In the Supreme Court of the United States

STATE OF FLORIDA,

PLAINTIFF,

v.

STATE OF GEORGIA,

DEFENDANT.

On Exceptions to the Report of the Special Master

AMICUS CURIAE BRIEF
IN SUPPORT OF THE STATE OF GEORGIA BY
THE ATLANTA REGIONAL COMMISSION, BARTOW
COUNTY, GEORGIA, DEKALB COUNTY, GEORGIA,
FORSYTH COUNTY, GEORGIA, FULTON COUNTY,
GEORGIA, GWINNETT COUNTY, GEORGIA, THE
CITY OF ATLANTA, GEORGIA, THE CITY OF
CARTERSVILLE, GEORGIA, THE CITY OF
GAINESVILLE, GEORGIA, AND THE COBB
COUNTY-MARIETTA WATER AUTHORITY

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IDENTITY AND INTEREST OF AMICI CURIAE¹

Amici Curiae are members of the "Georgia Water Supply Providers" group, which has been actively working to defend Metropolitan Atlanta's access to adequate water supplies for more than 20 years. The Atlanta Regional Commission ("ARC") is a regional governmental entity composed of ten counties and the cities within them. As the Metropolitan Planning and Development Commission for Metro Atlanta, ARC is responsible for coordinating and managing the planning, development. implementation, construction, management, and operation of regional water projects. It acts as the contracting and coordinating agent for local governments, and as the representative for local governments on matters related to reservoir and water supply operations by the United States Army Corps of Engineers ("Corps of Engineers").

The City of Atlanta, the City of Gainesville, DeKalb County, Forsyth County, Fulton County, and Gwinnett County are city and county governments in the Atlanta metropolitan area who use water from Lake Lanier and the Chattahoochee River for their public water supply. The Cobb County-Marietta Water Authority is a local government entity created

¹ The undersigned certify that counsel for a party did not author or pay for any part of this brief, and further that no person or entity other than the *Amici Curiae* made any monetary contribution to fund any part of the preparation or submission of this brief.

by the Georgia General Assembly to provide water on a wholesale basis to Cobb County and its environs. It relies on the Chattahoochee River for approximately half of its water supply. The City of Cartersville and Bartow County withdraw water from Allatoona Lake in the Alabama-Coosa-Tallapoosa River Basin, which would be forced to meet substantially increased demands if water supply from the Apalachicola-Chattahoochee-Flint ("ACF") River Basin were constrained. Together, *Amici* provide water from the ACF River Basin to millions of residents and hundreds of thousands of businesses in Metro Atlanta.

Amici are all cities, counties, and political subdivisions of the State of Georgia, and the undersigned counsel is their authorized law officer for purposes of this case and controversy, including specifically the filing of this brief. Accordingly, no motion for leave is required under Rule 37.4.

STATEMENT OF THE CASE

I. Metro Atlanta and Its Dependence on the Chattahoochee River

Metro Atlanta is a culturally vibrant and growing center of commerce, science, education, and the arts. From its modest beginnings as a railroad terminus, Metro Atlanta is now home to more than 6 million people, making it the ninth largest metropolitan area in the United States.² The region is home to nearly 150,000 different businesses and the headquarters of numerous Fortune 500 companies, including such household names as The Home Depot, United Parcel Service, Delta Airlines, and The Coca-Cola Company. Kirkpatrick PFD ¶¶ 11-12. It boasts the world's busiest airport, nationally significant infrastructure, including the U.S. Centers for Disease Control and Prevention, and leading universities, such as the Georgia Institute of Technology, Georgia State University, Emory University, and Morehouse and Spelman Colleges. *Id.*; Tr. 3447 (Kirkpatrick).³ All total, in 2018, the Metro Atlanta region generated more than \$397 billion in gross domestic product.⁴

Unlike other major U.S. cities located on a coast or major waterway, Metro Atlanta did not develop based on its access to water or waterborne commerce. Rather, the city's location at the southern end of the Appalachian Mountains and along the Eastern Continental Divide is a function of geography and

² U.S. Census Bureau, Release No. CB20-53, Table 4 (Mar. 26, 2020), available at https://www.census.gov/newsroom/pressreleases/2020/pop-estimates-county-metro.html (last visited June 15, 2020).

³ See also Metro Atlanta Chamber of Commerce, Profile of Metro Atlanta, available at https://bit.ly/2BcyV8V (last visited June 15, 2020).

⁴ U.S. Dept. of Commerce, Bureau of Economic Analysis, Gross Domestic Product (GDP) summary by county and metropolitan area, *available at* https://bit.ly/2zy04mq (last visited June 15, 2020).

railroads, whose routes converged at Atlanta, making the city a gateway for overland rail traffic passing between the Atlantic seaboard and regions to the west.⁵

This artifact of Atlanta's development is a key factor affecting this dispute. From a water supply perspective, Metro Atlanta sits atop the headwaters of six different river basins, where surface-water rivers and streams are small relative to other major metropolitan areas. Mayer PFD ¶¶ 22-25, 103.6 Moreover, because the region is underlain by granite bedrock, Metro Atlanta lacks any appreciable groundwater resources, meaning that the region depends almost entirely on these small surface-water sources to meet its water supply needs. Id. Of these, the Chattahoochee River and Lake Lanier, which impounds the river about 50 miles north of Atlanta, the most important, providing approximately 70 percent of Metro Atlanta's water supply. Id. \P 24.7

⁵ Encyclopedia Britannica, Atlanta, Georgia, *available at* https://www.britannica.com/place/Atlanta-Georgia (last visited June 15, 2020).

