article III generally requires a federal court to satisfy itself of its jurisdiction over the subject matter before it considers the merits of a case and that "for a court to pronounce upon [the merits] when it has no jurisdiction to do so is for a court to act *ultra vires*."

Hood ex rel. Mississippi v. City of Memphis, Tenn., 533 F. Supp. 2d 646 (2008), *aff'd* 570 F.3d 625 (2009) (citation omitted). The operative facts supporting dismissal by the district court on jurisdictional grounds were the absence of any reported cases on the groundwater issues, the parties' admission "that the Memphis Sands or Sparta aquifer lies under several States including the States of Tennessee and Mississippi," and unidentified exhibits. *Hood*, 533 F. Supp. 2d at 648; however, the opinions published by both the district court and court of appeals repeated broad phrases taken from Defendants' arguments which are, at best, dicta repeating a material fallacy of presumption living on in these two lower court opinions.

IDENTIFICATION OF OPERATIVE FACTS

Defendants' assertion that Mississippi has no exclusive sovereign authority over groundwater located and found in the earth in Mississippi, entitling Defendants to engage in cross-border pumping of the water because such pumping is an agency of natural law presents a matter of first impression under the Constitution. Therefore, it is important to identify the operative facts relevant to the issue. *See Aro* *Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 343 (1961) ("courts below focused attention on operative facts not properly determinative of question"); *Executive Jet Aviation, Inc. v. City of Cleveland, Ohio*, 409 U.S. 249, 251-52 (1972) (discussing operative facts necessary to determine admiralty jurisdiction). As illustrated in these cases, the operative facts depend on the controlling law in the dispute. In this dispute between States the controlling law is the Constitution.

In this context, the respective rights and obligations of the States must be decided based on the following facts: (1) the location of the groundwater in dispute under natural conditions before commercial groundwater pumping; (2) the geographic area from which Defendants' commercial pumping has taken groundwater; (3) the availability of scientific information necessary to predict and limit the geographic area within which pumping would capture the groundwater in dispute; and (4) the availability of such scientific information to Defendants at the time relevant to Mississippi's claims.

MATERIAL EVIDENCE ESTABLISHING OPERATIVE FACTS³

Mississippi and Tennessee are separate sovereign States admitted to the Union by the United States Congress under the United States Constitution in 1817 and

³ Many of the operative facts are found in United States Geological Survey ("USGS") reports on studies specifically made of groundwater resources in Memphis, Shelby County, Tennessee, sometimes referred to as "the Memphis area," which is always specifically defined when this more general description is used in a USGS report. These USGS reports are marked as Joint Exhibits in the Record.

1796, respectively. (S1, S2, S5, S6). Memphis is a political subdivision of the State of Tennessee. (S3). MLGW is a division of Memphis. (S4). Groundwater is a natural resource. (S7).

The groundwater at issue is found in Mississippi in cracks and pore spaces in the earth, deposited over tens of millions of years; and "[t]he size, shape, and degree of interconnection of the open spaces between rock particles control[s] the amount of water that can be accepted, stored, and eventually discharged ... by natural subsurface ground-water movement." (J-22, page 21-22 of 62).

Under natural conditions at the time Mississippi and Tennessee were admitted to the Union each State became sovereign over an essentially constant volume of groundwater stored by nature under natural conditions within its borders. Undisturbed by man, this groundwater found in confined aquifers, (S19), created by the forces of nature over tens of millions of years creeps through the earth westward from eastern outcrops in both states, remaining within their respective territorial borders for hundreds to thousands of years. (J-22, pages 21-22, 24, 38-40 of 62; J-77; J-58; Tr. 450; S-15).

Groundwater pumping imposes stresses on natural groundwater systems. Pumping lowers the natural groundwater pressure at the location of the pump and

Reliance by the Special Master on directly relevant USGS reports was approved by the Supreme Court in *Kansas v. Colorado*, 514 U.S. 673, 691 (1995).

pulls groundwater out of natural storage in the pore spaces of the earth, and toward the pumping well, changing the natural groundwater pressures in an area resembling an inverted cone called a "cone of depression." The part of the earth from which a specific well can lower the pressure to extract groundwater decreases as the distance from the well increases. (S26; S27; S30; S32; S18).

The areal extent and depth of the cone of depression created by a pumping well or wells can be reasonably predicted and can be accurately determined by groundwater hydrologists using information obtained from properly drilled and finished wells. (J-77, pages 331-337 of 354; J-22, pages 40, 59 of 62; J-58, pages 31, 34, 49 of 50).

Both Tennessee and Memphis, in cooperation with the USGS, have intensively studied the natural groundwater resources in west Tennessee and the impacts of Memphis area groundwater pumping on the natural groundwater systems since the 1920s, creating a substantial body of literature on the hydrogeology of the aquifer systems.⁴ These studies produced undisputed scientific evidence tracking the

⁴ *E.g.*, J-12, page 2 "Previous Studies;" J-15, page 2 of 64, "Previous Investigations;" J-77, pages 11-12 of 354, "Previous investigations," and 289-342 of 354, "Memphis;" J-58, page 10 of 50, "Previous Investigations," and 9-11, 14-15, 20, 25-26, 32-36, 42, 45-47; J-23, pages 1-2 of 26, "Purpose and Scope of Investigation," and "Previous Investigations," and 10, 16-17; J-9, Figures 1-4, pages 4-7. All USGS investigations identified in the USGS studies and investigations marked as Joint Exhibits have not been in print for some time, but the scientific data in these reports is often referred to in the Reports in evidence.

progression of the geographic impacts of Tennessee groundwater pumping in southwest Tennessee near the Mississippi border since 1933.⁵ (J-77).

The Memphis Sand found in all west Tennessee extends a few miles south into northwest Mississippi where it disappears into the much thinner Sparta Sand, which has an underlying confining clay layer not found in Tennessee. (J-3, pages 4-5 of 100; J-58, page 18 of 50).

In 1953 MLGW began operation of its new Allen wellfield constructed to the southwest of its existing wellfields (*i.e.*, closer to Mississippi) in 1953 (J-23, pages 1, 7, 10 of 26); but nothing in the available⁶ USGS reports from 1933 (J-77) through 1958 (J-23) reports a cone of depression extending into Mississippi.

⁵ *See* USGS reports marked as joint exhibits, in year date order, as follows: 1906 (J-31); 1933 (J-77); 1958 (J-23); 1964 (J-25); 1964 (J-22); 1965 (J-58); 1965 (J-59); 1968 (J-7); 1976 (J-24); 1976 (J-60); 1978 (J-33); 1981 (J-10); 1981 (J-11); 1982 (J-12); 1982 (J-34); 1987 (J-35); 1989 (J-61); 1990 (J-62); 1990 (J-63); 1990 (J-64); 1991 (J-8); 1992 (J-48); 1993 (J-49); 1995 (J-65); 1996 (J-50); 2001 (J-15); 2012 (J-38); 2015 (J-9); 2016 (J-39); 2018 (J-17) and other unpublished studies referred to in these documents as references.

