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

ON EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE IN SUPPORT OF OVERRULING MISSISSIPPI'S EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER

ELIZABETH B. PRELOGAR
Acting Solicitor General
Counsel of Record

JEAN E. WILLIAMS
Acting Assistant Attorney General

EDWIN S. KNEEDLER
Deputy Solicitor General

FREDERICK LIU
Assistant to the Solicitor General

JAMES J. DUBOIS
JUDITH E. COLEMAN
Attorneys

Department of Justice
Washington, D.C. 20530-0001
SupremeCtBriefs@usdoj.gov
(202) 514-2217

QUESTION PRESENTED

Whether the Special Master correctly determined that Mississippi's complaint should be dismissed because the groundwater at issue is an interstate resource subject to equitable apportionment and because Mississippi has disclaimed any request for an equitable apportionment.

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases—Continued: Page

Constitution, statutes, and rule:

Miscellaneous:

In the Supreme Court of the United States

No. 143, Original

STATE OF MISSISSIPPI, PLAINTIFF

v.

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

ON EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE IN SUPPORT OF OVERRULING MISSISSIPPI'S EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER

INTEREST OF THE UNITED STATES

The dispute in this case concerns the allocation of groundwater in an aquifer that lies beneath portions of eight States. The United States has a substantial interest in how interstate resources are allocated among the relevant States, including whether the doctrine of equitable apportionment applies. At the Court's invitation, the United States filed a brief as amicus curiae addressing Mississippi's motion for leave to file a bill of complaint. Before the Special Master, the United States also filed a brief as amicus curiae addressing defendants' motions for judgment on the pleadings.

STATEMENT

A. Groundwater Hydrology

Beneath the Earth's surface lie various layers of particles. See Evidentiary Hr'g Tr. (Hr'g Tr.) 47; Tenn. Reply App. 40a (top figure). Some of the layers consist of particles stuck together, forming different types of rock, such as granite or limestone. See Hr'g Tr. 54-55; Joint Ex. 40, at 7.[1] Other layers consist of unconsolidated particles, such as clay, silt, sand, and gravel. See Hr'g Tr. 55; Joint Ex. 40, at 7.

Groundwater is the water that percolates through the spaces between subsurface particles. See Hr'g Tr. 47, 52. It exists in two zones: the unsaturated zone, directly beneath the surface, where the water does not completely fill those spaces; and the saturated zone, farther below, where the water does. See *id.* at 57; Tenn. Reply App. 40a (top figure).

In relation to groundwater, the layers beneath the Earth's surface "can be classified either as aquifers or confining beds." Joint Ex. 40, at 11. An aquifer is a layer that is capable of yielding usable quantities of water to a well or spring. See Hr'g Tr. 53, 569; Joint Ex. 40, at 11. Aquifers typically consist of relatively permeable material, such as sand. See Hr'g Tr. 167. A confining bed, in contrast, is a layer, either above or below an aquifer, that consists of less permeable material, such as clay. See *id.* at 57, 167, 573; Joint Ex. 40, at 11. An aquifer that exists in the saturation zone below a confining bed is known as a confined aquifer. See Joint Ex. 40, at 11; Doc. 64, at 102 (Feb. 27, 2018).

---

[1] Joint Exhibit 40 is the following publication: Ralph C. Heath, U.S. Geological Survey, *Basic Ground-Water Hydrology* (rev. 2004), https://pubs.usgs.gov/wsp/2220/report.pdf. References to Joint Exhibit 40 are to the pages of the pdf.

Aquifers "are always gaining (recharging) water and losing (discharging) water." 11/5/20 Special Master Report (Rep.) 12; see Hr'g Tr. 63, 119, 582. And within an aquifer, groundwater is constantly moving "from areas of higher potentiometric level to places of lower potentiometric level," Rep. 12; see Doc. 64, at 103—or, in more simplified terms, from areas of "higher pressure" to areas of "lower pressure," Hr'g Tr. 497. See *id.* at 715 (explaining that the potentiometric level, which "will determine the flow of the water," "is a combination of pressure and elevation"); *id.* at 1014 (explaining that "groundwater is always flowing"). How quickly the water moves depends on various factors, including the permeability of the materials composing the aquifer. *Id.* at 64-65. "Groundwater typically moves at relatively slow rates," such as "tens of feet per year to hundreds of feet per year." *Id.* at 746.

"[M]ost ground-water needs are met by withdrawals from wells." Joint Ex. 40, at 35; see Hr'g Tr. 134. When water is withdrawn from a well, the potentiometric level in the well drops, causing water to move from the aquifer into the well. See Hr'g Tr. 149, 583, 585; Joint Ex. 40, at 35. That movement, in turn, causes potentiometric levels around the well to drop, accelerating the movement of more water toward the well. See Hr'g Tr. 150-152, 497, 585, 957. Because the drop is steepest in the area closest to the well, the lowering of potentiometric levels takes the shape of an upside-down cone, centered on the well. See *id.* at 150, 585-586; Joint Ex. 40, at 35; Tenn. Reply App. 40a (bottom figure). That cone is known as a cone of depression. Joint Ex. 40, at 35. As a matter of hydrology, such a cone is an unavoidable consequence of using a well. See Hr'g Tr. 465, 497, 585-586, 605. And when wells are located near each other,

their cones of depression "can overlap and combine, deepening the cone in the area of overlap." Doc. 64, at 104.

B. The Middle Claiborne Aquifer

The Mississippi Embayment Regional Aquifer System is a group of aquifers separated by confining beds located in the Gulf Coast Plain. See Doc. 64, at 103. The aquifers and beds are stacked on top of each other, like alternating layers of a cake. See *id.* at 105; Hr'g Tr. 918; Defs. Exception App. 81a (figure).