⁶ See also Metropolitan North Georgia Water Planning District ("Metro District"), Water Resource Management Plan, 3-1 (June 2017), available at https://bit.ly/30PEVj3 (last visited June 15, 2020).

⁷ Of the remainder, about 25 percent is obtained from the Coosa, Tallapoosa, and Ocmulgee River Basins, with the Flint River in the ACF Basin contributing about 5 percent. Metro

II. Florida's Claims Targeting Metro Atlanta's Water Use

Following decades of unsuccessful litigation in the lower courts related to Metro Atlanta's water supply withdrawals from the Chattahoochee River and Lake Lanier,⁸ Florida sought relief in this Court in 2013. In its Complaint, Florida asserted that the "primary uses of water in the Chattahoochee River Basin are municipal and industrial," and that "[l]arge, and ever-increasing, amounts of water" are "consumed upstream for municipal [and] industrial" purposes in Metro Atlanta. Complaint ¶¶ 5, 45. Based on this, Florida requested that this Court "enter an order enjoining Georgia ... and other persons claiming under it, from interfering with Florida's rights, and capping Georgia's overall depletive water uses at the level then existing on January 3, 1992." *Id.* at 21.

District, Water Resource Management Plan, supra n.6, Table 3-1.

⁸ See, e.g., U.S. Army Corps of Engineers, Final Environmental Impact Statement, Update of the Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin in Alabama, Florida, and Georgia and a Water Supply Storage Assessment (Dec. 2016) ("Final EIS"), Vol. 1, ES-2 to ES-5, ES-10 to ES-11 (describing history of dispute), available at https://bit.ly/2YmCiDs (last visited June 15, 2020); In re MDL-1824 Tri-State Water Rights Litig., 644 F.3d 1160, 1174-78 (11th Cir. 2011) (same).

III. Florida's Case at Trial and Special Master Lancaster's Recommendation

Notwithstanding these allegations—and despite assuring the Special Master that "Metro Atlanta" would be a primary "focus" of its evidence because its "consumption has been intense," Tr. 10 (Perry)—Florida failed to press its challenges to Metro Atlanta's water use, either in the trial before the Special Master or in its briefing to this Court.

At the trial, Florida declined to call its subject-matter expert on municipal and industrial water supply and water conservation, Dr. Dracup, who had admitted during discovery that Metro Atlanta's water conservation programs are appropriate and being properly implemented. Mayer PFD ¶ 49 (quoting Dracup Dep. at 132:12-18). Instead, Florida relied entirely on testimony from an economist, Dr. David Sunding, who offered a limited and error-filled critique of Metro Atlanta's water use, purportedly identifying three additional conservation measures he claimed could be implemented. 2019 Report 67-69.9

⁹ As discussed below, the three measures Dr. Sunding claimed could be implemented in Metro Atlanta were "municipal leak abatement," "eliminating" inter-basin transfers, and additional restrictions on outdoor water use. See 2019 Report 67-69. Dr. Sunding's analysis of these measures was deeply flawed, however, and the Special Master rejected them. Id.; see also Mayer PFD ¶¶ 87, 97-131 (describing Dr. Sunding's many errors).

While recommending that Florida's case be dismissed, Special Master Lancaster addressed Florida's claims against Metro Atlanta in a single footnote, which acknowledged the "significant steps" taken "to conserve water in the Atlanta metropolitan region." 2017 Report 34 n.28. Florida did not challenge these statements in its Exceptions filed $ext{this}$ Court. Instead, Florida repeatedly acknowledged that, contrary to the allegations in its Complaint, "most of the water at issue" is withdrawn from "the Flint River and lower Chattahoochee Basins" downstream of Atlanta. 2017 Exceptions to Report of the Special Master by Plaintiff State of Florida and Brief in Support of Exceptions, 18, 38.¹⁰

IV. The Court's Decision and Instructions on Remand

A majority of this Court held the Special Master "applied too strict a standard" in determining "the Court would not be able to fashion an appropriate equitable decree" if the Corps of Engineers is not a party in this case. *Florida v. Georgia*, 138 S. Ct. 2502, 2516 (2018). Emphasizing that Florida would be required to prove "the benefits of the apportionment substantially outweigh the harm that might result,"

¹⁰ Given this concession, *Amici* filed a brief suggesting that Florida's tacit acceptance reflected a decision to abandon its claims against Metro Atlanta's water use. 2017 Amici Curiae Brief in Support of the State of Georgia by the Atlanta Regional Commission, *et al.*, 15-18. Florida did not respond to this argument in it Sur-Reply. *See generally* 2017 Sur-Reply in Support of Exceptions to Report of the Special Master.

id. at 2527 (quoting Colorado v. New Mexico ("Colorado I"), 459 U.S. 176, 187 (1982)), the Court remanded the matter to the Special Master, directing the Master to make "specific factual findings" regarding the issues in dispute. Id. at 2515, 2527.

In so doing, the Court instructed the Special Master to address a series of questions regarding Georgia's water use and the benefits—or lack thereof—to Florida that reducing Georgia's use would provide. *Id.* at 2527. Each of the majority's questions focused on Georgia's water use "from the Flint River," explaining that "specific factual findings and definitive recommendations" regarding these matters were necessary for the Court "to determine whether Florida can eventually prove its right to cap Georgia's use of Flint River waters." *Id.* None of the Court's questions on remand mentioned either Metro Atlanta or its water use as a subject for further inquiry.