⁶ J-23, published in 1958, explained that the USGS began a cooperative program with MLGW in 1940 of groundwater water-level measurements, which was expanded in 1943 to a continuing investigation of groundwater and conditions (impacts of groundwater pumping) in the Memphis area, and that studies and reports that were no longer in print that had been undertaken as part of a continuous study of Memphis area groundwater pumping in cooperation with MLGW reported on in 1944 and 1948. Both prior reports were out of print, but the author had access to the information. (J-23, page 7 of 27).

Two USGS Reports of studies undertaken in cooperation with MLGW in 1964 (J-22), and in cooperation with Tennessee in 1965 (J-58), however, advised Defendants that heavy Shelby County pumping, including by MLGW, from existing wellfields during 1960 was withdrawing 25 million gallons of groundwater a day across the border from Mississippi into Tennessee; and advised that the question of the "legal and economic aspects of continued development" needed to be answered. (J-22, pages 40, 59 of 62; J-58, pages 31, 34, 49 of 50).

Despite these reports, MLGW did not place new wellfields further north to eliminate the cross-border capture of groundwater from Mississippi, but rather proceeded to construct and put into operation the Lichterman, Davis, and Palmer wellfields within two to three miles of the Mississippi-Tennessee border. (S14) It cannot be reasonably disputed that all three wellfields were conceived, designed, constructed, and operated with the knowledge that their pumping operations would capture substantial amounts of groundwater located in Mississippi. (J-59, pages 6, 19, 22-22 of 32).

RESPONSE TO DEFENDANTS' ARGUMENTS

- I. Mississippi Is Entitled To Judicial Relief Under The United States Constitution, And The Federal Common Law Does Not And Cannot Create Cross-Border Groundwater Rights Between Separate States.
 - A. This Dispute Falls Directly Under the Authority of the United States Constitution, Not Federal Common Law.

The United States Constitution, Article IV, Section 3, Clause 1 provides:

New States may be admitted by the Congress into this Union; but no new State shall be formed or erected within the Jurisdiction of any other State; nor any State be formed by the Junction of two or more States, or Parts of States, without the Consent of the Legislatures of the States concerned as well as of the Congress.

The Tenth Amendment to the Constitution provides:

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

Relatively recent cases have reminded us of the first principles embodied in the Constitution which created a governmental structure in which the States retained numerous and indefinite sovereign powers. *U.S. v. Lopez*, 514 U.S. 549, 552 (1995).

Defendants' briefs simply ignore these foundational provisions. But upon the Act of Congress admitting it to the Union, Mississippi became an absolute sovereign under the law of nations over all lands and waters within its borders, subject only to the authority ceded to the federal government under the Constitution. *E.g.*, U.S. Const. amend. X; *Rhode Island v. Massachusetts*, 37 U.S. 657, 733 (1838); *Oregon ex rel. State Land Bd. v. Corvallis Sand & Gravel Co.*, 429 U.S. 363, 374 (1977); *PPL Montana, LLC v. Montana*, 565 U.S. 576, 590-91 (2012). State sovereign authority over all waters within its borders is an essential attribute of retained sovereignty existing under the Constitution to the exclusion of other States. *E.g., Tarrant Reg'l Water Dist. v. Herrmann*, 569 U.S. 614, 631-32 (2013); *Kansas*, 206 U.S. at 93-95.

B. Rules of Federal Common Law Do Not Displace Retained Sovereign Authority of States Within Their Borders Under the Constitution in Disputes Between States Involving No Federal Issues.

Defendants completely ignore the Constitution, which clearly defeats their claim without further inquiry, and turn to federal common law to make a host of arguments that ignore the Constitutional limitations on federal common law. In summary, the Constitution still controls this case, and federal common law cannot support Defendants' intentional cross-border groundwater pumping from within Mississippi's borders.

The purpose of federal common law is to implement the federal Constitution and statutes, and its viability and limits are conditioned on the authority within them. *See D'Oench, Duhme & Co. v. FDIC*, 315 U.S. 447, 472 (1942) (Jackson, concurring). The body of federal common law created within this purpose consists of a collection of special rules of decision, each created by a federal court, in a few and limited instances involving a significant conflict or threat to a federal interest which justifies creation of such a special rule of decision. Such instances are few and restricted. *See Atherton v. FDIC*, 519 U.S. 213, 217-19, 224-25 (1997); *Texas Industries, Inc. v. Radcliff Materials, Inc.*, 451 U.S. 630, 640-41; (1981); *Kansas. v. Colorado*, 206 U.S. 46, 79 (1907). The Court's 1907 decision in *Kansas. v. Colorado* demonstrates a clear understanding of the purpose and the limitations of a federal court's authority to create federal common law. Before discussing this 1907 decision further, it is helpful to refer briefly to the Court's earlier decision in the case which denied Colorado's demurrer objecting to the Court's jurisdiction. *Kansas v. Colorado*, 185 U.S. 125 (1902). In its 1902 opinion the Court identified the dispute as one between separate States, each sovereign over all waters within its borders, as a just cause of war by sovereign nations not available to the States under the Constitution. *Id.* at 140-145. The case clearly presented a significant conflict or threat to a federal interest.

The Court's 1907 opinion opened by stating "[t]his suit involves no question of boundary or of the limits of territorial jurisdiction" in clear recognition of State territorial sovereignty, 206 U.S. at 79, then expressly affirmed each State's absolute sovereign authority over all waters within its borders, and the prohibition against either State attempting to extend its sovereignty beyond its borders. *Id.* at 93, 95. The Court then explained that its authority under the Constitution to create federal common law arose from the rule of "equality of right" among sovereigns, and the fact that "[b]efore either Kansas or Colorado was settled the Arkansas river was a stream running through the territory which now composes these two states." 206 U.S. at 97-98.

The equitable apportionment rule which arose out of *Kansas v. Colorado* has been limited to disputes between State involving interstate rivers and streams, and,

contrary to Defendants' arguments, it has never been applied outside this context. The rule cannot be read to create cross-border groundwater pumping rights.

C. Defendants' Arguments That Equitable Apportionment Has Been Expansively Applied to "Interstate Resources" Misstates the Supreme Court Case Law.

Ignoring the Constitution, Defendants contend that equitable apportionment is the controlling law in this case. (TN Br. at 2-3; MLGW Br. at 20-23). When analyzed carefully it is clear that their argument has no support in the Supreme Court case law.

Tennessee states that "'equitable apportionment is the doctrine of federal common law that governs disputes between states concerning' an interstate water resource." (TN Br. at 2) The language quoted by Tennessee is from a sentence in *Colorado v. New Mexico* which reads in its entirety as follows:

Equitable apportionment is the doctrine of federal common law that governs disputes between states concerning *their rights to use the water of an interstate stream*.

459 U.S. 176, 183 (1982) (emphasis added). Tennessee omits the italicized language, which limits the actual statement of law by the Supreme Court and undermines a major premise of Tennessee's argument. Tennessee simply replaces the limiting

language related to "interstate stream" with the expansive phrase "interstate water resource." This phrase has never appeared in any Supreme Court opinion.⁷

Tennessee follows this with a cropped quote from *Tarrant* that is misleading. The context of *Tarrant* was a dispute over the Red River Compact and the phrase "equitable apportionment" only appears once in the opinion, as background motivation for interstate river compacts. 569 U.S. at 619. This sentence is dicta.