The Middle Claiborne Aquifer is one of those layers. See Hr'g Tr. 278, 573; Doc. 133, at 6 (Mar. 6, 2020) (aquifer labeled "Memphis Sand and equivalents" on the figure). The Middle Claiborne Aquifer lies beneath portions of eight States: Kentucky, Illinois, Missouri, Tennessee, Arkansas, Mississippi, Louisiana, and Alabama. See Hr'g Tr. 279, 597, 807; Rep. 16 (figure); Defs. Exception App. 83a (figure). Wells within many of those States pump water from the aquifer. See Hr'g Tr. 606, 660-661, 1038-1039, 1042-1043. Those wells have caused regional cones of depression in the areas of Jackson, Mississippi; Stuttgart, Arkansas; Union County, Arkansas, and nearby Louisiana; and Memphis, Tennessee. See *ibid.*; Doc. 133, at 23 (figure).

The regional cone of depression in the Memphis area is the result of groundwater pumping in both southwest Tennessee (Shelby County) and northwest Mississippi. See Hr'g Tr. 501, 604-605. Groundwater pumping in that area—where the Middle Claiborne Aquifer is a confined aquifer that exists hundreds of feet below the surface and consists mainly of sand—began in 1886. See *id.* at 144, 586, 597, 600, 816-817, 1007; Tenn. Reply Br. 3 n.3; Miss. Exceptions Br. 9 n.6. By 2018, Memphis Light, Gas & Water Division (MLGW), a division of the City of Memphis, was operating more than 160 wells in

Shelby County, Doc. 64, at 101, and municipalities across the border were operating wells of their own in Mississippi, see Hr'g Tr. 501, 604-605, 853, 1045. All of those wells—whether in Tennessee or in Mississippi—"are drilled straight down." Doc. 64, at 106. "There are no wells in either State that are drilled at a slant so that part of the pump or well physically crosses the Mississippi-Tennessee state line." *Ibid.*

C. Prior Litigation

In 2005, the Attorney General of Mississippi brought suit in federal district court against the City of Memphis and MLGW. Defs. Exceptions App. 1a, 3a, 32a, 36a. The Mississippi Attorney General alleged, among other things, that the City and MLGW had converted Mississippi's property by unlawfully pumping "billions of gallons of Mississippi's portion of the Aquifer ground water," *id.* at 36a; see *id.* at 38a-40a—which Mississippi defined as groundwater "underneath lands situated exclusively within and belonging to Mississippi," *id.* at 32a. The Mississippi Attorney General sought declaratory and injunctive relief, as well as "several hundreds of millions of dollars" in damages. *Id.* at 34a.

The district court dismissed the suit without prejudice, *Hood ex rel. Miss.* v. *City of Memphis*, 533 F. Supp. 2d 646 (N.D. Miss. 2008), and the Fifth Circuit affirmed, *Hood ex rel. Miss.* v. *City of Memphis*, 570 F.3d 625 (2009), cert. denied, 559 U.S. 904 (2010). The Fifth Circuit determined that "[t]he Aquifer is an interstate water source," "indistinguishable from a lake bordered by multiple states or from a river bordering several states depending upon it for water," *id.* at 630; that, as in the case of any "interstate water source," "the amount of water to which each state is entitled from [the aquifer] must be allocated before one state may sue an entity for

invading its share," *ibid.*; and that Tennessee must be a party to any suit for equitable apportionment of the aquifer, *id.* at 631. The Fifth Circuit explained, however, that because "a suit between Mississippi and Tennessee for equitable apportionment of the Aquifer" would lie within this Court's "exclusive jurisdiction," Tennessee could not be joined as a party to the district-court suit "without depriving the district court of subject-matter jurisdiction." *Id.* at 632; see 28 U.S.C. 1251(a). Finding "no abuse of discretion" in the district court's determination that the suit before it could not proceed "in equity and good conscience" without Tennessee as a party, the Fifth Circuit agreed that "the suit should be dismissed." *Hood*, 570 F.3d at 633; see Fed. R. Civ. P. 19(b).

In 2009, Mississippi filed a petition for a writ of certiorari, seeking review of the Fifth Circuit's decision. See *Mississippi* v. *City of Memphis*, No. 09-289 (Sept. 2, 2009). At the same time, Mississippi filed in this Court a motion for leave to file a bill of complaint against Tennessee, the City of Memphis, and MLGW (collectively, defendants). See Compl. ¶ 5, *Mississippi* v. *City of Memphis*, No. 139, Orig. (Sept. 2, 2009). Like the complaint filed in the district court, the proposed complaint alleged that defendants had converted Mississippi's property by unlawfully pumping groundwater that would have otherwise remained beneath the surface in Mississippi. *Id.* ¶ 1. The proposed complaint also asserted a claim for equitable apportionment, but only in the alternative. *Id.* ¶ 5(c).

In 2010, this Court denied both the petition for a writ of certiorari, *Mississippi* v. *City of Memphis*, 559 U.S. 904, and the motion for leave to file a bill of complaint, *Mississippi* v. *City of Memphis*, 559 U.S. 901. The Court's order denying the motion stated:

> Motion for leave to file a bill of complaint denied without prejudice. See *Virginia* v. *Maryland*, 540 U.S. 56, 74, n. 9 (2003); *Colorado* v. *New Mexico*, 459 U.S. 176, 187, n. 13 (1982).

Id. at 901-902. The cited footnote in *Virginia* v. *Maryland* observed that "[f]ederal 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." 540 U.S. at 74 n.9. And the cited footnote in *Colorado* v. *New Mexico* reaffirmed that "a State seeking to prevent or enjoin a diversion by another State bears the burden of proving that the diversion will cause it 'real or substantial injury or damage.'" 459 U.S. at 187 n.13 (citation omitted).