V. The Special Master's Finding that Metro Atlanta's Water Use Is Reasonable and Efficient

On remand, Special Master Kelly did not limit his analysis to the questions posed by the Court, which focused on Georgia's water use "from the Flint River." He also made specific findings about water use in Metro Atlanta, explaining that these findings were necessary, despite the Court's focus on remand, because Florida's post-remand briefing continued to reference water uses in Metro Atlanta:

Although the Supreme Court's ... questions were limited to the Flint River, Florida continues to argue that Georgia's use of the Chattahoochee River (which primarily serves the Atlanta Metropolitan area) is also inequitable. Because the Supreme Court's list of questions for remand was not exclusive, I also evaluate Florida's arguments concerning the Chattahoochee River. 2019 Report 7.

The Special Master found that Metro Atlanta's consumption of water for municipal and industrial purposes "is reasonable" and efficient. 2019 Report 52-53. In particular, the Special Master found that Georgia has "taken concrete steps to increase efficiency and conserve in this area," explaining that these efforts have been "quite effective" in driving down water use in Metro Atlanta. Id. at 52, 48. The Special Master further found that "Florida has not pointed to any compelling evidence of waste or inefficiency in Georgia's M&I[municipal industriall consumption," explaining that Dr. Sunding's testimony regarding additional conservation measures to be implemented in Metro Atlanta was "not credible" and "simply not believable." Id. at 53, 67-69. "On top of that," the Special Master recognized, Metro Atlanta's water use "generates benefits" for millions of people who depend on the ACF Basin for their water supply. *Id*. at 52-53.

SUMMARY OF ARGUMENT

The Court should deny Florida's request for relief for four reasons.

First, Florida has abandoned any claim that water use in Metro Atlanta is excessive, inefficient, or unreasonable. See infra pp. 11-13.

Second, Florida abandoned its claims against Metro Atlanta for good reason—Metro Atlanta is a national leader in water conservation. It has implemented award-winning water conservation and efficiency programs, which have driven down water use in Metro Atlanta, even as the region's population grown substantially. Its water has insignificant at the basin scale and "negligible" effect on Florida, as the Corps Engineers has explained. And yet, the small amount of water that Metro Atlanta consumes supports millions of people and the area's almost \$400 billion economy. See infra pp. 13-24, 30-32.

Third, the Special Master correctly rejected Florida's assertions that additional conservation measures in Metro Atlanta should be ordered. 2019 Report 67-69. The limited evidence Florida put forth to support these claims is riddled with errors and "simply not believable," as the Special Master found. 2019 Report 67-69. If accepted, a decree mandating the reductions Florida advocated for Metro Atlanta would be truly frightening—necessitating entirely unrealistic cuts to Metro Atlanta's water use that cannot be achieved and imposing job losses and other costs that "would be staggering." See infra pp. 24-29.

Finally, any decree curtailing water use in Metro Atlanta would inflict tremendous economic damage and hardship on millions of people in Georgia, while providing—at best—only trivial benefits to Florida. See infra pp. 30-33.

For these reasons, and more, Florida cannot possibly establish that the benefits of a decree limiting Metro Atlanta's water use "substantially outweigh the harm that might result." *Florida v. Georgia*, 138 S. Ct. at 2527. Florida's request for relief should be denied, as the Special Master recommended.

ARGUMENT

I. Florida Has Abandoned Any Challenge to Metro Atlanta's Water Use

Florida does not meaningfully challenge the detailed findings Special Master's and recommendations regarding municipal and industrial water use by Metro Atlanta. The words "municipal and industrial" do not appear in Florida's Exceptions. The word "Atlanta" appears only once—and even then not in reference to any claim by Florida that Metro Atlanta's water use is unreasonable. See 2020 Exceptions to Report of the Special Master by Plaintiff State of Florida and Brief in Support of Exceptions, 33. The only hint of a reference to Metro Atlanta's water use is found on page 49 of Florida's Exceptions, Florida mentions that a 2009 report recommended "municipal leak abatement" as a "noregrets" conservation measure. Id. at 49 & n.10.

A single, passing reference to "municipal leak abatement" is not sufficient to preserve a challenge to Metro Atlanta's water use. This Court has not hesitated to find an issue abandoned when a party's brief on the merits fails to address it. See DaimlerChrysler Corp. v. Cuno, 547 U.S. 332, 339 n.2 (2006) ("Plaintiffs neither identified these allegations as a basis for standing in their merits brief before this Court nor referred to them at oral argument. Any argument based on these allegations is therefore abandoned."); United States v. Int'l Bus. Machines Corp., 517 U.S. 843, 856 & n.3 (1996) ("To the extent the issue was raised in the petition for certiorari, the Government failed to address the issue in its brief on the merits and therefore has abandoned it.").

The rationale for finding abandonment is particularly compelling in this equitable apportionment action, where sovereign interests are at stake, where the claimed benefits from Florida's remedies are speculative, and where the potential impacts from a decree limiting Metro Atlanta's water This supply enormous. Court's original jurisdiction is both "delicate and grave." South Carolina v. North Carolina, 558 U.S. 256, 267 (2010) (quoting Louisiana v. Texas, 176 U.S. 1, 15 (1900)). For this reason, the Court "exercise[s its] original jurisdiction 'sparingly' and retain[s] 'substantial discretion' to decide whether a particular claim requires 'an original forum in this Court." Id. (quoting Mississippi v. Louisiana, 506 U.S. 73, 76 (1992)). When it does choose to exercise that jurisdiction, the Court requires more proof—not less—before it will exercise its and "extraordinary power under the Constitution" to enjoin otherwise lawful uses of water occurring in another sovereign state. Washington v. Oregon, 297 U.S. 517, 522 (quotations omitted). And because (1936)"substantial" and "compelling" equities support "the protection of existing economies," while claimed future benefits "may be speculative and remote," Colorado I, 459 U.S. at 187, it has required the state seeking to invoke this Court's jurisdiction to upset established uses to "bear most, though not all, of the risks of erroneous decision," Colorado v. New Mexico ("Colorado II"), 467 U.S. 310, 316 (1984).