Tennessee closes its first paragraph by asserting that "[t]he Supreme Court has applied that doctrine [equitable apportionment] to a wide array of *interstate resources*...." (TN Br. at 2-3) (emphasis added). The phrase "*interstate resources*" has never appeared in a Supreme Court case referring to "natural resources" of the type at issue in this case; the "wide array" of cases cited all involved interstate rivers or streams. Indeed, none of the cases cited by Tennessee expand the federal common law of equitable apportionment beyond interstate rivers and streams and the surface water (or fish) in them. *See, e.g., Nebraska v. Wyoming,* 325 U.S. 589 (1945) and *Nebraska v. Wyoming,* 515 U.S. 1, 14 (1995) (1945 case apportioned surface water in North Platte River between States; 1995 decision allowed Nebraska to proceed

⁷ An advanced search in the Westlaw Supreme Court decision database for this exact phrase reports zero cases. To be fair, Westlaw has given one of its Keycite numbers this name, and defendants have used it from the beginning as one of their many descriptive phrases so it appears in *Hood*, also cited by Tennessee as support for its argument. But again, *Hood* appears to be the only federal case using this phrase which is clearly dicta at best.

with claim that Wyoming groundwater pumping depleted Nebraska's apportioned share of the surface water; Wyoming admitted its pumping reduced river flow); *Washington v. Oregon*, 297 U.S. 517 (1936) (dispute between States over the waters of interstate Walla Walla River; opinion never uses phrase "equitable apportionment"); *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017 (1983) (dispute over migratory fish traveling in interstate river system). The "wide array" is limited to cases involving interstate rivers and streams, and Tennessee's use of the phrase "interstate resources" is meaningless.

MLGW notes that in *Florida v. Georgia*, 138 S. Ct. 2502, 2513 (2018), the Court stated: "Where, as here, the Court is asked to resolve an interstate water dispute raising questions beyond the interpretation of specific language of an interstate compact, the doctrine of equitable apportionment governs our inquiry." (MLGW Br. at 20). It is clear, however, from the context of the Court's language, *see* 138 S.Ct. at 2513-15, that the "interstate water" to which the Court referred was interstate rivers and streams. *See also Virginia v. Maryland*, 540 U.S. 56, 74, n. 9 (2003) ("Federal common law governs interstate bodies of water, ensuring that the water is equitably apportioned between the States and that neither State harms the other's interest *in the river*.") (emphasis added).

Contrary to Defendants' implications, the Supreme Court has never applied equitable apportionment to a single case involving a dispute between States over cross-border groundwater pumping. Tennessee cites various cases discussing groundwater pumping to infer support for its arguments, but none of the cases support cross-border pumping of groundwater by one State out of another and are irrelevant to the issue before the Court.

For example, *Nebraska v. Wyoming*, 515 U.S. 1 (1995) (TN Br. at 3-5) is the third reported case between these States on a dispute over the surface waters of the North Platte River. The surface waters of this interstate river had been fully apportioned among the two States and the United States since 1953 under a Supreme Court Decree. *Nebraska v Wyoming*, 325 U.S. 589 (1945); *Nebraska v Wyoming*, 345 U.S. 981 (1953). This third reported case only allowed Nebraska to pursue a claim against Wyoming for Wyoming's depletion of the surface water already apportioned to Nebraska by the Decree by groundwater pumping which Wyoming conceded reduced the surface water flow in the river. 515 U.S. at 14. This claim did not involve any apportionment of the groundwater.

Kansas v. Nebraska, 135 S. Ct. 1042 (2015) (TN Br. at 4) is the most recent in a series of cases, this time involving a dispute over the interstate surface waters of the Red River under the Red River Compact between the States and approved by Congress making it federal law under which the Court's role was to "declare rights under the Compact and enforce its terms." *Id.* at 1052-53. As the Court explained, in this context it possesses even greater equitable authority than in the equitable apportionment cases to fashion a remedy, limited only by the express terms of the compact. *Id.* The Court agreed with the Special Master's recommendation finding that the Nebraska groundwater pumping challenged by Kansas was a violation of the interstate compact supporting an equitable award of monetary relief to Kansas. Nothing in this case involved federal common law of equitable apportionment; it involved breach of an interstate compact.

Likewise, *Texas v. New Mexico*, 462 U.S. 554 (1983) (TN Br. at 2, 5, 30) involved a dispute under an interstate compact which the Court dismissed because it refused to make a tie breaking vote of the Pecos River Commission established by the compact and dismissed the case based on the terms of the compact. This case did not involve equitable apportionment of groundwater under the federal common law as implied by Tennessee; and, the Court's decision in *Washington v. Oregon*, 297 U.S. 517 (1936) (TN Br. at 2, 5, 30) was a dispute between the States over the water of the Walla Walla river needed to meet their respective allocations under their separate State laws in which the Court never used the phrase "equitable apportionment," and dismissed the case without any relief.

Finally, *Sporhase v. Nebraska ex rel Douglas*, 458 U.S. 941 (1982) (TN Br. at 4) is an Interstate Commerce Clause case which never touched the issue of State sovereignty to control the pumping of groundwater found within its borders. It only held that once such groundwater has been pumped from within a State's borders with

permission from that State, that water constitutes an article of commerce. Nothing in Sporhase compromised the State's retained territorial sovereignty over all waters within its borders because this issue was not before the Court and any language suggesting otherwise is dicta. Id. at 961, et seq. (REHNQUIST, O'CONNOR dissenting). The scope of this Opinion was subsequently reviewed by the Nebraska Supreme Court in State ex rel. Douglas v. Sporhase, 213 Neb. 484 (1983). The Nebraska Supreme Court held that it was limited to a clause in Nebraska's regulatory statutes which prohibited the transport of groundwater lawfully produced under those statutes to another State absent a provision in the other State's statutes granting "reciprocal rights" to transport to Nebraska under the Interstate Commerce Clause of the Constitution groundwater that had been produced in the other State. Finding that clause severable from the statutes of Nebraska regulating groundwater pumping, it affirmed the balance of these State laws. Id. at 487. Groundwater naturally stored in the earth within Mississippi's borders is not the subject of commerce under the Constitution under any Supreme Court application of that clause of the Constitution, and Sporhase provides no support for extension of federal common law in direct conflict with the Constitution as argued by Defendants.

D. Groundwater Is Substantially Different From Surface Water In All Material Respects.

Defendants' arguments (TN Br. at 3; MLGW Br. at 22-23) assert an equivalence between surface water and groundwater that simply does not exist. For

example, Tennessee's citation of *Hood ex rel. Mississippi v. City of Memphis* in the concluding paragraph of its Section I.A does not support its assertion that "groundwater resembles surface water in all the relevant ways." (TN Br. at 3) The only issue before the Court of Appeals was dismissal for lack of subject matter jurisdiction before any consideration on the merits. The record evidence, including USGS reports and hydrogeology treatises admitted as Joint Exhibits, actually reveals *many* material differences between groundwater and surface water. (*E.g.*, J-1; J-2, pages 8, 10, 13, 15-16 of 86; J-3, pages 3-6 of 100; J-20; J-27, pages 441-42; J-40, pages 6-25 of 91; J-51, pages 5, 6, 8-12 of 12).

