

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.

**MOTION OF DEFENDANTS STATE OF TENNESSEE, CITY OF
MEMPHIS, AND MEMPHIS LIGHT, GAS & WATER DIVISION
FOR SUMMARY JUDGMENT AND MEMORANDUM OF LAW
IN SUPPORT THEREOF**

DAVID C. FREDERICK
JOSHUA D. BRANSON
T. DIETRICH HILL
GRACE W. KNOFCZYNSKI
KELLOGG, HANSEN, TODD,
FIGEL & FREDERICK, P.L.L.C.
1615 M Street, N.W.
Suite 400
Washington, D.C. 20036
(202) 326-7900

*Special Counsel to Defendant
State of Tennessee*

June 1, 2018

LEO M. BEARMAN
Counsel of Record
DAVID L. BEARMAN
KRISTINE L. ROBERTS
BAKER, DONELSON, BEARMAN,
CALDWELL & BERKOWITZ, PC
165 Madison Avenue, Suite 2000
Memphis, Tennessee 38103
(901) 526-2000
(lbearman@bakerdonelson.com)

*Counsel for Defendants
City of Memphis, Tennessee, and
Memphis Light, Gas & Water
Division*

(Additional Counsel Listed On Next Page)

HERBERT H. SLATERY III
Attorney General

ANDRÉE S. BLUMSTEIN
Solicitor General

BARRY TURNER
*Deputy Attorney General
Counsel of Record*

SOHNIA W. HONG
Senior Counsel

P.O. Box 20207
Nashville, Tennessee 37202-0207
(615) 741-3491
(barry.turner@ag.tn.gov)

*Counsel for Defendant
State of Tennessee*

CHERYL W. PATTERSON
CHARLOTTE KNIGHT GRIFFIN
MEMPHIS LIGHT, GAS & WATER
DIVISION

220 South Main Street
Memphis, Tennessee 38103

*Counsel for Defendant
Memphis Light, Gas & Water
Division*

BRUCE A. MCMULLEN
City Attorney

CITY OF MEMPHIS, TENNESSEE
125 North Main Street, Room 336
Memphis, Tennessee 38103

*Counsel for Defendants
City of Memphis, Tennessee, and
Memphis Light, Gas & Water
Division*

MARK S. NORRIS, SR.
ADAMS AND REESE LLP
6075 Poplar Avenue, Suite 700
Memphis, Tennessee 38119

*Counsel for Defendant
City of Memphis, Tennessee*

TABLE OF CONTENTS

	Page
TABLE OF AUTHORITIES	ii
GLOSSARY.....	iv
I. INTRODUCTION.....	1
A. The Limited Issue Identified For The Hearing	1
B. Summary Judgment In Original-Jurisdiction Actions	4
II. DEFENDANTS ARE ENTITLED TO JUDGMENT AS A MATTER OF LAW BECAUSE THE AQUIFER IS INTERSTATE.....	5
A. The Aquifer Underlies Mississippi, Tennessee, And Six Other States	5
B. The Aquifer Is An Interstate Resource Because The Impact Of Pumping From The Aquifer Crosses State Borders	7
C. The Aquifer Is An Interstate Resource Because Groundwater Naturally Flowed Beneath And Across State Lines Before Pumping Began	9
D. The Aquifer Is An Interstate Resource Because It Is Hydrologically Connected To Interstate Surface Water Resources.....	11
III. PLAINTIFF’S RECENTLY DEvised “TWO AQUIFER” THEORY IS FACTUALLY AND LEGALLY ERRONEOUS AND DOES NOT PRECLUDE SUMMARY JUDGMENT.....	12
IV. CONCLUSION.....	14
CERTIFICATE OF SERVICE	

TABLE OF AUTHORITIES

	Page
CASES	
<i>Alabama v. North Carolina</i> , 560 U.S. 330 (2010).....	4, 5
<i>Colorado v. New Mexico</i> , 459 U.S. 176 (1982).....	1
<i>Idaho ex rel. Evans v. Oregon</i> , 462 U.S. 1017	2, 10
<i>Kansas v. Colorado</i> , 206 U.S. 46 (1907).....	5, 7, 8
<i>Matsushita Elec. Indus. Co. v. Zenith Radio Corp.</i> , 475 U.S. 574 (1986).....	4
<i>Nebraska v. Wyoming</i> :	
507 U.S. 584 (1993).....	4
515 U.S. 1 (1995).....	11
<i>Tarrant Reg'l Water Dist. v. Herrmann</i> , 569 U.S. 614 (2013)	1
<i>Texas v. New Mexico</i> , 462 U.S. 554 (1983).....	11
<i>Washington v. Oregon</i> , 297 U.S. 517 (1936).....	11
RULES	
Fed. R. Civ. P.:	
Rule 30(b)(6)	5, 7
Rule 36(b)	13
Rule 56.....	4