D. The Present Case

1. Four years later, in 2014, Mississippi filed another motion for leave to file a bill of complaint against defendants. As before, Mississippi alleged that defendants' wells in Tennessee had unlawfully taken groundwater that otherwise would have remained underneath Mississippi. Compl. ¶ 14. Mississippi further alleged that defendants' actions "constitute[d] a violation of Mississippi's retained sovereign rights under the United States Constitution, and a wrongful and actionable trespass upon, and conversion, taking and misappropriation of, property belonging to Mississippi and its people." Compl. ¶ 52. In addition to injunctive and declaratory relief, Mississippi sought damages "in an amount equal to the value of the groundwater taken wrongfully" from "1985 through the present," Compl. 23, which Mississippi estimated to be "not less than $615 million," Compl. ¶ 55.

Unlike in 2009, however, Mississippi did not seek an equitable apportionment of the groundwater at issue, even in the alternative. Rather, Mississippi disclaimed

any reliance on "this Court's equitable apportionment jurisprudence," asserting that the "fundamental premise of [that] jurisprudence—that each of the opposing States has an equality of right to use the waters at issue—does not apply to this dispute." Compl. ¶ 49; see Compl. ¶¶ 38, 41.

Defendants opposed leave to file the complaint, and at this Court's invitation, 574 U.S. 957, the United States filed a brief as amicus curiae. In its brief, the United States argued that Mississippi "has no cognizable cause of action against defendants for pumping water from the Aquifer because the Aquifer is an interstate water source that has not yet been apportioned among the relevant States." U.S. Invitation Br. 13. The United States observed that Mississippi had "unequivocally disclaim[ed]" any request for an equitable apportionment. *Ibid.* And the United States argued that Mississippi's complaint did "not contain sufficiently concrete allegations of injury" from defendants' actions to sustain such a request in any event. *Id.* at 22. The United States therefore recommended "deny[ing] Mississippi leave to file its complaint without prejudice to refiling a properly framed complaint for an equitable apportionment of the Aquifer premised on concrete allegations of real and substantial injury." *Id.* at 23.

This Court granted Mississippi leave to file its complaint, 135 S. Ct. 2916, and appointed a Special Master to conduct further proceedings and "to submit reports as he may deem appropriate," 577 U.S. 981.

2. Before the Special Master, defendants moved for judgment on the pleadings. Doc. 28 (Feb. 24, 2016); Doc. 30 (Feb. 25, 2016). The United States filed an amicus brief supporting defendants, reiterating that Mis-

sissippi had "not alleged a cognizable cause of action because Mississippi cannot claim that Tennessee is taking Mississippi's water until the Aquifer has been equitably apportioned." Doc. 32, at 15 (Mar. 3, 2016).

The Special Master declined to grant judgment on the pleadings. Doc. 55 (Aug. 12, 2016). The Special Master recognized that dismissal of the suit would "likely be appropriate" because "it does not appear that the complaint plausibly alleges that the Aquifer * * * lacks an interstate character," and because "Mississippi has explicitly disclaimed a request for equitable apportionment." *Id.* at 35. But the Special Master believed that he should "err on the side of over-inclusiveness" in "preparing an adequate record for review," and therefore decided that "holding an evidentiary hearing on the limited—and potentially dispositive—issue of whether the Aquifer is, indeed, an interstate resource" would be "appropriate." *Id.* at 1.

In advance of that hearing, the parties conducted discovery on the "limited issue" that the Special Master had identified. Doc. 57, at 1 (Oct. 26, 2016). Defendants then moved for summary judgment, arguing that an evidentiary hearing was unnecessary because discovery had confirmed that "the Aquifer and its groundwater constitute an interstate resource subject to equitable apportionment." Doc. 70, at 4 (June 1, 2018).

The Special Master denied the motion for summary judgment. Doc. 93 (Nov. 29, 2018). The Special Master acknowledged that defendants had "present[ed] strong evidence that the Aquifer and water are interstate in nature." *Id.* at 27. But the Special Master again decided to "err on the side of over-inclusiveness" and to proceed with an evidentiary hearing. *Ibid.* (citation omitted).

In May 2019, the Special Master held a five-day evidentiary hearing. Rep. 8; see Hr'g Tr. 1, 229, 472, 721, 982. Mississippi called two experts in groundwater hydrology to testify, see Hr'g Tr. 37 (Richard Spruill); *id.* at 416 (David Wiley), while defendants called three, see *id.* at 559, 564 (Steven Larson); *id.* at 797, 803 (Brian Waldron); *id.* at 965, 969 (David Langseth). Following the hearing, the parties presented a day of closing arguments. See Doc. 131 (Mar. 6, 2020).

3. In November 2020, the Special Master submitted a report recommending that this Court "dismiss Mississippi's complaint with leave to file an amended complaint based on an equitable-apportionment theory." Rep. 32. In light of the evidence in the record, the Special Master found that the Middle Claiborne Aquifer is an "interstate" resource for "four reasons": (1) the "Aquifer and the groundwater inside it is a single hydrogeological unit underneath several states"; (2) "Tennessee's water pumping affected the groundwater underneath Mississippi, showing that the Aquifer is an interconnected resource"; (3) "natural flow patterns indicate that the water inside the Aquifer would ultimately—even if slowly—flow across Mississippi's borders"; and (4) "the water inside the Aquifer interacts with, and discharges into, interstate surface waters." Rep. 11.

The Special Master then rejected Mississippi's contention that the aquifer is not subject to equitable apportionment. Rep. 28-31. The Special Master explained that this Court has "[n]ever" "allowed one state's sovereignty to subsume an entire interstate resource," Rep. 29, or "suggested a state can sue for the effects of resource collection that happen outside its borders * * * in the absence of equitable apportionment," Rep. 30.