Groundwater is part of the earth, part of a hidden and infinitely complex, heterogenous subsurface. It does not "flow" like a "body of water" in an interstate river moving downstream at velocities measured in feet per second roughly equating 16 miles a day. (J-2, page 13 of 86). Groundwater creeps through cracks or between and around the rocks and soils of the earth moving at typical rates measured in meters a year, (J-40, page 10 of 90) and can remain in the earth for periods of times ranging from days to tens of thousands of years depending on the specific geology and location in the three-dimensional subsurface environment. (J-2, page 16 of 86; J-29, page 23 of 624; J-40, page 19 of 91). The groundwater at issue constitutes part of the subterranean structure of Mississippi, and therefore part of its sovereign territory.

Without explanation, Defendants simply contend that the fact that the groundwater at issue would have remained in Mississippi for thousands of years but for their actions is simply irrelevant. But this fact is a fundamental and critical distinction of groundwater from surface water.

MLGW seeks to avoid this fact by characterizing it as an argument about "origin" which was rejected in two equitable apportionment cases, *Colorado v. New Mexico* and *Idaho v. Oregon.* (MLGW Br. at 30). MLGW's argument has no application, however, because this case is not about the origin of the water at issue but the location of that water (Mississippi) when MLGW captured it unlawfully, and further because the water at issue bears no resemblance to the surface water and migrating fish found in the inapt equitable apportionment cases.

E. Mechanized Commercial Pumping is an Artificial Man-Made Activity, Not an Agency of Natural Laws.

Defendants' "agency of natural laws" argument (TN Br. at 3; MLGW Br. at 11-12) is just another attempt to bring this case under *Kansas v. Colorado* by removing this phrase from its context. But the Court had no difficulty understanding the meaning of this phrase in *Kansas v. Nebraska*, 135 S. Ct. 1042 (2015):

In *Kansas v. Colorado* we confronted a simple consequence of geography: An upstream State can appropriate all water from a river, thus "wholly depriv[ing]" a downstream State "of the benefit of water" *that "by nature"* would flow into its territory.

135 S. Ct. at 1053 (citation omitted; emphasis added). The phrase "agency of natural laws" as used by the Court in its *Kansas v. Colorado* opinion referred to the natural uninterrupted downstream flow of an interstate river or stream. Commercial groundwater pumping is an agency of man's applied mechanical engineering expertise, not nature.

F. The Equitable Apportionment Cases Cannot and Do Not Create Cross-Border Groundwater Pumping Rights.

Defendants argue that the "equitable apportionment doctrine" precludes all of Mississippi's claims (TN Br. at 3-5; MLGW Br. at 20-23), but it does not. Equitable apportionment is not a doctrine establishing substantive rights of general application; it is a federal common law remedy limited by the Constitution. It simply does not, as Defendants suggest, create or bestow upon Defendants any legal rights to or interests in groundwater that is located within Mississippi's sovereign territory; it cannot create the cross-border rights claimed by Defendants, which are in direct conflict with the Constitution.

The Supreme Court has never decided a single case involving a groundwater dispute between two States in which one State was pumping groundwater across state borders out of its neighboring State's sovereign territory.⁸ Instead, all of the

⁸The equitable apportionment cases all originate in disputes over the interruption of the natural flow of surface water down a path through the territory of two or more states. Groundwater has only been addressed by the Court where it was hydrologically connected to the disputed surface water. *See Kansas v. Nebraska*, 135

Court's interstate river apportionment cases were rooted in an upstream State's taking of water from a river *while the surface water was located within the upstream State*; and the Supreme Court balanced the equities between the upstream State(s) and the downstream State(s) and imposed limits on the amount of water the upstream State could take while the water was within its borders. *None of the cases* involved or sanctioned the cross-border extraction of water physically located in another State.

Unlike the equitable apportionment cases where a downstream State is complaining that the upstream State is taking too much water (an unfair share) from an interstate river or stream, Mississippi's claim is *not* that MLGW is taking too much water from underneath Mississippi or from "the aquifer" (however that may be defined). Instead, Mississippi's claim is that all groundwater in Mississippi is held by Mississippi in public trust for the use and benefit of its citizens, and that MLGW's intentional cross-border extractions of groundwater located in Mississippi without Mississippi's permission is a violation of Mississippi's sovereignty under the

S. Ct. 1042 (2015) (hydrologically connected to the Republican River); *Nebraska v. Wyoming*, 534 U.S. 40 (2001) (hydrologically connected to North Platte River); *Kansas v. Colorado*, 533 U.S. 1 (2001) (hydrologically connected to Arkansas River); *Nebraska v. Wyoming*, 515 U.S. 1 (1995) (hydrologically connected to North Platte River); *Kansas v. Colorado*, 514 U.S. 673 (1995) (hydrologically connected to Colorado River); *Texas v. New Mexico*, 462 U.S. 554 (1983) (hydrologically connected to Pecos River).

Constitution. None of the cases cited by Tennessee addresses, much less condones, such conduct.

Consistent with this, *Tarrant* slammed the door on attempts by the State of Texas to take water located in the State of Oklahoma without Oklahoma's permission, and reaffirmed the exclusive authority of each State to control the water that is located within its borders and to protect that water from unauthorized extractions by neighboring States. 569 U.S. at 632-633.

Defendants assert that under the equitable apportionment doctrine, a "State may not preserve solely for its own inhabitants natural resources located within its borders." (TN Br. at 4; MLGW Br. at 21). The case cited in support of their argument, *Idaho v. Oregon*, is distinguishable and does not support Defendants' argument.

The equitable apportionment *remedy* was applied by the Court in *Kansas v*. *Colorado* (1907) to address disputes over flowing surface water in which each State held an equitable interest under the conditions established by nature. Under these circumstances, the Court has balanced the rights of the affected States and made equitable allocations that affect how much water (or salmon, in *Idaho v. Oregon*) a State could take as the water (or fish) naturally traversed the State. It is only in this context that the Court has stated that a State "may not preserve solely for its own

inhabitants natural resources located within its borders." *Idaho v. Oregon*, 462 U.S. at 1025.

This case involves an entirely different set of facts and legal rights. Defendants' arguments presuppose that Defendants have a pre-existing right to take natural resources (groundwater) located within Mississippi's sovereign borders. *They do not*.

Defendants have reached into Mississippi and violated Mississippi sovereignty. The retained sovereignty of each State within its borders as against its neighboring states is one of the foundations of the Union. *See Rhode Island v. Massachusetts*, 37 U.S. at 726, 733 ("Controversies about boundary, are more serious in their consequences upon the contending states, and their relations to the Union and governments, than compacts and agreements;" "[N]either state can have any right beyond its territorial boundary.").