OTHER MATERIALS

- J. Kerry Arthur & Richard E. Taylor, *Ground-Water Flow Analysis of the Mississippi Embayment Aquifer System, South-Central United States: Regional Aquifer System Analysis – Gulf Coastal Plain*, USGS Professional Paper 1416-I (1998), available at <https://pubs.er.usgs.gov/publication/pp1416I>.....6
- J.V. Brahana & R.E. Broshears, *Hydrogeology and Ground-Water Flow in the Memphis and Fort Pillow Aquifers in the Memphis Area, Tennessee*, USGS Water-Resources Investigations Report 89-4131 (2001), available at <https://pubs.usgs.gov/wri/wri894131/pdf/wri89-4131.pdf>6
- Brian R. Clark & Rheannon M. Hart, *The Mississippi Embayment Regional Aquifer Study (MERAS): Documentation of a Groundwater-Flow Model Constructed to Assess Water Availability in the Mississippi Embayment*, USGS Scientific Investigations Report 2009-5172 (2009), available at <https://pubs.usgs.gov/sir/2009/5172/pdf/SIR2009-5172.pdf>6, 11
- Ralph C. Heath, *Basic Ground-Water Hydrology*, USGS Water-Supply Paper 2220 (2004 rev.), available at https://pubs.er.usgs.gov/djvu/WSP/wsp_2220.pdf.....8
- J.E. Reed, *Analog Simulation of Water-Level Declines in the Sparta Sand, Mississippi Embayment*, USGS Hydrologic Atlas, HA 434 (1972), available at <https://pubs.usgs.gov/ha/434/plate-1.pdf>6
- Tony P. Schrader, *Potentiometric Surface in the Sparta-Memphis Aquifer of the Mississippi Embayment, Spring 2007*, USGS Scientific Investigations Map 3014 (2008), available at <https://pubs.usgs.gov/sim/3014/>6, 14

GLOSSARY

Branch Dep.	Deposition of Charles Thomas Branch, <i>Hood v. City of Memphis, et al.</i> , No. 2:05CV32-D-B (N.D. Miss.) (Oct. 1, 2007)
CMP	Case Management Plan (Dkt. No. 57)
Compl.	State of Mississippi’s Complaint in Original Action, <i>Mississippi v. Tennessee, et al.</i> , No. 143, Orig. (U.S. filed June 6, 2014) (Dkt. No. 1)
Compl. App.	Appendix to Motion for Leave To File Bill of Complaint in Original Action, <i>Mississippi v. Tennessee, et al.</i> , No. 143, Orig. (U.S. filed June 6, 2014) (Dkt. No. 1)
Crawford Dep.	Deposition of Jamie Crawford, <i>Hood v. City of Memphis, et al.</i> , No. 2:05CV32-D-B (N.D. Miss.) (July 30, 2007)
Joint Statement	Plaintiff’s and Defendants’ Joint Statement of Stipulated and Contested Facts, <i>Mississippi v. Tennessee, et al.</i> , No. 143, Orig. (U.S. filed Feb. 28, 2018) (Dkt. No. 64)
Langseth Rep.	Expert Report of David E. Langseth on the Interstate Nature of the Memphis/Sparta Sand Aquifer (June 27, 2017)
Larson Rep.	Expert Report of Steven P. Larson (June 30, 2017)
Memphis Mot.	City of Memphis, Tennessee and Memphis Light, Gas & Water Division’s Motion for Judgment on the Pleadings, <i>Mississippi v. Tennessee, et al.</i> , No. 143, Orig. (U.S. filed Feb. 24, 2016) (Dkt. No. 28)