The Special Master therefore concluded that "[e]quitable apportionment stands alone as the federal common-law principle for disputes over interstate water." Rep. 31. Noting that "Mississippi has explicitly not requested equitable apportionment in this action," the Special Master "recommended that the complaint be dismissed with leave to amend [to allege a claim for equitable apportionment], unless Mississippi declines the favor, in which case the complaint should be dismissed with prejudice." Rep. 2; see Rep. 26.

SUMMARY OF ARGUMENT

The Special Master correctly determined that Mississippi's complaint should be dismissed. Under this Court's precedents, the doctrine of equitable apportionment governs the allocation of an interstate resource in the absence of a federal statute or an interstate compact approved by Congress. See, *e.g.*, *Virginia* v. *Maryland*, 540 U.S. 56, 74 n.9 (2003). This Court has previously applied the doctrine of equitable apportionment to rivers that flow through more than one State and to fish that travel through several States during their lifetime. See *Idaho ex rel. Evans* v. *Oregon*, 462 U.S. 1017, 1024 (1983); *Kansas* v. *Colorado*, 206 U.S. 46, 97-98 (1907). In doing so, this Court has emphasized two characteristics of those resources: first, that the resource moves across state lines; and second, that actions in one State can affect how much of the resource does so.

The groundwater in the Middle Claiborne Aquifer exhibits those two characteristics. First, the groundwater here moves across state lines—as when it moves from the area underneath Mississippi to the area underneath Tennessee. Second, actions in one State can affect that movement—as when wells in Tennessee cause more groundwater, including water from Mississippi, to flow

toward those wells. Indeed, that is the very premise of Mississippi's suit in this case. The groundwater here is therefore an interstate resource, akin to the rivers and fish this Court has previously considered.

Mississippi nevertheless contends that the doctrine of equitable apportionment does not apply to the groundwater here because Mississippi has sovereign authority over all waters within its borders, including the groundwater at issue. But a State's sovereign authority over waters within its borders has never been a reason to find the doctrine of equitable apportionment inapplicable, and Mississippi identifies no valid basis for treating this case differently. To the contrary, Mississippi acknowledges that Tennessee possesses the same sovereign authority over waters within *its* borders. And the very purpose of the doctrine of equitable apportionment is to resolve disputes like this one involving competing assertions of sovereign authority.

Although the groundwater at issue here is an interstate resource subject to equitable apportionment, Mississippi does not ask this Court to equitably apportion the groundwater. Indeed, Mississippi has expressly disclaimed such a request. Until the groundwater has been apportioned, however, Mississippi cannot claim that Tennessee is taking Mississippi's groundwater. Mississippi's complaint therefore lacks any cognizable basis for relief and should be dismissed.

ARGUMENT

THE SPECIAL MASTER CORRECTLY DETERMINED THAT MISSISSIPPI'S COMPLAINT SHOULD BE DISMISSED

A suit brought by one State against another must be dismissed unless the plaintiff State can establish a ground on which it may recover. See, *e.g.*, *Massachusetts* v. *Missouri*, 308 U.S. 1, 15 (1939); *Missouri* v. *Illinois*, 200 U.S.

496, 519 (1906). Mississippi has failed to establish any ground on which it may recover here. Mississippi contends (Exceptions Br. 3) that Tennessee unlawfully has taken—and continues to take—"Mississippi groundwater" from the Middle Claiborne Aquifer. But the groundwater at issue is an interstate resource subject to equitable apportionment among the relevant States. And until that groundwater has been apportioned, Mississippi cannot claim that Tennessee is taking Mississippi's groundwater. Because Mississippi has disclaimed any request for an equitable apportionment, Mississippi's complaint should be dismissed.

A. The Groundwater At Issue Is An Interstate Resource Subject To Equitable Apportionment

Equitable apportionment is the doctrine of federal common law that governs the allocation of an interstate resource in the absence of a federal statute or an interstate compact approved by Congress. See, *e.g.*, *Virginia* v. *Maryland*, 540 U.S. 56, 74 n.9 (2003); *Arizona* v. *California*, 373 U.S. 546, 565 (1963). Because the groundwater at issue here is an interstate resource, it is subject to equitable apportionment. Rep. 11-28. Thus, in the absence of an interstate compact or federal statute, no State can claim that another State has unlawfully taken its groundwater until there has been an equitable apportionment of the groundwater between them.

1. The groundwater here has the same characteristics as other resources that this Court has found to be interstate resources subject to equitable apportionment

When a natural resource can move across state lines, and actions in one State can affect how much of it does, this Court has applied the doctrine of equitable apportionment in resolving disputes between or among States

over the allocation of the resource. The groundwater at issue here exhibits both of those characteristics: it can move across state lines, and actions in one State can affect how much of it does. The Special Master was therefore correct to conclude that the groundwater at issue here is an interstate resource subject to equitable apportionment. Rep. 11-28.

a. This Court's decision in *Kansas* v. *Colorado*, 206 U.S. 46 (1907), "pioneer[ed]" the application of equitable apportionment to interstate resources. *Wyoming* v. *Colorado*, 259 U.S. 419, 464 (1922). The dispute in that case concerned the allocation of waters of the Arkansas River. *Kansas* v. *Colorado*, 206 U.S. at 85. Colorado had withdrawn water from the river for irrigation purposes, diminishing the flow of the river into Kansas. *Id.* at 113. Kansas then sued Colorado, asserting the violation of an alleged "right to the continuous flow of the waters of the Arkansas River, as that flow existed before any human interference therewith." *Id.* at 85.

The Court concluded that the dispute presented a "justiciable" controversy, to be settled according to the principles of equitable apportionment. *Kansas* v. *Colorado*, 206 U.S. at 98. The Court explained:

> whenever * * * the action of one State reaches through the agency of natural laws into the territory of another State, the question of the extent and the limitations of the rights of the two States becomes a matter of justiciable dispute between them, and this [C]ourt is called upon to settle that dispute in such a way as will recognize the equal rights of both and at the same time establish justice between them.