The foundation of sovereignty was apparent in *Tarrant* where the petitioner contended that an interstate compact allocating the water from the Red River created a borderless common in which the signatories had a right to cross each other's borders to access water that was subject to the compact. 569 U.S. at 625. The compact was silent as to the effect of state water laws regulating out-of-state sales of water, so petitioner argued the sharing agreement waived the restrictions imposed by state water law as to the compact's members. The Supreme Court rejected this

argument, stating that a State's exclusive authority to create and enforce the water policies within its borders is a fundamental part of state sovereignty which cannot be lost by implication. *Id.* at 632-633.

The Supreme Court cases are clear. Under the Constitution no State has any claim of right to any water while it is naturally residing within another State, even if the parties have agreed by compact to share the water, unless they expressly agree that such cross-border rights are granted. There is no agreement between Mississippi and Defendants of any kind, and nothing in the equitable apportionment cases changes this attribute of state sovereignty which remains absolute under the Constitution.

Because Defendants have no rights to groundwater located in Mississippi, Mississippi has the authority under the Constitution, and the duty under the public trust doctrine, to seek redress where Defendants have knowingly violated Mississippi's rights; no Constitutional basis exists for the Court to override Mississippi's Constitutional rights and allow Defendants to extract water located in Mississippi.

This case is not about "equitable allocation." It is about "location" and the sovereign rights of States under the Constitution. *No case* stands for the principle that one State such as Tennessee has the authority to *reach into* another State such as Mississippi and forcibly take water that is physically located in the other State,

nor for the principle that a State may not obtain judicial relief to prevent another State from engaging in forced, unnatural cross-border extractions of water that is physically located within its borders.

G. The Water at Issue is Held in Trust by Mississippi and is Subject to Mississippi's Exclusive Authority and Control.

Defendants' "no ownership" arguments (TN Br. at 4-5; MLGW Br. at 31-34) disregard the incidents of ownership held by Mississippi under the public trust doctrine, and the Supreme Court's recognition of a state's "greater ownership interest" in groundwater water as its most valuable natural resource. *See Sporhase v. Nebraska*, 458 U.S. 941, 952 (1982) (acknowledging the state's "greater ownership interest" in groundwater in a Commerce Clause case).

Under the Constitution Mississippi retained the authority to determine under state law the scope of the public trust doctrine and the natural resources to which it would apply, including all waters within its borders. *PPL Mont., LLC v. Montana*, 132 S. Ct. 1215, 1235 (2012); *Phillips Petroleum Co. v. Mississippi.*, 484 U.S. 469, 479 (1988). In 1985 Mississippi codified the public trust over all waters in Mississippi in its "Omnibus Water Rights Act," which declares:

All water, whether occurring on the surface of the ground or underneath the surface of the ground, is hereby declared to be among the basic resources of this state to therefore belong to the people of this state, and is subject to regulation in accordance with the provisions of this chapter. The control and development and use of water for all beneficial purposes shall be in the state, which, in the exercise of its police powers, shall take such measures to effectively and efficiently manage, protect and utilize the water resources of Mississippi.

Miss. Code Ann. § 51-3-1 (2003).

The public trust doctrine articulates Mississippi's interest in and duty as a trustee to hold, manage, preserve, and protect all waters within its territorial borders. Mississippi's claims for relief are made in both its sovereign capacity to protect its sovereign interests and to discharge its duty as trustee to protect, preserve, control, and regulate Mississippi groundwater for the people of Mississippi.

Mississippi's sovereign rights and authority over the groundwater residing within its territorial borders are Constitutionally based and proper. *See Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 237 (1907). This is not a Commerce Clause case, and Tennessee's "no ownership" argument under those cases (TN Br. at 4) misses the mark. Nevertheless, even those cases, *Hughes v. Oklahoma*, 441 U.S. 322, 334 (1979), and *Sporhase*, 458 U.S. at 952-53, acknowledge the State's interests in its natural resources protected under the Constitution.

Consistent with this fundamental attribute of State sovereignty, the Court recognized in *Tarrant* that the right to control and regulate the use of natural resources within the State's territory "is an essential attribute of sovereignty." *Tarrant*, 133 S. Ct. at 2132 (*quoting United States v. Alaska*, 621 U.S. 1, 34 (1997). A State has incidents of ownership and control sufficient to recover appropriate relief should another State or other actor wrongfully appropriate, harm or otherwise

deprive the State or its citizens of those natural resources. *See Hudson Co. Water Co. v. McCarter*, 209 U.S. 349, 355 (1908) (recognizing that "[1]he State, as *quasi*sovereign and representative of the interests of the public, has standing in court to protect . . . the water . . . within its territory"); *Selma Pressure Treating Co. v. Osmose Wood Preserving*, 221 Cal. App. 3d 1601, 1617-18 (Cal. Ct. App. 1990) (collecting cases where states have been awarded relief where its interests in air, land, or water were violated). *Cf. Missouri v. Illinois*, 180 U.S. 208, 241 (1901) ("It is true that no question of boundary is involved, nor of direct property rights belonging to the complainant State, but it must surely be conceded that, if the health and comfort of the inhabitants of a state are threatened, the state is the proper party to represent and defend them.").

H. Mississippi Code § 51-3-41 Does Not Help Defendants.

MGLW argues that Mississippi ceded its sovereignty in § 51-3-41 of Mississippi's Omnibus Water Act, §§ 51-3-1, *et seq.*, Miss. Code Ann., such that Mississippi has no protectable property interests in the water at issue and that the water therefore must be equitably apportioned. (MLGW Br. at 32-33). That statute, however, does nothing more than empower the Mississippi Commission on Environmental Quality of negotiate compacts or agreements with adjoining States.

As interpreted by MLGW, § 51-3-41 waives Mississippi's sovereign powers and nullifies the public trust which is established in § 51-3-1 and attaches to *all* water in the State. In *Tarrant* this Court rejected this kind of argument, noting that as sovereign entities "states do not easily cede their sovereign powers, including their control over waters within their own territories," 568 U.S. at 631, and held that any ceding of such powers must be stated expressly and cannot be premised on ambiguity or silence. *Id.* at 632. There is nothing in § 51-3-41 which purports to waive or limit Mississippi's sovereign powers as MLGW asserts.

MLGW next argues that the Supreme Court of Mississippi "expressly rejected Mississippi's claim of 'sovereign ownership' over water" in *Dycus v. Sillers*, 557 So.2d 486 (Miss. 1990) (MLGW Br. at 33-34). *Dycus*, however, dealt with the issue of whether public waters are susceptible of *private* ownership (*see* 557 So.2d at 501-02), and the Court expressly recognized that the waters of the State are held in public trust by the State for the use and benefit of its citizens. *Id.* at 497-98. Further, MLGW's assertion that Mississippi's holding of the groundwater at issue in public trust for the use and benefit of its citizens "is contradicted by its own law," (MLGW Br. at 34) is specious, given the Mississippi Legislature's unequivocal mandate/proclamation in § 51-3-1.