Simply put, the Court need not—and should not enter a decree affecting the water supply of millions of people without clear statements of the issues; without meaningful argument about whether those uses are reasonable; and without a detailed presentation of the specific relief being sought, the specific benefits the proposed remedies will provide, and the specific costs that will be imposed as a result. Only then could the Court possibly have "an adequate basis on which to make 'the delicate adjustment of interests' that the law requires." Florida v. Georgia, 138 S. Ct. at 2515 (quoting Nebraska v. Wyoming, 325 U.S. 589, 618 (1945)). Because Florida has made no effort to do that here, the Court should deem issues related to Metro Atlanta's water use abandoned.

II. Metro Atlanta's Water Use Is Reasonable

If the Court entertains Florida's claims targeting Metro Atlanta's water use, the Court should adopt the Special Master's Report; hold that municipal and industrial water use in Metro Atlanta is reasonable and efficient; and deny Florida's request for relief.

A. Metro Atlanta's Water Use Creates Enormous Benefits

The Special Master correctly found that water use in Metro Atlanta provides enormous benefits in both economic and human terms. 2019 Report 53. Millions of people and thousands of businesses depend on the ACF Basin for a clean and plentiful water supply. Indeed, this water use—which is trivial at the basin scale, as explained below—supports hundreds of billions of dollars of economic activity. Florida has not contested any of these findings.

B. Metro Atlanta's Water Use Is Highly Efficient

 Metro Atlanta's Conservation Efforts Have Been Hugely Successful and Driven Down Its Water Use

Given its location in the headwaters of the ACF Basin and its dependence on relatively small surfacewater sources, Metro Atlanta has invested heavily in water conservation and efficiency programs to ensure that available supplies can meet its long-term needs. 2019 Report 48. Special Master Kelly thus correctly found that Metro Atlanta has "taken concrete steps to increase efficiency and conserve," and that these steps have dramatically reduced Metro Atlanta's water use. *Id.* at 47-48, 52, 69.

As the Special Master explained, the effectiveness of Metro Atlanta's efforts to increase efficiency "has been borne out by reductions in per capita use," 2019 Report 52, which declined sharply after the Metro District was created and Metro Atlanta implemented its award-winning conservation programs, described below. During the period from 2000 to 2013, for example, per capita water use in the Metro District decreased almost 37 percent, falling from 155 gallons per capita per day ("gpcd") to less than 100 gpcd. 2019 Report 48, 69; see also Mayer PFD ¶¶ 8, 31, 43-44 & Figure 7; Tr. 3535-37 (Mayer); Kirkpatrick PFD ¶ 27. "[T]his reduction reflects the significant impact of water management, water conservation, and investments in water efficiency across the metro Atlanta region." Mayer PFD ¶ 44.11

Notably, Florida's own municipal and industrial water conservation expert—whom Florida declined to present at trial—conceded that per capita use at these levels "demonstrates that 'water conservation measures are being appropriately implemented." Mayer PFD ¶¶ 8, 49 (quoting Dracup Dep. at 132:12-18). Moreover, Metro Atlanta's reductions in per

¹¹ These successes continue today, with per capita use in Metro Atlanta remaining steady at about 100 gpcd. See Metro District, Latest Water Stats, Water Withdrawals Per Capita Remain Steady ("Since 2012, per capita water withdrawals in the Metro Water District have remained steady around 100 gallons per capita per day (gpcd), with some variation due to climate. Even in drought years, the implementation of drought restrictions has maintained the effective culture of wise water use."), available at https://bit.ly/2NJjvME (last visited June 29,2020).

capita use far outpaced those in the Northwest Florida Water Management District, ¹² where per capita use declined much more slowly and remained almost 35 percent higher than in Metro Atlanta. Mayer PFD ¶¶ 8, 45-50 & Figure 8; Tr. 3536-37 (Mayer).

As a direct result of these efficiency increases in Metro Atlanta, the total amount of water actually consumed in Georgia for municipal and industrial purposes has declined compared to 1994 levels. 2019 Report 68-69; Mayer PFD ¶¶ 7, 29-36 & Figures 3 through 5; Tr. 3530-35 (Mayer). This is a "remarkable achievement," Mayer PFD ¶ 35, given "a population increase of 50% during the same period," 2019 Report 69 (citing Mayer PFD ¶¶ 7, 32).

As above, the decline in municipal and industrial water consumption was especially pronounced after the Metro District was created. Since 2000, the total amount of water withdrawn in the Metro District decreased by 10 percent, Kirkpatrick PFD ¶ 26, while the total amount of water actually consumed in Georgia for municipal and industrial purposes declined by 55 percent over the period, falling to just 94 mgd in 2013. Mayer PFD ¶¶ 7, 36 & Figure 5. Again, Metro Atlanta and Georgia achieved these reductions "even as the total population increased"

¹² The Northwest Florida Water Management District includes Florida's portion of the ACF Basin, along with cities like Tallahassee, Pensacola, and Panama City. Northwest Florida Water Management District, Map Library, available at https://bit.ly/3dJs4la (last visited July 1, 2020).

dramatically over the same period." Kirkpatrick PFD ¶ 26; Mayer PFD ¶¶ 7, 36.

2. Metro Atlanta and the State of Georgia Are National Leaders in Water Conservation and Efficiency

The very low rate of water use in Metro Atlanta did not occur by chance. Rather, it is the direct result of decades of effort and expense by Metro Atlanta and the State of Georgia to improve efficiency.