Miss. <i>Hood</i> Br.	Plaintiff's Response to Defendants' (I) Motion to Dismiss for Lack of Ripeness/Lack of Standing, (II) Motion to Dismiss for Failure to Join Indispensable Party, (III) Motion to Dismiss the Tort Claims for Lack of Subject Matter Jurisdiction/Improper Venue, <i>Hood v. City of Memphis, et al.</i> , No. 2:05CV32-D-B (N.D. Miss. filed Apr. 11, 2005) (ECF No. 29)
MLGW	Memphis Light, Gas & Water Division
Op.	Memorandum of Decision on Tennessee's Motion to Dismiss, Memphis and Memphis Light, Gas & Water Division's Motion to Dismiss, and Mississippi's Motion to Exclude, <i>Mississippi v. Tennessee, et al.</i> , No. 143, Orig. (U.S. Aug. 12, 2016) (opinion of Special Master) (Dkt. No. 55)
Spruill Dep.	Deposition of Richard Spruill (Sept. 28, 2017)
Spruill Rebuttal Rep.	Expert Report Addendum #1 of Richard K. Spruill, Ph.D., P.G. (July 31, 2017)
Spruill Rep.	Expert Report of Richard K. Spruill, Ph.D., P.G. (June 30, 2017)
Tenn. Mot.	Motion of Defendant State of Tennessee for Judgment on the Pleadings, <i>Mississippi v. Tennessee, et al.</i> , No. 143, Orig. (U.S. filed Feb. 25, 2016) (Dkt. No. 30)
U.S. Amicus Br.	Brief for the United States as Amicus Curiae Supporting Defendants, <i>Mississippi v. Tennessee, et al.</i> , No. 143, Orig. (U.S. filed Mar. 3, 2016) (Dkt. No. 32)
USGS	United States Geological Survey
Waldron Rep.	Expert Report of Brian Waldron, Ph.D. (June 30, 2017)
Wiley Dep.	Deposition of David Wiley (Sept. 26, 2017)

<p>Wiley Rep.</p>	<p>Update Report on Diversion and Withdrawal of Groundwater from Northern Mississippi Into the State of Tennessee (prepared by Leggette, Brashears & Graham, Inc.) (June 30, 2017) (expert report of David Wiley)</p>
<p>S__ D__ Resp. to D__</p>	<p>Citations to S__ and D__ refer to the numbered facts identified in the Joint Statement.</p> <p>In the Joint Statement, S__ refers to the facts to which the parties stipulated. D__ refers to the facts submitted by Defendants that Mississippi purports to dispute. Resp. to D__ refers to Mississippi's response to Defendants' fact, which often indicates Mississippi's agreement with a portion of the fact, and is therefore cited in the Motion.</p>

Defendants, the State of Tennessee, the City of Memphis, Tennessee, and Memphis Light, Gas & Water Division (collectively, “Defendants”), move for summary judgment against Plaintiff, the State of Mississippi (“Mississippi”), and ask the Special Master to find that, as a matter of law, the aquifer at issue in this cause is an interstate aquifer. Because equitable apportionment is the exclusive remedy for disputes between States over rights to a shared interstate water resource, and because Mississippi has expressly disavowed the remedy of equitable apportionment, Defendants are entitled to judgment as a matter of law. Defendants are available for oral argument on this Motion if it would assist the Special Master.

I. INTRODUCTION

A. The Limited Issue Identified For The Hearing

On August 12, 2016, the Special Master issued his Memorandum of Decision (“Op.”) in response to Defendants’ Motions for Judgment on the Pleadings. The Special Master noted that “[e]quitable apportionment is the doctrine of federal common law that governs disputes between states concerning their rights to use the water of an interstate stream.” Op. 19 (quoting *Colorado v. New Mexico*, 459 U.S. 176, 183 (1982)) (alteration in original). It is the exclusive remedy for disputes between States over rights to use interstate water resources that are not subject to an interstate compact. *See, e.g., Tarrant Reg’l Water Dist. v. Herrmann*, 569 U.S. 614, 619 (2013).

The Special Master further acknowledged that the equitable-apportionment doctrine applies broadly “to a variety of interstate water disputes – and even to runs of anadromous fish” – when “‘the action of one State reaches through the agency of natural laws into the territory of another State.’” Op. 20 (quoting *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017, 1024 & n.8 (1983)). “[G]roundwater pumping,” the Special Master observed, “generally resembles surface water pumping; both could have an effect on water in another state through the operation of natural laws.” *Id.* Accordingly, “equitable apportionment appears to apply to disputes between States over interstate groundwater.” Op. 25. Yet Mississippi “has explicitly stated that it does not seek an equitable apportionment of the Aquifer.” Op. 19 (citing Compl. ¶¶ 38, 48).