II. Water Policy In The United States Must Be Premised On And Consistent With The Constitution.

Defendants assert speculative, unfounded arguments about the potential effects Mississippi's claims may allegedly have on "water policy" in the United States. Tennessee asserts, for example, that "applying a sovereignty-based framework to groundwater would destabilize national water policy and frustrate the 'public interest.'" (TN Br. at 5). Similar assertions are made by Memphis/MLGW. (MLGW Br. at 35). As noted in J-1, however, there is no national framework or water policy in the United States. J-1, "A National Framework for Ground-Water Monitoring in the United States," authored by the Subcommittee on Ground Water of the Advisory Committee on Water Information (SOGW), explains that ground-water level monitoring has been carried out by States. J-1, page 13 of 182. The SOGW "was commissioned to . . . develop a framework that establishes and encourages implementation of a long-term national ground-water quantity and quality monitoring network." *Id*.

Congress, in addressing water quality protections in the Clean Water Act (CWA), has recognized and preserved a "sovereign-based framework to groundwater policy." The CWA states that "[i]t is the policy of Congress to recognize, preserve, and protect the primary responsibility and rights of States to prevent, reduce, and eliminate pollution [and] to plan the development and use (including restoration, preservation, and enhancement) of land and water resources," 33 U.S.C. § 1251(b); and "the waters of the United States" regulated by the CWA do not include groundwater. *Exxon Corp. v. Train*, 554 F.2d 1310, 1330 (5th Cir. 1977).

On April 23, 2019, the Environmental Protection Agency, in the wake of a circuit split regarding the extent of the CWA to "releases of pollutants from a point source that subsequently migrate or are conveyed by groundwater to jurisdictional surface waters," has concluded that the CWA "is best read" as excluding such releases from the coverage of the CWA, "regardless of a hydrologic connection between the groundwater and a jurisdictional surface water." EPA Interpretive Statement, April 12, 2019.⁹ And in a May 2019 amicus brief supporting the Petitioner in *County of Maui v. Hawaii Wildlife Fund, et. al.* ("*County of Maui*"), No. 18-260 (Aug. 27, 2018), the United States likewise argues that the NPDES program does not apply to groundwater pollution, noting that "groundwater is distinct from surface water." (Br. at 9-10).¹⁰

Defendants also proffer an unfounded "floodgates" argument, asserting that protecting Mississippi's sovereignty would lead to "ruinous liability" (TN Br. at 6) and motivate States to sue other States in the hope of recovering a "windfall to the public treasury." (MLGW Br. at 35) Mississippi's sovereign rights, however, cannot

⁹https://www.epa.gov/sites/production/files/2019-

 $^{04/}documents/interpretive_statement_application_of_cwa_npdes_memo_-signed.pdf$

¹⁰ Brief for United States as Amicus Curiae Supporting Petitioner, *County of Maui v. Hawaii Wildlife Fund, et. al.*, No. 18-260 (Aug. 27, 2018) -

https://www.supremecourt.gov/DocketPDF/18/18-260/100079/20190516161951453_18-260tsacUnitedStates.pdf

be ignored simply because Defendants may incur monetary liability for violating them.

As a practical matter, Defendants' arguments disregard the discretion and wisdom of this Court. In exercising its original jurisdiction, the Court "may 'mould each decree to the necessities of the particular case' and 'accord full justice' to all parties." *Kansas v. Nebraska*, 135 S.Ct. 1042, 1053 (2015), quoting *Porter v. Warner Holding Co.*, 328 U.S. 395, 398 (1946). The Court's equitable powers are broad and flexible, and the Court will certainly take the concerns of Defendants into account in fashioning the relief it awards Mississippi. The Court may very well decide to grant relief through the issuance of injunctive or other relief in lieu of a damages award, but we leave it to another day to argue with Defendants about the "full justice" Mississippi is entitled to receive.

III. The Water At Issue Is Not An Interstate Natural Resource.

Defendants' briefs (TN Br. at 8-28; MLGW Br. at 10-20) contain extensive discussions of the alleged interstate nature of "the Aquifer at issue," but carefully ignore any meaningful analysis of the *water* at issue. As explained in Mississippi's initial post-hearing brief, the water at issue is not part of (nor like) an underground lake or underground stream flowing in a defined channel. Instead, it is located hundreds of feet below the surface in tiny pore spaces or fractures that exist between and around extremely small grains of unconsolidated naturally occurring materials.

The water is part of the earth, part of the subterranean structure of Mississippi and, therefore, part of Mississippi's sovereign territory. Under natural conditions, the groundwater creeps generally westward between and around grains of material, moving at an average rate of one or two inches a day. At one inch a day, the water moves only 30 feet in a year, and one mile in 175 years. The water has been located in Mississippi (or the territory that became Mississippi) for hundreds and thousands of years. (MS Br. at 5-8).

The fact that this groundwater will "eventually"—over the course of hundreds and thousands of years—leave Mississippi is of no legal or practical significance and irrelevant for the purposes of territorial sovereignty. Regardless of the direction of its movement (whether toward Tennessee or toward the Mississippi River), the groundwater is part and parcel of Mississippi's sovereign territory and subject to Mississippi's exclusive dominion and control.¹¹

¹¹ Contrary to Defendants' assertions (TN Br. at 29; MLGW Br. at 30), Mississippi does not admit that groundwater that will eventually flow into Tennessee is "interstate" water. Mississippi excludes from its damages calculation water that would have eventually flowed into Tennessee under natural conditions, but it is Mississippi's position that *all* groundwater located within its borders is "intrastate" water and subject to Mississippi's exclusive dominion and control. As Mississippi explained in its brief (MS Br. at 12-13), when groundwater actually moves/creeps from Mississippi into Tennessee under natural conditions, that groundwater will then be the property of Tennessee under § 68-221-702 of the Tennessee Code and subject to Tennessee's exclusive dominion and control. But *until* water stored in Mississippi leaves Mississippi under natural conditions, it is under *Mississippi's* exclusive control in accordance with the Constitution, Miss. Code Ann. § 51-3-1, and the public trust doctrine.

Tennessee spills much ink talking about "the Aquifer at issue," but the natural resource at issue is groundwater.¹² Regardless of the aquifer (or aquifers) in which it is stored, the water at issue is subject to Mississippi's exclusive authority and control under the Constitution. Defendants label "the Aquifer" an "interstate resource," but such a label does nothing more than describe the geographic location of "the Aquifer," not the legal principles governing the State's respective rights to water contained within that aquifer. See Rhode Island, 37 U.S. at 733 ("neither state can have any right beyond its territorial boundary"). Defendants have not cited to, and cannot cite to, any law that gives them the *right* to water that is located in Mississippi, nor the *right* to pull water from Mississippi into Tennessee, create a cone of depression in Mississippi, or otherwise change and adversely affect hydrogeologic conditions in Mississippi. Labeling "the Aquifer" an "interstate resource" does not and cannot create rights that do not otherwise exist nor diminish Mississippi's rights as a sovereign under the Constitution.

¹² Defendants argue that the phrase "interstate aquifer" is "consistent with the use of that term in an Advisory Committee on Water Information document, citing J-1, page 77. Defendants' PFOF 88. The phrase "interstate aquifer" does not appear in that document, which discusses a proposed framework of groundwater monitoring by various agencies, including States. J-1 notes that some States, such as Mississippi, have adopted "State-managed/operated statewide networks" and notes that some States, like Tennessee have no such network. (J-1, page 26 of 182). This further illustrates the recognition of each State's authority over their natural resources.