Almost 20 years ago, Georgia created the Metro to spearhead Metro Atlanta's conservation effort. The Metro District was charged to develop comprehensive water supply and water conservation plans for the 15-county Metro Atlanta region. Mayer PFD ¶¶ 22, 54. The Metro District's plans specify "highly effective" water conservation and efficiency measures that every water utility in Metro Atlanta must implement. Mayer PFD ¶¶ 54-56, 71-73 & Table 2.13 These requirements include mandatory residential "conservation pricing" (where the cost of water increases with the amount the customer uses); required water loss auditing and leak detection; and programs to replace inefficient plumbing fixtures with new, high-efficiency models, to name a few. See id. As the Special Master found, these measures have been "quite effective" and

¹³ See also Metro District, Water Resource Management Plan, supra n.6, Table 3-5, pp. 5-44 to 5-45, 5-51 to 5-88 (describing historic and current water conservation measures).

directly reduced water use in Metro Atlanta. 2019 Report 47-48 (discussing measures implemented to reduce municipal and industrial water consumption and describing Georgia's "significant progress in conserving water"); see also Mayer PFD ¶¶ 51-57; Tr. 3537-41 (Mayer).

At the state level, Georgia enacted the Water Stewardship Act of 2010, which is "perhaps the most comprehensive piece of state water conservation and management legislation enacted anywhere in the United States." Mayer PFD ¶ 60. The Alliance for Water Efficiency hailed the Water Stewardship Act as "landmark" water efficiency legislation. *Id.* American Rivers, another national environmental organization, characterized it as one of the strongest statewide water conservation laws in the United States, stating that "Georgia now leads most states in the nation when it comes to 21st century water supply solutions." Kirkpatrick PFD ¶ 49 (quoting American Rivers, New Bill Makes Georgia a National Leader in Water Efficiency).

Georgia's and Metro Atlanta's water loss control and leak abatement programs are particularly notable. Georgia is one of just five states or regulatory agencies in the United States to require lossaudits using rigorous water standards established bv the American Water Works Association ("AWWA"). It is the only state in the nation to require those audits to be validated by a third party. Mayer PFD ¶¶ 9, 61-67. What is more, water systems are required to demonstrate progress in water loss control based on their annual audits, with system expansions and withdrawal permit renewals conditioned on "demonstrat[ing] progress in fixing leaks." Mayer PFD ¶ 66; Kirkpatrick PFD ¶ 50.

Metro Atlanta's water loss requirements are even more stringent. Under the Metro District's plan, water utilities are required to achieve specified numeric water loss goals by 2025. ¹⁴ At the same time, water utilities in Metro Atlanta have invested heavily in water loss control and leak abatement, identifying and repairing more than 42,000 water leaks between 2009 and 2014. Mayer PFD ¶ 65. From 2012 to 2015, the City of Atlanta alone repaired more than 10,000 leaks across its distribution system, which includes more than 3,000 miles of buried mains, while also allocating more than \$55 million for distribution system rehabilitation and repair projects that will improve system reliability and decrease water loss. *Id.*; Tr. 3509 (Mayer).

As a result, Metro Atlanta and Georgia are regarded as national leaders in water loss control and leak abatement. The AWWA, for instance, has lauded Georgia for its water loss control and leak abatement program, touting its "comprehensive approach" and the "considerable resources" it has devoted to these issues. Mayer PFD ¶ 63. A separate AWWA report entitled "The State of Water Loss

 $^{^{14}}$ See Metro District, Water Resource Management Plan, supran.6, 5-83 to 5-85 (Action Item WSWC-15, Water Loss Control and Reduction).

Control in Drinking Water Utilities" identifies Georgia as a "case study" of a "successful water loss control program," finding that "Georgia has taken a highly progressive and structured stance" toward implementing water loss control requirements and that "Georgia's innovative approach is being modeled by a number of other states." ¹⁵ Georgia's expert on municipal and industrial water conservation described Georgia's water loss control program as "exemplary," explaining it was "among the best, if not the best" water loss and leak abatement program in the United States. Tr. 3541 (Mayer). Again, Georgia's requirements far exceed any similar efforts in Florida. Mayer PFD ¶¶ 9, 61, 63-66.

The water conservation and efficiency measures adopted in Metro Atlanta do not end there. All water utilities in the Metro District are required to implement "conservation pricing," which provides a "strong price signal" that incentivizes customers to reduce their water use. Mayer PFD ¶¶ 55-56, 71-72; Tr. 3538 (Mayer). Local governments are required to adopt high-efficiency plumbing codes, which mandate the use of high-efficiency fixtures, submetering multiunit commercial and residential buildings, and the installation of high-efficiency cooling towers in all

¹⁵ American Water Works Association, *The State of Water Loss Control in Drinking Water Utilities*, 15 (2016), *available at* https://bit.ly/3eBwmMA (last visited June 25, 2020); *see also id.* at 13 (discussing an initiative by the California Water Loss Control Collaborative that is "transforming water loss assessments in California," explaining that "[t]he initiative is based on the successful program developed in Georgia").

new construction. Mayer PFD ¶ 62. And more than 110,000 inefficient toilets in Metro Atlanta have been replaced with new high-efficiency models, saving almost 950 million gallons of water per year. Mayer PFD ¶ 56.

Metro Georgia and Atlanta have also implemented permanent, year-round measures to limit outdoor water use, including restricting outdoor irrigation during the day, requiring irrigation systems to utilize rain sensor shut-offs, and implementing award-winning education programs. Tr. 3540 (Mayer); Mayer PFD ¶¶ 55, 62. Further, they have instituted a "highly effective drought response program" to limit outdoor water use during periods of reduced rainfall—even going so far as banning outdoor irrigation during extreme drought periods. Tr. 3523 (Mayer); Mayer PFD ¶¶ 68-70.