Id. at 97-98.

In finding the principles of equitable apportionment to be applicable, the Court emphasized two characteristics of the natural resource at issue. See *Kansas* v. *Colorado*, 206 U.S. at 98. First, the Court emphasized the movement of the water across state lines, "through the territory" of both Colorado and Kansas. *Ibid.*; see *id.* at 95 (noting that the "stream flows through the two" States); *ibid.* (noting that the dispute concerned "a stream passing through the two States"). The Court specifically rejected Colorado's contention that "there [we]re really two rivers, one commencing in the mountains of Colorado and terminating at or near the state line, and the other commencing at or near the place where the former ends." *Id.* at 115; see *id.* at 117 (reiterating that "the contention of Colorado of two streams cannot be sustained"). Rather, the Court found "the existence of a single continuous river," flowing from one State to another. *Id.* at 115.

Second, the Court emphasized how actions in one State could affect how much water makes its way into another State. *Kansas* v. *Colorado*, 206 U.S. at 97-98. The Court explained, for example, that if Colorado "appropriate[d] all the waters of this stream for the purposes of irrigating its soil and making more valuable its own territory," that would deprive Kansas of "the entire flow of the river" and "naturally tend to make the lands along the stream in Kansas less arable." *Id.* at 98. The Court thus stressed that "the action of one State" (Colorado) could "reach[] through the agency of natural laws into the territory of another State" (Kansas). *Id.* at 97.

b. The Court followed similar reasoning in *Idaho ex rel. Evans* v. *Oregon*, 462 U.S. 1017 (1983) (*Idaho* v. *Oregon II*). The dispute in that case concerned the allocation of anadromous fish, "one of the valuable natural

resources of the Columbia-Snake River system in the Pacific Northwest." *Id.* at 1018-1019. The fish "originate in" spawning grounds in Idaho and then migrate down the Columbia and Snake Rivers "to the Pacific Ocean, where they spend anywhere from one to four years." *Idaho ex rel. Evans* v. *Oregon*, 444 U.S. 380, 382 (1980) (*Idaho* v. *Oregon I*). "Near the end of their life cycle," they "return to the Columbia River and migrate upstream toward the waters of their origin to spawn." *Ibid.* On the way, however, many fish perish in "man-made" dams along the Columbia and Snake Rivers. *Ibid.* And many others are caught by "fishermen in Oregon and Washington." *Id.* at 385. Idaho sued Oregon and Washington, alleging that their "fishermen [had] take[n] a disproportionate share of fish destined for Idaho." *Ibid.*

The Court concluded that, "[a]lthough th[e] doctrine [of equitable apportionment] has its roots in water rights litigation, the natural resource of anadromous fish is sufficiently similar to make equitable apportionment an appropriate mechanism for resolving allocative disputes." *Idaho* v. *Oregon II*, 462 U.S. at 1024 (citation omitted). In reaching that conclusion, the Court emphasized the same two characteristics that it had emphasized in *Kansas* v. *Colorado*. See *ibid.* First, the Court noted the movement of the resource across state lines, observing that "[t]he anadromous fish at issue travel through several States during their lifetime." *Ibid.* Second, the Court noted how actions in one State could affect that movement: "Much as in a water dispute," the Court explained, "a State that overfishes a run downstream deprives an upstream State of the fish it otherwise would receive." *Ibid.*

c. The groundwater at issue here exhibits the same characteristics that this Court emphasized in finding the doctrine of equitable apportionment applicable to interstate rivers and anadromous fish. First, the groundwater at issue here can—and does—move across state lines. See Rep. 25-26 (finding that "groundwater flows within [the aquifer] across the Mississippi-Tennessee border"). The Middle Claiborne Aquifer lies beneath portions of eight States, including Mississippi and Tennessee. Hr'g Tr. 279, 597, 807; see Rep. 17 ("Experts agree that the Middle Claiborne Aquifer is underneath several states."). The groundwater in the aquifer is constantly moving from "areas of higher potentiometric level to places of lower potentiometric level." Rep. 12; see Hr'g Tr. 497, 715, 1014; Doc. 64, at 103. And the groundwater freely crosses the Mississippi-Tennessee border as it so moves. Hr'g Tr. 285, 493, 621, 628, 826, 1011; see Rep. 20 (finding that "both the hydraulic conductivity and potentiometric levels extend across the state borders uninterrupted"). Thus, as in *Kansas* v. *Colorado*, the water at issue is a "single continuous" resource, flowing from one State to another. 206 U.S. at 115; see Rep. 25 (finding the Middle Claiborne Aquifer to be "a continuous, interconnected hydrogeological unit beneath several states").

Second, actions in one State can affect the movement of groundwater across state lines. When defendants pump water from wells in Tennessee, it affects the flow of groundwater from Mississippi. See Rep. 21-22; Hr'g Tr. 215, 300, 450, 484, 493, 605-606, 826, 928, 1036-1037. That is not because any defendant has crossed the Mississippi-Tennessee border; to the contrary, "[a]ll of [MLGW's] wells are physically located entirely within

Tennessee." Doc. 64, at 106. Rather, defendants' pumping affects the flow of groundwater "through the agency of natural laws," *Kansas* v. *Colorado*, 206 U.S. at 97—namely, the laws of hydrology, one of which is that withdrawing groundwater from a well causes potentiometric levels around the well to drop in the shape of a cone, causing more groundwater to flow toward the well. See Rep. 21-22; Joint Ex. 40, at 35. Actions taken entirely within one State can thus affect the presence of the resource in another—just as in the case of interstate rivers and anadromous fish.