Given the Special Master’s conclusion that equitable apportionment applies to interstate groundwater disputes, “the question then becomes whether Mississippi’s claims touch on . . . an interstate resource.” Op. 25, 35. Under the Supreme Court’s “functional approach to determining when water is subject to equitable apportionment,” the dispositive question is whether the Aquifer¹ “is such that the removal of water within a State’s borders can have a direct effect on the availability

¹ The aquifer at issue in this lawsuit is called the “Sparta Aquifer” in Plaintiff’s Complaint, but it is commonly referred to by many other names including, without limitation, the “Memphis Sand Aquifer,” “Sparta-Memphis Sand,” and the “Middle Claiborne Aquifer.” *See* discussion *infra* Part III. For purposes of this Motion, the aquifer at issue will be referred to as the “Aquifer.”

of water in another State.” Op. 31. Applying that approach to Mississippi’s Complaint at the pleading stage, the Special Master concluded that Mississippi failed to allege plausibly that the Aquifer at issue is not interstate and that “dismissal would likely be appropriate under Rule 12(c).” Op. 35. However, noting his “responsibility to prepare an adequate record for review,” the Special Master ordered a hearing on the threshold “limited issue of whether the Aquifer and the water constitutes an interstate resource.” Op. 36. “Evidence that would likely be relevant” to this limited issue “includes the nature and extent of hydrological and geological connections between the groundwater in Memphis and that in Mississippi, the extent of historical flows in the Aquifer between Mississippi and Tennessee, and similar considerations.” *Id.*

Discovery on that limited issue is now complete and has created an “adequate record for review” that warrants summary judgment. *Id.* As explained below, there is no genuine dispute that:

- The Aquifer lies beneath Mississippi, Tennessee, and six other States. *See infra* Part II.A.
- Groundwater pumping in one State can and does affect groundwater conditions in other States. *See infra* Part II.B.
- Before pumping began, groundwater in the Aquifer flowed naturally across state lines, including from Mississippi to Tennessee. *See infra* Part II.C.
- The Aquifer is hydrologically connected to interstate surface waters. *See infra* Part II.D.

With the benefit of a full discovery record on the threshold issue, any material factual questions that might have existed at the pleading stage have been answered conclusively in Defendants' favor. Nothing else is needed for the Special Master to dismiss Mississippi's claims under the functional approach he already established. Indeed, no reasonable trier of fact could now dispute that the Aquifer and its groundwater constitute an interstate resource subject to equitable apportionment.

B. Summary Judgment In Original-Jurisdiction Actions

In original-jurisdiction actions, summary judgment is proper “where there ‘is no genuine issue as to any material fact’ and the moving party is ‘entitled to a judgment as a matter of law.’” *Alabama v. North Carolina*, 560 U.S. 330, 344 (2010) (citation omitted). Rule 56 of the Federal Rules of Civil Procedure, though not binding, guides the determination. *See Nebraska v. Wyoming*, 507 U.S. 584, 590 (1993). To create a “genuine” dispute, a party “must do more than simply show that there is some metaphysical doubt as to the material facts”; it must “come forward with specific facts” demonstrating a genuine issue for trial. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586-87 (1986).

Mississippi has asserted in the parties' Joint Statement that many facts are “disputed,” but Mississippi's assertions are factually unfounded, refuted by its own experts, and, most importantly, immaterial to the dispositive legal question the Special Master has articulated. *See infra* Part III. The facts supporting Defendants'

Motion for Summary Judgment are not genuinely disputed because they come directly from the testimony of Mississippi's experts and Mississippi's Rule 30(b)(6) witnesses. An evidentiary hearing will not reveal any additional facts material to whether the Aquifer is interstate; it will merely waste public resources. Indeed, Mississippi has had a full and fair chance to develop evidence showing that the Aquifer is not an interstate resource, and it has failed to do so. The Special Master should thus recommend that summary judgment be granted in order to "facilitate the efficient disposition of th[is] case." *Alabama v. North Carolina*, 560 U.S. at 353-54.

II. DEFENDANTS ARE ENTITLED TO JUDGMENT AS A MATTER OF LAW BECAUSE THE AQUIFER IS INTERSTATE

A. The Aquifer Underlies Mississippi, Tennessee, And Six Other States

As the Special Master recognized, "geological characteristics of a water resource are relevant to whether [the water at issue] should be considered interstate in nature"; for example, the Supreme Court has found it persuasive that a particular river "'ha[d] been recognized by geographers, explorers, and travelers'" as a single body of water. Op. 31-32 (quoting *Kansas v. Colorado*, 206 U.S. 46, 115 (1907)). The record shows that the Aquifer is a single, continuous hydrological body that lies beneath parts of Mississippi, Tennessee, and six other States.