As a result, Georgia, the Metro District, and water providers in Metro Atlanta have been repeatedly recognized for their municipal industrial water conservation and efficiency efforts. Mayer PFD ¶¶ 51, 63, 82-86. Just last year, for example, the Metro District received the WaterSense Excellence Award from the Sustained U.S. Environmental Protection Agency ("EPA"). This is the fifth consecutive year that EPA has recognized Metro District for its innovative conservation efforts. 16 Another major water provider

¹⁶ Metro District, Metropolitan North Georgia Water Planning District Honored with WaterSense Award for Fifth Straight

in Metro Atlanta, the Cobb County Water System, has been recognized by EPA eight times under this same program, including Sustained Excellence Awards in 2017, 2018, and 2019.¹⁷

Likewise, in 2017, the Alliance for Water Efficiency and the non-partisan Environmental Law Institute ranked states based on their water conservation and efficiency. Georgia received the highest score of any state east of the Mississippi, with only California and Texas receiving higher grades. Notably, Georgia far outranked Florida, which received a grade of only "C plus." See id.; Mayer PFD ¶ 83 (discussing 2012 version of study, in which Florida tied for 20th in the nation and was given a grade of "C").

Year, available at https://bit.ly/3eoA0JP (last visited June 15, 2020).

¹⁷ See U.S. EPA, WaterSense Award Winners, available at https://www.epa.gov/watersense/watersense-award-winners (last visited July 1, 2020).

¹⁸ Alliance for Water Efficiency and Environmental Law Institute, Water Efficiency and Conservation State Scorecard: An Assessment of Laws, Table 2 (Dec. 2017), available at https://bit.ly/2Y41Zc3 (last visited June 15, 2020).

3. Metro Atlanta Has Invested Billions to Reduce the Impact of Its Water Use by Returning High-Quality Reclaimed Water to the Chattahoochee River and Lake Lanier

Beyond the water conservation and efficiency programs described above, Metro Atlanta has invested billions in projects to reclaim water after it used and to return that water and Chattahoochee River Lake Lanier—thus expanding water reuse and reducing consumption in Metro Atlanta. The City Gainesville and Gwinnett County, for example, operate water reclamation facilities to return reclaimed water directly to its source in Lake Lanier, with Gwinnett County alone investing more than \$1 billion in this effort. Mayer PFD ¶¶ 75-76. At the same time, the City of Atlanta, Cobb County, Fulton County, and others return huge amounts of water to the Chattahoochee River below Lake Lanier, further reducing Metro Atlanta's water consumption and making this water available to meet other needs downstream. Mayer PFD ¶ 77.

As a result of these investments, fully 70 percent of the water Metro Atlanta withdraws from the ACF Basin is reclaimed and returned to the basin. Mayer PFD ¶ 34-36 & Figure 4. This figure is projected to increase to 75 percent in the future. Mayer PFD ¶ 34 (citing GX-829). Indeed, entities withdrawing water from Lake Lanier are projected to return almost 100 million gallons per day ("mgd") to the reservoir by 2050, with additional amounts possible based on

policies adopted by the Corps of Engineers. Mayer PFD ¶ 78; GX-829 at 12 & Exhibit I, Table 3. Return flows to the Chattahoochee River are even larger, with the City of Atlanta, Cobb County and others projected to reclaim and return 361 mgd by 2050. GX-829, Exhibit I, Tables 4 & 5.

4. The Special Master Correctly Rejected Florida's Assertion that Additional Conservation Measures Should Be Imposed

Without directly attacking Metro Atlanta's award-winning conservation programs, Florida asserts (albeit now vaguely) that Metro Atlanta should be ordered to do more. The Special Master rightly rejected this suggestion, however, finding that Florida failed to present "any compelling evidence of waste or inefficiency" and that the testimony of Florida's expert, Dr. Sunding, was "not credible" and "simply not believable." 2019 Report 53, 67-69.

To begin, the Special Master rejected Dr. Sunding's assertion that "Georgia could generate 42 cfs [cubic feet per second] of additional streamflow ... by undertaking a leak abatement program." *Id.* at 67. As the Special Master recognized, the estimated stream flow increase Dr. Sunding claimed was simply copied from a report issued in 2009 by Georgia's Water Contingency Task Force, which in turn was based on numbers from 2007. 19 2019 Report 67;

¹⁹ In his expert report, Dr. Sunding attempted to calculate water loss in Georgia, but his calculations were deeply flawed

Mayer PFD ¶¶ 37, 98. And, as a result, Dr. Sunding's claim ignored the very substantial efforts undertaken after the 2009 Task Force Report was produced, including the nationally recognized water loss and leak abatement programs implemented under the Water Stewardship Act of 2010. 2019 Report 67; Mayer PFD ¶ 98; Tr. 3546-47 (Mayer). In other words, Dr. Sunding's municipal leak abatement proposal did not actually represent any new water savings, because, as the Special Master recognized, Metro Atlanta and Georgia have already implemented best practices to reduce water losses. 2019 Report 67; Mayer PFD ¶¶ 97-99; Tr. 3546-47 (Mayer).

But the flaws in Dr. Sunding's municipal leak did abatement proposal not end there. Dr. Sunding also failed to understand the 42-cfs value he plucked from the report was a long-term future estimate, which did not represent savings available at the time the Task Force Report was written in 2009. Mayer PFD ¶ 99 (explaining that, according to the Task Force Report, only 8 to 10 mgd of the projected total would be available by 2012, three years after the report was issued). Dr. Sunding failed to recognize that his 42-cfs value was based on outdated water demand estimates that had been superseded and substantially reduced at the time the trial occurred. Id. Dr. Sunding failed to grasp that his 42-cfs value was for the entire Metro District, and

and were not included in his testimony to the Special Master. Mayer PFD \P 98.

thus did not represent potential water savings available in the ACF Basin, which is all that matters here. *Id.* And, as the Special Master found, he grossly understated the costs of implementing such a program. 2019 Report 67; Mayer PFD ¶ 100.