Regarding Defendants' identification of "the Aquifer at issue," Mississippi noted in its brief (MS Br. at 23-29) the confusion and disagreements, even among Defendants, that exist on this issue. Defendants' briefs contribute further confusion. Defendants contend "the Aquifer at issue" is a "single hydrologic unit" called "the Middle Claiborne Aquifer." (TN Br. at 9; MLGW Br. at 1, 11). Tennessee's expert Dr. Brian Waldron explained during the hearing that a hydrogeologic unit can either be a confining unit or an aquifer unit; that a hydrogeologic aquifer unit may include multiple aquifers; and that when his testimony referred to the "Middle Claiborne Aquifer," he was referring to a single hydrogeologic unit, *not* a single aquifer. (Tr. 904-05). This begs the question: are Defendants now asking the Court to assess the interstate nature of an "aquifer" or the interstate nature of a "hydrogeologic unit"? Either way, further confusion is generated by the opinion of MLGW's expert David Langseth, who opined that "the Aquifer at issue" is comprised of "the aquifers of the middle Claiborne, lower Claiborne, and upper Wilcox *units*." (D-191, page 10 of 80 (emphasis added)).

Tennessee argues that "Mississippi's attempt to recharacterize the Middle Claiborne Aquifer as two or more separate aquifers is scientifically unsound" (TN Br. at 11), and MLGW similarly attacks Mississippi for suggesting that multiple aquifers must be considered. (MLBW Br. at 24-26). But Defendants' arguments create more confusion by conflating the concepts of "aquifer" and "hydrogeologic unit." Dr. Waldron explained that a hydrogeologic unit may contain multiple aquifers (Tr. 904-05), so there is nothing "scientifically unsound" about the inclusion of two or more separate aquifers within a single hydrogeologic aquifer unit. In fact, contrary to Defendants' criticisms of Mississippi, MLGW's *own expert* is of the opinion that multiple aquifers and multiple hydrogeologic units are at issue. Mr. Langseth opined, as noted above, that "the Aquifer at issue" is comprised of "the *aquifers* of the middle Claiborne, lower Claiborne and upper Wilcox *units*." (D-191, page 10 of 80 (emphasis added)).

Tennessee also spends a great deal of time talking about pre-development flow patterns (TN Br. at 19-25), but then concedes that "developing an accurate picture" of pre-development flow patterns "is a complex and difficult undertaking" and that "there is inherent uncertainty in any attempt to reconstruct historical conditions based on limited data." (TN Br. at 24-25).¹³ Mississippi does not disagree. Tennessee also concludes that "the Special Master should not define an 'interstate' aquifer in a way that requires fine calculations based on such conditions" (TN Br. at 25) and concludes that "the Middle Claiborne aquifer is an interstate water resource regardless of its pre-development flow patterns." (TN Br. at 24). Mississippi

¹³ Tennessee's assertions that Dr. Waldron's opinions about pre-development flow were not refuted (TN Br. at 21) is simply not correct. Dr. Spruill's criticisms of Dr. Waldron's opinions are included in the record through the parties' deposition designations. *See* Spruill Dep., Ex. 4.

similarly contends that the groundwater at issue is intrastate water, subject to Mississippi's exclusive jurisdiction and control regardless of its pre-development flow patterns. (MS Br. at 12-13).

The confusion among Defendants and their experts concerning the proper identification "the Aquifer at issue" is reflective of a common problem. *See* J-29, page 65 of 624 ("Of all the words in the hydrologic vocabulary, there is probably none with more shades of meaning than the term *aquifer*. It means different things to different people, and perhaps different things to the same person at different times."). But such confusion is not without significance in this case. Defendants want this case to turn on the alleged interstate nature of "the Aquifer at issue," but the "Aquifer" they have identified for the Court in their post-hearing briefs is arbitrary, confusing, and contradicted by the opinions of their own experts. Such confusion, arbitrariness, and contradiction cannot serve as the foundation for deciding the issues before the Court.

The operative facts in this case concern the *water* at issue. There may be confusion about the aquifer or aquifers at issue, but one thing is undisputed. The water at issue was located, existed, and occurred in Mississippi, as part of the earth, as part of Mississippi's sovereign territory. Whether labelled "intrastate" or not, that water was held by Mississippi in trust for the use and benefit of its citizens and was subject to Mississippi's *exclusive* authority and control. When Defendants, using

massive turbine pumps, forcibly pulled that water into Tennessee for MLGW's production and commercial sale, without Mississippi's permission, Defendants violated Mississippi's sovereignty, plain and simple. *See Rhode Island*, 37 U.S. at 733 ("neither state can have any right beyond its territorial boundary"). Regardless of the aquifer or aquifers in which the water was located, Defendants' violations of Mississippi's rights under the Constitution cannot be countenanced by this Court.

IV. Mississippi Is Entitled To Prevail Notwithstanding The Absence Of A Claim For Equitable Apportionment.

Section III of Tennessee's brief (TN Br. at 29) contains a discussion about equitable apportionment and argues that the record does not establish facts sufficient to warrant equitable apportionment. Tennessee's arguments are completely irrelevant. Mississippi does not seek equitable apportionment in this proceeding. Instead, Mississippi claims Defendants' actions are a direct violation of Mississippi's territorial sovereignty.

Mississippi seeks all relief that may be appropriate, and the Court possesses all the authority necessary to grant any relief it determines to be appropriate. "The Constitution gives this Court original jurisdiction to hear suits between the States. See Art. III, 2. Proceedings under that grant of jurisdiction are 'basically equitable in nature.'" *Kansas*, 135 S. Ct. at 574, U.S. at 1051, quoting *Ohio v. Kentucky*, 410 U.S. 641, 648 (1973). "When the Court exercises its original jurisdiction over a controversy between two States, it serves 'as a substitute for the diplomatic settlement of controversies between sovereigns and a possible resort to force." 135 S. Ct. at 1051, quoting *North Dakota v. Minnesota*, 263 U.S. 365, 372-373 (1923).

This Court accepted jurisdiction presumably because the question of whether citizens of one State may, through mechanized pumping, intentionally take large volumes of groundwater located in a neighboring State without the neighboring State's permission, is unsettled. This case raises the issue of whether the Court is bound by artificial restrictions on the scope of its equitable powers (*i.e.*, equitable apportionment) or whether the Court has the obligation and flexibility to fashion a remedy (or remedies) that upholds and protects the neighboring State's sovereign rights under the Constitution. This Court's authority and the sovereign rights of Mississippi are not limited in the manner the Defendants contend.

In exercising original jurisdiction, the Court may "mould each decree to the necessities of the particular case" and "accord full justice" to all parties. *Kansas v. Nebraska*, 135 S. Ct. at 1053, quoting *Porter v. Warner Holding Co.*, 328 U.S. 395, 398 (1946). Here the Court should mould a decree that *preserves* the sovereign rights of Mississippi—as required by the Constitution—and correspondingly gives the States meaningful incentives to resolve their dispute by agreement. (MS Br. at 37-39). Rather than dismiss Mississippi's claims with prejudice as Tennessee urges, the Special Master should recommend that the Court enter a judgment for

Mississippi on the limited issue identified for the evidentiary hearing and seek direction for the next step in these proceedings.