The United States Geological Survey (“USGS”) confirms that the Aquifer extends beneath multiple States and is the “most widely used aquifer for industry and public supply . . . in Arkansas, Louisiana, Mississippi, and Tennessee.” Ex. 1 (Tony P. Schrader, *Potentiometric Surface in the Sparta-Memphis Aquifer of the Mississippi Embayment, Spring 2007*, USGS Scientific Investigations Map 3014 (2008)).² Further, Mississippi’s expert, David Wiley, concedes that the fact that the Aquifer underlies multiple States is “not really disputed” and “pretty well agreed upon by scientists.” Ex. 7 (Wiley Dep. 11:5-8, 12:4-13:12). Every relevant study, including scientific papers referenced or relied upon by all five experts in this case, describes the Aquifer as underlying multiple States including Mississippi and Tennessee and provides substantially identical maps of the Aquifer’s boundaries.³

² This USGS paper was referenced by all five experts in this case. See Ex. 2 (Waldron Rep. 25); Ex. 3 (Larson Rep. 22); Ex. 4 (Langseth Rep. 21); Ex. 5 (Wiley Rep. 22); Ex. 6 (Spruill Rep. 43).

³ E.g., Ex. 8 (J.V. Brahana & R.E. Broshears, *Hydrogeology and Ground-Water Flow in the Memphis and Fort Pillow Aquifers in the Memphis Area, Tennessee*, USGS Water-Resources Investigations Report 89-4131, at 1-5, 26 (2001) (Exhibit 13 to Wiley Dep.)); Ex. 9 (Brian R. Clark & Rheannon M. Hart, *The Mississippi Embayment Regional Aquifer Study (MERAS): Documentation of a Groundwater-Flow Model Constructed to Assess Water Availability in the Mississippi Embayment*, USGS Scientific Investigations Report 2009-5172, at 1-2, 8 (2009) (“Clark & Hart MERAS Report”) (cited in Spruill Rep. 39)); Ex. 10 (J.E. Reed, *Analog Simulation of Water-Level Declines in the Sparta Sand, Mississippi Embayment*, USGS Hydrologic Atlas, HA 434 (1972) (cited in Spruill Rep. 43)); Ex. 11 (J. Kerry Arthur & Richard E. Taylor, *Ground-Water Flow Analysis of the Mississippi Embayment Aquifer System, South-Central United States: Regional Aquifer System Analysis – Gulf Coastal Plain*, USGS Professional Paper 1416-I, at I1-I2, I11-I12, I43 (1998) (cited in Wiley Rep. 21; Spruill Rep. 39)).

And Mississippi's own expert and Rule 30(b)(6) witnesses acknowledge that wells in Tennessee and Mississippi are drilled straight down and are pumping from the same "shared" resource. *See* Ex. 7 (Wiley Dep. 18:23-19:6, 132:6-10); Ex. 12 (Crawford Dep. 133:10-20, 138:16-139:1); Ex. 13 (Branch Dep. 45:24-46:8). The Aquifer's eight-state geological footprint, by itself, confirms that it is an interstate resource. *See* Op. 31-32.

B. The Aquifer Is An Interstate Resource Because The Impact Of Pumping From The Aquifer Crosses State Borders

The Special Master also concluded that a water resource is likely interstate if it is "such that the removal of water within a State's borders can have a direct effect on the availability of water in another State." Op. 31. Mississippi claims that pumping from the Aquifer from wells located entirely in Shelby County, Tennessee,⁴ has pulled groundwater in that same Aquifer from beneath Mississippi across their shared boundary into Tennessee. *See* Compl. ¶ 14; *see also* Resp. to D65 ("The pumping within Tennessee has . . . had a material impact on Mississippi's natural groundwater resource."). That core allegation, as confirmed by the discovery record, shows that this is a case in which "the action of one State reaches through the agency of natural laws into the territory of another State.'" Op. 30-31 (quoting *Kansas v. Colorado*, 206 U.S. at 97-98).

⁴ Mississippi now has stipulated to the fact that "[a]ll of Memphis Light, Gas & Water Division's wells are physically located entirely within Tennessee." S34.

All of the parties' experts agree that, through the natural laws of hydraulics, pumping groundwater from any well creates a "cone of depression" that lowers the potentiometric head in the area surrounding an active pumping well, with the lowest potentiometric head being closest to the well. S18. This causes groundwater from surrounding higher-head areas to flow toward the pump. *See* Ex. 14 (Ralph C. Heath, *Basic Ground-Water Hydrology*, USGS Water-Supply Paper 2220, at 30 (2004 rev.)). In this case, Mississippi's experts agree that there is a cone of depression in the Aquifer extending beneath southwest Tennessee and northwest Mississippi that is the result of the cumulative pumping in both States. *See* Ex. 7 (Wiley Dep. 86:6-16, 87:21-88:1); *see also* Resp. to D81 ("Mississippi acknowledges that wells drilled within a specified distance of the Mississippi border will necessarily have some theoretical impact on the regional cone of depression . . ."). That cross-border cone of depression epitomizes "'one State reach[ing] through the agency of natural laws into the territory of another State'" and, therefore, supports the interstate character of the Aquifer. Op. 31 (quoting *Kansas v. Colorado*, 206 U.S. at 97-98).