Mississippi does not dispute that the groundwater at issue here can move across state lines or that actions in one State can affect that movement. Indeed, its claims are premised on both of those propositions being true. From the beginning, Mississippi has asserted that defendants' wells in Tennessee have caused groundwater to leave "Mississippi's borders," Compl. ¶ 24—that is, to move from underneath Mississippi to underneath Tennessee. And Mississippi has attributed that outcome to "a hydrologic feature called a 'cone of depression,'" Compl. ¶ 25—not to any part of defendants' wells "physically cross[ing] the Mississippi-Tennessee state line," Doc. 64, at 106.

Mississippi's allegations thus presuppose the movement of the groundwater across state lines and the ability of actions within a single State to affect that movement. Because those characteristics render the groundwater here indistinguishable from—or at least "sufficiently similar to," *Idaho* v. *Oregon II*, 462 U.S. at 1024—interstate rivers and anadromous fish, the Special Master correctly concluded that the groundwater here is an interstate resource subject to equitable apportionment. Rep. 11-26. Indeed, every judge to have considered the

issue has reached the same conclusion. See *Hood ex rel. Miss.* v. *City of Memphis*, 570 F.3d 625, 630 (5th Cir. 2009) (concluding that "[t]he Aquifer is an interstate water source" subject to equitable apportionment), cert. denied, 559 U.S. 904 (2010); *Hood ex rel. Miss.* v. *City of Memphis*, 533 F. Supp. 2d 646, 648 (N.D. Miss. 2008) (characterizing the groundwater in the aquifer as "interstate waters" subject to equitable apportionment), aff'd, 570 F.3d 625 (5th Cir. 2009), cert. denied, 559 U.S. 904 (2010).[2]

2. Equitable apportionment of interstate groundwater, like equitable apportionment of other interstate resources, respects the equal sovereignty of each State

Because the groundwater at issue here is an interstate resource, the doctrine of equitable apportionment should apply for the same reasons that justify its application to other interstate resources. The problem that all interstate resources raise is that one State's control of the resource within its borders could deprive other States of the benefit of the resource within theirs—as when, for example, one State "appropriate[s] all the waters of [a] stream," *Kansas* v. *Colorado*, 206 U.S. at 98; "overfishes a run" of anadromous fish, *Idaho* v. *Oregon II*, 462 U.S. at 1024; or, in this case, withdraws water from an aquifer.

---

[2] Although this Court has previously addressed the effects of groundwater pumping, it has done so only in cases involving the apportionment of interstate streams, where issues have arisen regarding whether the pumping of groundwater hydrologically connected to the stream has impaired a downstream State's share of water under an interstate compact or apportionment decree. See, *e.g.*, *Kansas* v. *Nebraska*, 574 U.S. 445, 450 (2015); *Nebraska* v. *Wyoming*, 515 U.S. 1, 14 (1995); *Kansas* v. *Colorado*, 514 U.S. 673, 687-694 (1995); *Texas* v. *New Mexico*, 462 U.S. 554, 557 n.2 (1983); see also Miss. Exceptions Br. 29-30.

The doctrine of equitable apportionment addresses that problem. It rests on the principle of "equality of right": that "[e]ach State stands on the same level with all the rest," and "can impose its own legislation on no one of the others." *Kansas* v. *Colorado*, 206 U.S. at 97. The doctrine thus holds that when two or more States "have real and substantial interests" in an interstate resource, their interests "must be reconciled as best they may." *New Jersey* v. *New York*, 283 U.S. 336, 342-343 (1931). That does not mean that each State is necessarily entitled to an "equal division" of the resource. *Wyoming* v. *Colorado*, 259 U.S. at 465. But it does mean that each State enjoys an "equitable right to a fair distribution." *Idaho* v. *Oregon II*, 462 U.S. at 1025. Accordingly, "a State may not preserve solely for its own inhabitants natural resources located within its borders." *Ibid.* Rather, a State's fair distribution of the resource will depend on a consideration of "all relevant factors," including "physical and climatic conditions," "the extent of established uses," "the practical effect of wasteful uses," and the "damage" and "benefits" to other States. *Colorado* v. *New Mexico*, 459 U.S. 176, 183 (1982) (citation and internal quotation marks omitted).

At the same time, "in light of the sovereign status and 'equal dignity' of States, a complaining State must bear a burden that is 'much greater' than the burden ordinarily shouldered by a private party seeking an injunction." *Florida* v. *Georgia*, 138 S. Ct. 2502, 2514 (2018) (citation omitted). "In particular, before this [C]ourt can be moved to exercise its extraordinary power under the Constitution to control the conduct of one State at the suit of another, the complaining State must demonstrate that it has suffered a threatened invasion of

rights that is of serious magnitude." *Ibid.* (brackets, citation, and internal quotation marks omitted). It must also demonstrate that "the benefits of the apportionment substantially outweigh the harm that might result." *Florida* v. *Georgia*, 141 S. Ct. 1175, 1180 (2021) (brackets and citation omitted). And when a complaining State cannot make that showing, "equality of right and equity between the two States forbid[] any interference with the present" use of the resource by the defendant State. *Kansas* v. *Colorado*, 206 U.S. at 114. In all of those ways, the doctrine of equitable apportionment respects the equal sovereignty of each State.

B. Having Disclaimed Any Request For An Equitable Apportionment, Mississippi Has Not Established Any Cognizable Basis For Relief

Mississippi has disclaimed any request for an equitable apportionment. See Miss. Exceptions Br. 50 (acknowledging that "Mississippi disclaimed equitable apportionment in its Complaint"). It contends that "[t]he fundamental premise of this Court's equitable apportionment jurisprudence—that each of the opposing States has an equality of right to use the waters at issue—does not apply to this dispute." Compl. ¶ 49. That is because, in Mississippi's view, each State "possesses exclusive sovereign authority over all waters located within its borders," including groundwater. Miss. Exceptions Br. 20 (capitalization and emphasis omitted). Mississippi contends that defendants have violated Mississippi's sovereignty here by pumping the groundwater at issue, *id.* at 19, and that defendants owe Mississippi hundreds of millions of dollars in compensation, Compl. ¶ 55.