V. Issue Preclusion Does Not Bar Mississippi's Claims.

Defendants argue (TN Br. at 35; MLGW Br. at 18 n. 6) that "issue preclusion" bars Mississippi's claims, though Tennessee acknowledges the Special Master rejected this argument in his August 12, 2016 Memorandum of Decision. (Dkt. 55 at 25-28). Defendants' arguments need not be revisited, but to the extent it may be necessary for Mississippi to do so, Mississippi incorporates by reference the arguments it made on the issue in its Response in Opposition to Defendants' Motions for Judgment on the Pleadings (Dkt. 42 at 36-42).

VI. Defendants' Motions In Limine And Motions To Exclude Should Be Denied.

A. Mississippi's Evidence Pertaining to Groundwater and Wellfield Management and Pumping Volumes is Relevant and Admissible.

Defendants repeat their request that Mississippi's evidence pertaining to groundwater and wellfield management be excluded, claiming it is not relevant. (TN Br. at 35-36; MLGW Br. at 37) (citing Dkt. 81, at 4).¹⁴ The Court, however, decided this issue properly at the hearing. For example, while Dr. Spruill was being asked questions on direct pertaining to wellfield management, MLGW counsel objected to

¹⁴ Mississippi filed a response to Dkt. 81 and incorporates those arguments herein by reference. Dkt. 88, at 6.

the testimony as "being beyond the scope of the issue that Your Honor has set out." Tr. 255. The Court overruled the objection and the testimony was admitted. *Id.* In addition, the substantial evidence regarding groundwater and wellfield management was presented by Mississippi to show that the impacts of MLGW's pumping on Mississippi were avoidable--which is clearly relevant. (MS Br. at 21-23). There is no reason to revisit the issue, and the Court may consider the evidence for what the Court deems it to be worth.

Moreover, MLGW claims that "Mississippi did not produce any evidence to support a contention that MLGW was not a good manager of the Aquifer." (MLGW Br. at 37). However, MLGW was taking water from and adversely affecting hydrogeologic conditions in Mississippi; and there is substantial proof in the record of those facts. Dr. Spruill, for example, testified about wellfield design practices, including, the "impact to adjacent property owners." (Tr. 177). The record also contains USGS and other reports showing that MLGW's heavy pumping has materially changed the hydrologic characteristics of the Memphis Sand, and is causing water from upper formations to be pulled down into the Memphis Sand, exposing the groundwater to contamination. (J-13, pages 5-6 of 26; J-15, pages 9-10, 31 of 64; J-17, page 11 of 78). The only record evidence regarding stewardship certainly undermines Defendants' claim of "good management" of the Memphis Sand.

Defendants also rehash their previous request that Mississippi's evidence pertaining to MLGW's pumping volumes and diversions of the water at issue be excluded. (TN Br. at 37; MLGW Br. at 38) (citing Dkt. 81, at 7). Mississippi filed a response and incorporates those arguments here. Dkt. 88, at 9. Additionally, MLGW suggests that "if relevant at all" the fact that MLGW is pulling millions of gallons of water per day from under Mississippi somehow supports their characterization of the facts. It does not. This evidence is plainly relevant and supports Mississippi's position that the water at issue is substantial and was located in Mississippi under natural conditions until pulled out by MLGW in violation of Mississippi's sovereignty.

B. Dr. Spruill's Testimony Was No Surprise to Defendants and Should Not Be Stricken.

Tennessee objects to Dr. Spruill's testimony at the evidentiary hearing that MLGW could have, among other things, located its wellfields further north away from Mississippi, so as to avoid impacting Mississippi, complaining that Dr. Spruill did not disclose these opinions. (TN Br. at 38) Tennessee, however, examined Dr. Spruill at length about these opinions in deposition:

- Q. What would you change about MLG&W pumping practices to make them consistent with your definition of good groundwater management practices?
- A. Are you asking what would I do now or what would I have done when the well field was being envisioned?
- Q. What would you do now?

A. I would think about trying to minimize the cone of depression. The cone of depression is the problem. A cone of depression is a lowering of a pressure surface.

Spruill Dep. 127, 1-12.

In his deposition, Dr. Spruill described multiple options that MLGW had available to reduce or eliminate MLGW's pumping effects in Mississippi. When Tennessee asked Dr. Spruill if he had studied whether these techniques would be feasible to implement, Dr. Spruill testified that he "had given a lot of thought to it" and "looked at the nature and extent of the Sparta" and that he knew from his analysis of hydraulic properties that there is "great potential to produce water to meet the demand of this region by moving some of the wells to a different location and minimizing the impact." *Id.* p. 132-33. Tennessee asked:

- Q: You are talking about moving the wells further north in Shelby County away from the state border?
- A: Yeah, mostly.

Id. p. 133, 5-8.

Tennessee cannot complain of "surprise." Tennessee was fully aware of Dr. Spruill's opinions regarding mitigation of the cone of depression, including relocation of MLGW's wells away from Mississippi, opinions which were supported by extensive evidence, including the USGS studies to which MLGW was a party. (Miss. Br. at 16). Tennessee also complains that Dr. Spruill provided testimony about the location of MLGW's Lichterman, Davis, and Palmer wells, including the approximate distance of those wells to the Mississippi border. (TN Br. at 39) The parties, however, had already stipulated that all the Davis and Palmer wells, and some of the Lichterman wells, were located within two to three miles of the border (S-14), so Dr. Spruill's testimony did nothing more than add a little more detail. Defendants have not suggested that they were prejudiced by this testimony in any way. Tennessee's argument is much to do about nothing and should be rejected.

C. Defendants' Other Motions Should Be Denied.

Defendants' four other evidentiary motions (Dkt. Nos. 77, 78, 79, 80) should be denied for the reasons set forth in Mississippi's responses to those motions (Dkt. Nos. 84, 85, 86, 87) which are incorporated herein by reference.

CONCLUSION

This case presents the Court with a unique opportunity to affirm that States have a right under the Constitution to protect and preserve groundwater located within their boundaries and have an obligation to do so under the public trust doctrine. Disputes of this nature cannot and should not be resolved by the inapplicable/ill-fitting regime of equitable apportionment. This Court should fashion an equitable remedy protecting Mississippi's rights as a sovereign and providing a meaningful incentive for each State to honor the sovereign territory and rights of

their neighboring States and conserve these important natural resources.

Dated: October 21, 2019.

Respectfully submitted,

THE STATE OF MISSISSIPPI

<u>/s/ C. Michael Ellingburg</u> C. Michael Ellingburg

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CERTIFICATE OF SERVICE

Pursuant to Paragraph 3 of the Special Master's Case Management Plan (Dkt. No. 57), I hereby certify that all parties on the Special Master's approved service list (Dkt. No. 26) have been served by electronic mail, this the 21st day of October, 2019.

<u>/s/ C. Michael Ellingburg</u> C. Michael Ellingburg