Further, Mississippi has agreed that the cross-border effect of pumping goes both ways: pumping from the Aquifer in Tennessee affects the flow of groundwater in Mississippi, and pumping from the Aquifer in Mississippi affects the flow of groundwater into Tennessee. *See* Resp. to D72-D73, D77; Ex. 7 (Wiley Dep. 16:4-13). Finally, the parties agree that there have never been any physical barriers in the

Aquifer that impede or prevent the flow of groundwater across the Tennessee-Mississippi border. *See* Resp. to D48; Ex. 15 (Response to Tennessee’s Interrogatory No. 3). Interstate groundwater flow in the Aquifer is not limited to the Mississippi-Tennessee shared border. Unrebutted expert opinion shows that pumping from the Aquifer in certain areas of Mississippi affects groundwater in Arkansas and Louisiana, pumping in certain areas of Arkansas affects groundwater in Mississippi and Louisiana, and pumping in certain areas of Louisiana affects groundwater in Arkansas. *See* Ex. 4 (Langseth Rep. 21-22); Resp. to D78-D80. These cross-border “hydrological and geological connections” confirm that the Aquifer is an interstate resource. Op. 36.

C. The Aquifer Is An Interstate Resource Because Groundwater Naturally Flowed Beneath And Across State Lines Before Pumping Began

The Special Master also observed that “the extent of historical flows in the Aquifer between Mississippi and Tennessee” is relevant to the “limited issue of whether the Aquifer and the water constitutes an interstate resource.” Op. 36. This consideration likewise supports summary judgment. The record now establishes that groundwater in the Aquifer was continually flowing under pre-development conditions, and still is today. *See* Resp. to D35; Ex. 16 (Spruill Dep. 41:14-23); Ex. 17 (Spruill Rebuttal Rep. 27-28). It is also now undisputed that under pre-development conditions (*i.e.*, before the influence of pumping) some

groundwater in the Aquifer naturally flowed from Mississippi into Tennessee. *See* Resp. to D49-D50; Ex. 2 (Waldron Rep. 13-15); Ex. 3 (Larson Rep. 19-22); Ex. 4 (Langseth Rep. 16-17); Ex. 5 (Wiley Rep. 11); Ex. 6 (Spruill Rep. 35-36); Ex. 17 (Spruill Rebuttal Rep. 15-16).

In fact, both of Mississippi’s experts have now adopted the pre-development flow map that Mississippi attached to its Complaint, containing what Mississippi identified as an “Area of Limited Natural Flow from Mississippi to Tennessee,” defined by a yellow triangle adjoining the state border.⁵ Mississippi’s experts opined that, before pumping began, groundwater in the Aquifer within the yellow triangle area in Mississippi naturally moved into Tennessee. This is the same area of interstate flow that the Special Master has already noted “certainly do[es] not help” Mississippi’s contention that the water at issue is intrastate. Op. 33-34 (citing Compl. App. 20a, 70a). Mississippi’s own experts now conclusively establish the existence of “historical flows” in the Aquifer between Mississippi and Tennessee across their shared border. Op. 36. An evidentiary hearing is thus unnecessary – the Aquifer undisputedly is an interstate resource subject to equitable apportionment. *Id.*⁶

⁵ *See* Ex. 5 (Wiley Rep. 11 & Figure 9); Ex. 6 (Spruill Rep. 36, Figure 17).

⁶ Defendants do not waive, and hereby expressly reserve, their right to assert that Mississippi cannot state a viable claim for equitable apportionment because it cannot prove “by clear and convincing evidence some real and substantial injury or damage.” *Idaho ex rel. Evans v. Oregon*, 462 U.S. at 1027.

It is further undisputed that under pre-development conditions groundwater in the Aquifer naturally flowed across other state boundaries as well – following what Mississippi’s expert David Wiley acknowledged to be “an interstate flow path.” Ex. 7 (Wiley Dep. 142:3-8). For example, groundwater in the Aquifer naturally flowed from both Mississippi and Tennessee beneath the Mississippi River into Arkansas. *See* Ex. 6 (Spruill Rep. 36, Figure 17); Ex. 7 (Wiley Dep. 73:3-19, 96:19-23); Resp. to D52. Those undisputed historical cross-border flows further prove that the Aquifer is an interstate resource.