Mississippi's contention that the doctrine of equitable apportionment does not apply to the groundwater at

issue in this case should be rejected. A State's sovereign authority over waters located within its borders has never been a basis for concluding that the waters are not subject to equitable apportionment. Rep. 29. And Mississippi's attempts to distinguish the facts of this case from those of other cases involving interstate resources fail. Rep. 27-28. Because Mississippi chose not to seek an equitable apportionment, it has no cognizable basis for relief, and its complaint should be dismissed.

1. A State's sovereign authority over waters within its borders has never been a basis for finding the doctrine of equitable apportionment inapplicable

Mississippi argues that the doctrine of equitable apportionment does not apply in this case because "[u]nder the Constitution," each State "possesses exclusive sovereign authority over all waters located within its borders." Miss. Exceptions Br. 20 (capitalization altered; emphasis omitted); see *id.* at 3 (arguing that "each State's authority and rights end at its borders and do not extend into its sister States"). That argument lacks merit.

The sovereign authority that Mississippi asserts is a State's authority over "*all* its water resources"—including not just groundwater, but also surface water. Miss. Exceptions Br. 21 (emphasis added). Indeed, none of the authorities on which Mississippi relies (*id.* at 20-22) is specific to groundwater. See, *e.g.*, U.S. Const. Art. IV, § 3, Cl. 1; U.S. Const. Amend. X; *PPL Montana, LLC* v. *Montana*, 565 U.S. 576, 591 (2012) (stating that, "[u]pon statehood, the State gains title within its borders to the beds of waters then navigable"); *Cinque Bambini P'ship* v. *Mississippi*, 491 So. 2d 508, 511 (Miss. 1986) (stating that Mississippi holds in public trust "the tidelands and navigable waters of the state

together with the beds and lands underneath same"), aff'd *sub nom. Phillips Petroleum Co.* v. *Mississippi*, 484 U.S. 469 (1988); Miss. Code Ann. § 51-3-1 (2016) (declaring "[a]ll water, whether occurring on the surface of the ground or underneath the surface of the ground," to be "subject to regulation" by the State).

Thus, if Mississippi were correct that a State's sovereign authority over the waters within its borders forecloses an equitable apportionment, this Court's decisions involving disputes over interstate rivers and streams would look much different. After all, every upstream State "has the physical power to cut off all the water within its jurisdiction." *New Jersey* v. *New York*, 283 U.S. at 342. And if a State's assertion of such sovereign authority over the water within its borders were dispositive, there would never be any role for the doctrine of equitable apportionment to play.

Under this Court's precedents, however, a State's assertion of sovereign authority is the beginning, not the end, of the analysis. The Court has thus held that an upstream State's exercise of "power to the destruction of the interest of lower States" should "not be tolerated." *New Jersey* v. *New York*, 283 U.S. at 342. And the Court has "consistently denied" the "claim that on interstate streams the upper State has such ownership or control of the whole stream as entitles it to divert all the water, regardless of any injury or prejudice to the lower State." *Hinderlider* v. *La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92, 102 (1938); see *Wyoming* v. *Colorado*, 259 U.S. at 457, 466 (proceeding to apply the doctrine of equitable apportionment notwithstanding an upstream State's assertion of sovereign authority "to dispose, as she may choose, of any part or all of the

waters flowing in the portion of the river within her borders").

Mississippi's contention that its sovereign authority should be treated as dispositive here cannot be reconciled with those precedents. And indeed, it would make little sense to allow one State's assertion of sovereign authority to displace this Court's application of the doctrine of equitable apportionment. That is because, in disputes between States over the allocation of interstate resources, there are inevitably assertions of sovereignty on both sides. Here, Mississippi acknowledges (Exceptions Br. 41-43) that Tennessee possesses the same sovereign authority over waters within *its* borders. See Tenn. Code Ann. § 68-221-702 (2013) ("[r]ecognizing that the waters of the state are the property of the state and are held in public trust for the benefit of its citizens"). And Tennessee argues (Reply Br. 18-19, 31-32) that its groundwater pumping is simply an exercise of that sovereignty. Each State thus invokes its sovereign authority over waters within in its borders. But "[n]either State can * * * impose its own policy upon the other." *Kansas* v. *Colorado*, 206 U.S. at 95. The doctrine of equitable apportionment is meant to address that very "dilemma." Miss. Exceptions Br. 27; see pp. 19-20, *supra*; Tenn. Reply Br. 31-32.[3]

---

[3] At earlier stages of this litigation, Mississippi contended that it "owned" the groundwater at issue. Doc. 119, at 12 (Sept. 20, 2019). Mississippi does not renew that contention here, and for good reason. This Court has made clear that state "ownership" of groundwater is "'but a fiction expressive in legal shorthand of the importance to its people that a State have power to preserve and regulate the exploitation of an important resource.'" *Sporhase* v. *Nebraska ex rel. Douglas*, 458 U.S. 941, 951 (1982) (citation omitted); see *Idaho* v. *Oregon II*, 462 U.S. at 1028 n.12 (rejecting Idaho's claim of "legal ownership of the fish"). A State's assertion that it owns the

2. Mississippi identifies no sound basis to distinguish this case from others involving interstate resources subject to equitable apportionment

Mississippi also contends (*e.g.*, Exceptions Br. 4-8, 26-31) that the facts of this case distinguish it from others in which the Court has applied the doctrine of equitable apportionment. Contrary to Mississippi's contention, however, the facts of this case do not render that doctrine inapplicable.

a. In attempting to distinguish this case from others, Mississippi focuses primarily on how defendants captured the groundwater at issue. Mississippi asserts (Exceptions Br. 19) that defendants "reach[ed] into and invade[d] Mississippi's sovereign territory through artificial, mechanical, or technological means to forcibly capture [the] groundwater." That assertion is incorrect. The parties in this case have stipulated that the wells in Tennessee "are drilled straight down," with no "part of [a] pump or well physically cross[ing] the Mississippi-Tennessee state line." Doc. 64, at 106; see Rep. 21.