Rather than address the Special Master's findings, Florida suggests in a footnote (at 49 n.10) that he lacked evidence to support them, but this claim is belied by the record. As detailed above, Metro Atlanta and Georgia are national leaders in municipal water loss and leak abatement. Mayer PFD ¶¶ 9, 61, 63-67; Tr. 3540-41 (Mayer). Water providers in Metro Atlanta have spent tens of millions of dollars on water loss and leak abatement programs, while detecting and repairing tens of thousands of leaks. Mayer PFD ¶ 65; Tr. 3509 (Mayer). Georgia's water loss programs are "among the best, if not the best," in the United States. Tr. 3540-41 (Mayer). They have also been emulated in arid states, like California, that face significant water challenges. Mayer PFD ¶ 66. In short, there is overwhelming evidence of Georgia's "great progress in this area," as the Special Master found. 2019 Report 67.

Though not mentioned by Florida in its briefing to this Court, Dr. Sunding's other assertions regarding Metro Atlanta were equally flawed and the Special Master correctly rejected them. For example, Dr. Sunding's claim that "Georgia could eliminate interbasin transfers to increase streamflow by 66 cfs"—and that doing so would have zero cost—"ignore[s] the realities of the water system" and is "not

credible." 2019 Report 53 n.33, 68. As the Special Master explained, inter-basin transfers in Metro Atlanta are the natural result of its location in the headwaters of multiple river basins and the normal operation of its water systems, which sometimes cross basin lines that are "not always obvious" and occasionally "bisect individual counties and water service areas." *Id.* at 53 n.33; see also Mayer PFD ¶¶ 101-104. Eliminating these transfers would require Metro Atlanta to completely redesign the region's entire wastewater system. This "would require the construction of totally new wastewater infrastructure at a cost in 'the hundreds of millions and more likely billions' of dollars to implement, which is 'neither realistic nor reasonable" on the facts of this case. 2019 Report 68 (quoting Mayer).

Finally, the Special Master correctly rejected Dr. Sunding's claim that Georgia could "reduc[e] outdoor water consumption by 50% in drought years" and "generate 207 cfs at a cost of 0\$ per year." *Id.* at 68-69. As the Special Master explained, Dr. Sunding incorrectly calculated outdoor water use because he "fail[ed] to distinguish outdoor watering use from other seasonal uses"—such as evaporative cooling towers at industrial facilities, commercial buildings, hospitals, and other facilities, and changes in water use resulting from seasonal travel and tourism—that have nothing to do with outdoor irrigation. *Id.* at 68; see also Mayer PFD ¶¶ 117-125. This, along with other "significant errors" in his calculations, caused him to "greatly overstate the volume of outdoor water

use in Georgia." Tr. 3548-50 (Mayer); Mayer PFD ¶¶ 112-125.20 "At any rate," the Special Master found, "Georgia has already adopted measures to reduce M&I water use during drought," including banning "virtually all M&I outdoor water use in 61 counties" during past droughts. 2019 Report 68.

Moreover, Dr. Sunding's assertion that his proposed cuts to outdoor water use would have zero cost "is simply not believable." 2019 Report 68. As other experts explained, the cuts Dr. Sunding advocated would cost hundreds of millions of dollars and result in significant employment losses. See Stavins PFD ¶¶ 84-88 & Demo. 14 (discussing numerous errors in Dr. Sunding's analysis and explaining that a 50-percent cut in outdoor water use would cost \$445 million in every dry year it is implemented); Mayer PFD ¶¶ 129-131 (discussing impacts of outdoor water restrictions, including significant job losses, which Dr. Sunding ignored).

If accepted, the cumulative effect of Dr. Sunding's "numerous mathematical and methodological errors" would be truly frightening. Mayer PFD ¶¶ 126-131. As Georgia's expert explained, Dr. Sunding's compounding errors led him to grossly overstate the

 $^{^{20}}$ As a result of errors in his calculations, Dr. Sunding initially overestimated outdoor water use by as much as 120 percent. Mayer PFD ¶ 125. While he acknowledged some of these errors, he failed to correct them all and the estimates presented to the Special Master remain grossly overstated. *Id.* Further, Dr. Sunding failed to provide his new analysis or calculations for review by Georgia's experts. *Id.*

amount of water that Metro Atlanta could save. Thus, to achieve the savings Dr. Sunding predicted, Metro Atlanta would have to cut its total water use not just outdoor irrigation—by a whopping 72.5 percent. Mayer PFD ¶ 127. In certain months, the savings would literally be impossible to achieve, as his proposed savings exceed all municipal and industrial consumption in Georgia. Tr. 3553-54 & Trial Demo. 9. This is entirely "unrealistic," and far exceeds anything Georgia's expert has seen in "more than 20 years of professional experience working with water utilities on conservation and drought response." Mayer PFD ¶¶ 127-128. As Georgia's expert explained, a "reduction of this magnitude would require the complete elimination of all seasonal water use" in Metro Atlanta. Id. This includes "all outdoor water use," as well as "all evaporative cooling" towers used to cool hospitals, industrial facilities, airports, and commercial buildings, "and much more." Mayer PFD ¶ 127. Even if these reductions could be achieved, the costs of such a program "would be staggering," with resulting property damage, enormous job losses, and severe impacts to rate-payers, particularly the economically disadvantaged. Mayer PFD ¶¶ 128-131.