D. The Aquifer Is An Interstate Resource Because It Is Hydrologically Connected To Interstate Surface Water Resources

As the Special Master noted, “the Supreme Court has indicated that equitable-apportionment principles govern disputes between States over a body of interstate surface water with a groundwater component.” Op. 20 (citing *Texas v. New Mexico*, 462 U.S. 554, 556-58 & n.2 (1983)); *see also Nebraska v. Wyoming*, 515 U.S. 1, 14 (1995); *Washington v. Oregon*, 297 U.S. 517, 524-26 (1936). Here, Mississippi’s experts agree that the Aquifer is hydrologically connected to surface streams such as the Wolf River and other tributaries of the Mississippi River. *See* Ex. 7 (Wiley Dep. 188:17-190:21); Ex. 16 (Spruill Dep. 40:2-41:10). The Wolf River is an interstate river that originates in Mississippi and flows into Tennessee before emptying into the Mississippi River. *See* Ex. 9 (Clark & Hart MERAS Report at 6, Figure 3). Moreover, both of Mississippi’s experts opined that a substantial amount

of the water in the Aquifer discharges now (and did under natural conditions) to the Mississippi River itself, the paradigmatic interstate river. *See* Ex. 6 (Spruill Rep. 19, 23-24); Ex. 5 (Wiley Rep. 9-11); Ex. 7 (Wiley Dep. 190:17-21). The Aquifer’s undisputed hydrological connections to interstate surface waters further support a finding that the groundwater at issue is interstate and therefore subject to equitable apportionment.

III. PLAINTIFF’S RECENTLY DEvised “TWO AQUIFER” THEORY IS FACTUALLY AND LEGALLY ERRONEOUS AND DOES NOT PRECLUDE SUMMARY JUDGMENT

Since Mississippi filed its first complaint in federal district court against Memphis and MLGW in 2005, it has consistently taken the position that Memphis Sand and Sparta Sand were different names for the same resource – the Aquifer at issue in this case. Throughout, Mississippi and its experts have used these names interchangeably.⁷ Yet, after the close of discovery in this case, Mississippi, for the first time in the 12 years since this litigation began, appears to have changed its position to assert that the Memphis Sand and Sparta Sand are two “distinct” but “hydrologically connected” aquifers. Resp. to D25, D27. According to Mississippi’s new “two aquifer” theory, the Memphis Sand Aquifer exists beneath

⁷ For example, Mississippi represented to the district court and the Fifth Circuit that its claims related to a single aquifer underlying the two States. *E.g.*, Miss. *Hood* Br. 1 (“the so-called ‘Sparta’ Aquifer, also known as the Memphis Sand Aquifer across the state line (the ‘Aquifer’ or ‘Sparta Aquifer’)”); *see infra* note 8 (Mississippi’s experts explaining that these names refer to one aquifer).

Tennessee and northern Mississippi, whereas the Sparta Sand Aquifer exists beneath Mississippi, Louisiana, and Arkansas. *See* Resp. to D25.

As an initial matter, the Special Master should summarily reject Mississippi’s “two aquifer” theory because Mississippi has previously stipulated that there is only one Aquifer at issue that underlies both Tennessee and Mississippi. In its response to MLGW and Memphis’s Request for Admission No. 1, Mississippi admitted “that the general geologic formation known as the Sparta Sand underlies several states, including Mississippi, Tennessee, and Arkansas.” Ex. 18. Accordingly, that fact has been “conclusively established” under the Federal Rules adopted by the Special Master’s CMP. Fed. R. Civ. P. 36(b); *see* CMP ¶ 4(b).

Additionally, Mississippi’s “two aquifer” theory is squarely refuted by Mississippi’s own expert David Wiley, who testified that the various names used by the experts in this case for the resource – “Sparta Sand,” “Sparta/Memphis Sand,” “Middle Claiborne Aquifer,” “Memphis Sparta Sand Aquifer,” “MSSA,” “Sparta Memphis Sand” – all refer to the same aquifer, Ex. 7 (Wiley Dep. 9:14-11:4), and that Shelby County, Tennessee, and DeSoto County, Mississippi, “are [both] pumping from the same aquifer,” Ex. 7 (Wiley Dep. 132:6-10) (emphasis added).⁸

⁸ *See also* Ex. 6 (Spruill Rep. 2 (“The Sparta-Memphis Sand, also known as the Middle Claiborne Aquifer or the Memphis Aquifer, is an important source of potable groundwater within northwestern Mississippi and southwestern Tennessee.”); *id.* at 1-4); Ex. 5 (Wiley Rep. 7; *id.* at 5, 9-10).