For that reason, Mississippi likewise errs (Exceptions Br. 25) in suggesting that defendants' pumping captures "groundwater *while it is located within the territorial boundaries of Mississippi*." The only groundwater that defendants pump is groundwater located within the territorial boundaries of Tennessee. To be sure, some of that groundwater makes its way into Tennessee from neighboring Mississippi. But given that the wells in Tennessee are "drilled straight down," Doc.

---

groundwater within its borders is thus no different from an assertion that it possesses sovereign authority over that resource, and such an assertion fails to displace the doctrine of equitable apportionment for the reasons discussed above.

64, at 106, it would be impossible for those wells to capture any groundwater while that groundwater was located in another State.

Mississippi's reliance on this Court's decision in *Tarrant Regional Water District* v. *Herrmann*, 569 U.S. 614 (2013), is therefore misplaced. In that case, the Court held that an interstate compact did not authorize the compacting States to "cross each other's boundaries to access a shared pool of water." *Id.* at 627. But defendants do not cross any boundaries to pump the groundwater at issue here. The groundwater that defendants pump is entirely within Tennessee. The facts of this case thus mirror those of other cases involving interstate resources subject to equitable apportionment. Just as the Colorado irrigators in *Kansas* v. *Colorado* withdrew water that was in Colorado, see 206 U.S. at 113, and the Oregon fishermen in *Idaho* v. *Oregon II* harvested fish that were in Oregon, see 462 U.S. at 1022, so too the Tennessee defendants in this case withdrew water that was in Tennessee, see Doc. 64, at 106.

b. Mississippi also contends that the groundwater at issue "resided in Mississippi before Defendants' pumping," Miss. Exceptions Br. 18-19, and would have "stay[ed] within [Mississippi's] borders for hundreds of years absent affirmative action by another State," *id.* at 26. But even accepting those contentions as true, they provide no reason to conclude that the doctrine of equitable apportionment is inapplicable. The groundwater at issue here may have originated in Mississippi, just as the river at issue in *Colorado* v. *New Mexico* "originate[d]" in Colorado, 459 U.S. at 181 n.8, and the fish at issue in *Idaho* v. *Oregon II* "originate[d]" in Idaho, 462 U.S. at 1028 n.12. But that does not mean that Mississippi is automatically entitled to all of the

groundwater, any more than Colorado and Idaho were automatically entitled to all of the resources in those other cases. See *Ibid.* (holding that Idaho is not necessarily "entitled to those fish that originate in its waters"); *Colorado* v. *New Mexico*, 459 U.S. at 181 n.8 (holding that "the mere fact that the Vermejo River originates in Colorado" does not "automatically entitle[] Colorado to a share of the water of the Vermejo River").

Nor can Mississippi claim any automatic entitlement to whatever groundwater it would have had "under natural conditions." Miss. Exceptions Br. 8. This Court has held that "a State may not preserve solely for its own inhabitants natural resources located within its borders." *Idaho* v. *Oregon II*, 462 U.S. at 1025. And it has specifically rejected the contention that a complaining State is "entitled to have [a] stream flow as it flowed in a state of nature." *Colorado* v. *Kansas*, 320 U.S. 383, 385 (1943); see *id.* at 393 ("The lower state is not entitled to have the stream flow as it would in nature regardless of need or use."). Those precedents refute Mississippi's suggestion that it is entitled to whatever groundwater it would have had in a state of nature in this case.

c. Finally, Mississippi emphasizes (Exceptions Br. 8) that the "natural movement" of the groundwater at issue is "extremely slow." But whether a natural resource moves slowly or rapidly has no bearing on whether it should be subject to equitable apportionment. Here, it is undisputed that the groundwater can move across state lines and that actions in one State can affect how much does. See pp. 13-19, *supra*. Under this

Court's precedents, that suffices to make the groundwater an interstate resource subject to equitable apportionment, regardless of the speed at which it moves.[4]

CONCLUSION

The exceptions of Mississippi to the Report of the Special Master should be overruled, and the complaint should be dismissed.[5]

Respectfully submitted.

ELIZABETH B. PRELOGAR
Acting Solicitor General
JEAN E. WILLIAMS
Acting Assistant Attorney General
EDWIN S. KNEEDLER
Deputy Solicitor General
FREDERICK LIU
Assistant to the Solicitor General
JAMES J. DUBOIS
JUDITH E. COLEMAN
Attorneys

APRIL 2021

---

[4] Because this Court's precedents demonstrate that the groundwater at issue is an interstate resource subject to equitable apportionment, the Court does not need to address whether Mississippi's claims are barred by the doctrine of issue preclusion. See Tenn. Reply Br. 34-39; Memphis Reply Br. 35 n.13. Like the Special Master, the United States does not recommend that this Court dismiss Mississippi's complaint on that ground. See Rep. 7 n.3; Doc. 55, at 25-28; U.S. Invitation Br. 19 n.4.

[5] The United States takes no position on defendants' exception to the Special Master's recommendation that this Court dismiss "with leave to amend the complaint to include a claim for equitable apportionment." Rep. 26; see Defs. Exception Br. 15-27.