In short, the evidence Florida presented at trial is entirely unreliable. It is woefully inadequate to support an order mandating drastic cuts in the water supply of millions of people and the disruption of established uses and economies.

C. The Remedy Florida Seeks Would Provide No Benefit

1. Metro Atlanta's Total Water Use Has a Negligible Impact on Downstream Flows

Metro Atlanta's water use has a negligible effect on flows downstream in Florida. This is partly because Metro Atlanta's water consumption is small, thanks to its award-winning water conservation programs and its extraordinary investments to return water to the system, discussed above. Metro Atlanta's location in the headwaters of the ACF Basin also plays a role. Metro Atlanta is some 350 miles from the Florida line. And Lake Lanier, the region's primary water source, controls just 5.3 percent of the ACF Basin. JX-124 at 2-24, Table 2.1-3.21 This means that 94.7 percent of the drainage area of the ACF Basin is below Lake Lanier, and water entering those portions of the basin is not available to Metro Atlanta.22

²¹ See also U.S. Army Corps of Engineers, Final EIS, supra n.8, Vol. 1, Table ES-1 (stating that Lake Lanier's drainage area is 1,034 square miles out a total of 19,573 square miles for the ACF Basin).

²² See, e.g., U.S. Army Corps of Engineers, Final EIS, supra n.8, Vol. 1, 6-94 (explaining that water supply uses in Metro Atlanta occur in the uppermost portions of the basin and "generally have an inconsequential effect on flow conditions into Lake Seminole and downstream of Jim Woodruff Lock and Dam" at the Florida line, which are "more influenced by hydrologic conditions in the 90 percent of the ACF Basin downstream of Metro Atlanta").

The net result is that municipal and industrial water use in Metro Atlanta (and the rest of the ACF Basin in Georgia) is insignificant at the basin scale. Mayer PFD ¶ 44 & Figure 6. This is true across the entire range of flow conditions, including the drought conditions emphasized by Florida. Mayer PFD ¶¶ 132-33 & Figure 11; Tr. 3555-56 (Mayer). And yet, this small amount of water supports millions of people in Metro Atlanta and the area's multi-billion dollar economy. Tr. 3555 (Mayer).

This hydrologic reality is confirmed by the Corps of Engineers' Environmental Impact Statement for the Master Water Control Manual for the ACF Basin, which it adopted in March 2017. Following years of analysis, and a detailed examination of various levels of water supply use in Metro Atlanta, the Corps of Engineers concluded that meeting Metro Atlanta's long-term (year 2050) water demands from Lake Lanier and the Chattahoochee River would have "negligible" effects on Florida, "no appreciable flow conditions in the incremental effect on Apalachicola River," and "no incremental effect on freshwater inflows to Apalachicola Bay."23

The Corps of Engineers reiterated this finding in its Record of Decision adopting the Water Control Manual, which specifically rejected Florida's assertions that "adjusting [Corps] operations to accommodate water supply uses" in Metro Atlanta

²³ U.S. Army Corps of Engineers, Final EIS, *supra* n.8, Vol. 1, 6-42, 6-93.

"would come at the expense of downstream resources in the ACF Basin, including the Apalachicola River and Bay." ²⁴ Rather, the Corps of Engineers explained that its updated operations and future water supply withdrawals by Metro Atlanta "would be expected to have no appreciable incremental effect on flow conditions (quantity or timing) in the Apalachicola River or on salinity and hydrodynamic conditions in the Apalachicola Bay estuary, and negligible or no effects on oyster populations or the oyster industry in Apalachicola Bay." *Id.* at 11. Florida has not challenged any of these determinations—or the Water Control Manual—in the lower courts.

2. The Benefits of Florida's Proposed Remedy Would Be Truly Trivial

As Georgia explains, Florida's proposed remedy assumes Georgia's water use would be reduced by 1,000 cfs or more. Yet, according to Florida's own experts, even these draconian cuts would produce only trivial benefits—providing, for example, just 1.4 percent more oyster biomass in Apalachicola Bay and \$40,000 in annual benefits.

The effects of these restrictions, which would inflict harms on Georgia that far outweigh any benefits to Florida, are even more trivial where Metro Atlanta is concerned. As it is, Metro Atlanta's

²⁴ U.S. Army Corps of Engineers, Record of Decision, 11, 17-18 (Mar. 30, 2017), *available at* https://bit.ly/31ddqQF (last visited June 15, 2020).

water consumption is insignificant at the basin scale and has a "negligible" impact on flows in the Apalachicola River. But even accepting Dr. Sunding's grossly inflated and unrealistic estimates, the municipal and industrial reductions he advocates comprise only a small fraction of the total water use reductions that Florida seeks. It follows that any benefits attributable to reductions in Metro Atlanta's water use would be correspondingly small.

Simply stated, it is not equitable to require reductions of this magnitude based on an expert's prediction that it would have increased oyster biomass, at most, by three-tenths of one percent and generate, at most, \$12,600 per year in benefits. Given this, Florida cannot possibly establish, as it must, that "the benefits" of reducing water use in Metro Atlanta "substantially outweigh the harm that might result." Florida v. Georgia, 138 S. Ct. at 2527 (quoting Colorado I, 459 U.S. at 187). Florida's challenges to Metro Atlanta's water use should accordingly be dismissed and its request for relief denied.

CONCLUSION

For the foregoing reasons, as well as those given in the State of Georgia's Reply, the Court should adopt Special Master Kelly's recommendation, hold that water use in Metro Atlanta and the State of Georgia is reasonable, and deny Florida's request for relief. Respectfully submitted,

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