The position taken by both of Plaintiff’s experts – that there is a single aquifer – is consistent with the views of the USGS and of the United States. *See, e.g.*, Ex. 1 (Schrader, USGS Scientific Investigations Map 3014 (“The most widely used aquifer for industry and public supply . . . in Arkansas, Louisiana, Mississippi, and Tennessee is the Sparta-Memphis aquifer.”))⁹; U.S. Amicus Br. 3 (“The Sparta Sand is hydrologically correlated to the Memphis Sand, and they are considered to be one and the same aquifer”) (citation omitted). There is only one Aquifer at issue. It underlies Tennessee, Mississippi, and six other States.

More important, even if the Special Master were to consider Mississippi’s “two aquifer” theory, it would not change the undisputed facts that the water beneath Tennessee is hydrologically connected to the water beneath Mississippi, that pumping in one State impacts the Aquifer in the other State, and that groundwater naturally flowed across the Mississippi-Tennessee border in pre-development times. These concessions are more than sufficient to establish that the water resource at issue is interstate.

IV. CONCLUSION

Discovery on the limited issue of whether the Aquifer is an interstate resource has now created an “adequate record for review” that warrants summary judgment. Based on Mississippi’s own proof, there is no genuine dispute that the Aquifer spans

⁹ This USGS paper was cited by all five experts in this case. *See supra* note 2.

multiple States, that pumping on either side of the Tennessee-Mississippi state boundary affects groundwater conditions in the other State, that groundwater flowed naturally across the shared Mississippi-Tennessee state border under natural conditions, and that the groundwater at issue is hydrologically connected to numerous bodies of interstate surface water. Nothing else is needed for the Special Master to dismiss Mississippi's claims under the framework he already established. An evidentiary hearing will not reveal anything new. For all of the above reasons, Defendants respectfully request that the Special Master recommend that their Motion for Summary Judgment be granted and that this cause be dismissed.

Respectfully submitted this 1st day of June, 2018,

/s/ David C. Frederick

DAVID C. FREDERICK
JOSHUA D. BRANSON
T. DIETRICH HILL
GRACE W. KNOFCZYNSKI
KELLOGG, HANSEN, TODD,
FIGEL & FREDERICK, P.L.L.C.
1615 M Street, N.W.
Suite 400
Washington, D.C. 20036
(202) 326-7900
*Special Counsel to Defendant
State of Tennessee*

HERBERT H. SLATERY III
Attorney General

ANDRÉE S. BLUMSTEIN
Solicitor General

BARRY TURNER
*Deputy Attorney General
Counsel of Record*

SOHNIA W. HONG
Senior Counsel
P.O. Box 20207
Nashville, Tennessee 37202-0207
(615) 741-3491
(barry.turner@ag.tn.gov)
*Counsel for Defendant
State of Tennessee*

MARK S. NORRIS, SR.
ADAMS AND REESE LLP
6075 Poplar Avenue, Suite 700
Memphis, Tennessee 38119
*Counsel for Defendant
City of Memphis, Tennessee*

/s/ Leo M. Bearman

LEO M. BEARMAN
Counsel of Record
DAVID L. BEARMAN
KRISTINE L. ROBERTS
BAKER, DONELSON, BEARMAN,
CALDWELL & BERKOWITZ, PC
165 Madison Avenue, Suite 2000
Memphis, Tennessee 38103
(901) 526-2000
(lbearman@bakerdonelson.com)
*Counsel for Defendants
City of Memphis, Tennessee, and
Memphis Light, Gas & Water
Division*

CHERYL W. PATTERSON
CHARLOTTE KNIGHT GRIFFIN
MEMPHIS LIGHT, GAS & WATER
DIVISION
220 South Main Street
Memphis, Tennessee 38103
*Counsel for Defendant
Memphis Light, Gas & Water
Division*

BRUCE A. MCMULLEN
City Attorney
CITY OF MEMPHIS, TENNESSEE
125 North Main Street, Room 336
Memphis, Tennessee 38103
*Counsel for Defendants
City of Memphis, Tennessee, and
Memphis Light, Gas & Water
Division*

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 1st day of June 2018.

/s/ David C. Frederick

David C. Frederick
Special Counsel to Defendant
State of Tennessee