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## Syllabus

FLORIDA *v.* GEORGIA

## ON EXCEPTIONS TO REPORT OF SPECIAL MASTER

No. 142, Orig. Argued January 8, 2018—Decided June 27, 2018

This original action concerns the proper apportionment of water from an interstate river basin. Three rivers form the heart of the Basin. The Chattahoochee and Flint Rivers begin near Atlanta, flow south through Georgia, and ultimately converge at Lake Seminole, just north of Florida, where the Apalachicola River begins and flows 106 miles south into the Gulf of Mexico. In 2013, Florida, the downstream State, sued Georgia, the upstream State, asking the Court to issue a decree equitably apportioning the Basin's waters. The Court agreed to exercise its original jurisdiction and appointed a Special Master. The United States declined to waive its sovereign immunity from suit in the case. After conducting lengthy evidentiary proceedings, the Master submitted a Report recommending that the Court dismiss Florida's complaint. That recommendation, the parties agree, turns on a single issue—namely, whether Florida met its initial burden in respect to redressability. The Master concluded that Florida failed to make the requisite showing because it did not present clear and convincing evidence that its injuries could be redressed by a decree capping Georgia's upstream water consumption if the decree does not also bind the Army Corps of Engineers. Florida has filed exceptions to the Master's Report.

*Held:*

1. The Special Master applied too strict a standard in concluding that Florida failed to meet its initial burden of demonstrating that the Court can eventually fashion an effective equitable decree. Pp. 814–823.

(a) Where, as here, the Court is asked to resolve an interstate water dispute raising questions beyond the interpretation of specific language of an interstate compact, the doctrine of equitable apportionment applies. In this realm, several related but more specific sets of principles guide the Court's review. First, both Georgia and Florida possess "an equal right to make a *reasonable use* of the waters of" the Flint River. *United States v. Willow River Power Co.*, 324 U. S. 499, 505. Second, when confronted with competing claims to interstate water, the Court's "effort always is to secure an equitable apportionment without quibbling over formulas." *New Jersey v. New York*, 283 U. S. 336, 343. Third, in light of the sovereign status and "equal dignity" of States, a complaining State's burden is "much greater" than the burden ordinarily shouldered by a private party seeking an injunction. *Connecticut v.*

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*Massachusetts*, 282 U. S. 660, 669. Among other things, it must demonstrate, by “‘clear and convincing evidence,’” that it has suffered a “‘threatened invasion of rights’” that is “‘of serious magnitude.’” *Washington v. Oregon*, 297 U. S. 517, 522. And to the extent the Court has addressed the “initial burden” a State bears in respect to redressability, the Court has said that “it should be clear that [the complaining] State has not merely some technical right, but also a right with a corresponding benefit” as a precondition to any equitable apportionment. *Kansas v. Colorado*, 206 U. S. 46, 102, 109. An effort to shape a decree cannot be “a vain thing.” *Foster v. Mansfield, C. & L. M. R. Co.*, 146 U. S. 88, 101. Finally, because equitable apportionment is “flexible,” not “formulaic,” this Court will seek to “arrive at a “‘just and equitable’ apportionment’ of an interstate stream” by “consider[ing] ‘all relevant factors,’” *South Carolina v. North Carolina*, 558 U. S. 256, 271, including, *inter alia*, “physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas, [and] the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former,’” *Colorado v. New Mexico*, 459 U. S. 176, 183. Because all relevant factors must be weighed, extensive and specific factual findings are essential for the Court to properly apply the doctrine of equitable apportionment. See *Nebraska v. Wyoming*, 325 U. S. 589, 618. Pp. 814–819.

(b) The Special Master applied too strict a standard when he determined that the Court would not be able to fashion an appropriate equitable decree. The Master referred to this as a “threshold” showing. But it is “threshold” only in the sense that the Master has not yet determined key remedy-related matters, including the approximate amount of water that must flow into the Apalachicola River in order for Florida to receive a significant benefit from a cap on Georgia’s use of Flint River waters. Unless and until the Special Master makes the findings of fact necessary to determine the nature and scope of likely harm caused by the absence of water and the amount of additional water necessary to ameliorate that harm significantly, the complaining State should not have to prove with specificity the details of an eventually workable decree by “clear and convincing” evidence. Rather, the complaining State should have to show that, applying the principles of “flexibility” and “approximation,” it is likely to prove possible to fashion such a decree. To require “clear and convincing evidence” about the workability of a decree before the Court or a Special Master has a view about likely harms and likely amelioration is, at least in this case, to put the cart before the horse. Pp. 820–823.

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2. The Court reserves judgment as to the ultimate disposition of this case, addressing here only the narrow “threshold” question the Master addressed below—namely, whether Florida has shown that its “injur[ies can] effectively be redressed by limiting Georgia’s consumptive use of water from the Basin without a decree binding the Corps.” Report 30–31. Florida has made a legally sufficient showing as to the possibility of fashioning an effective remedial decree. Pp. 823–841.

(a) The Report makes several key assumptions. First, the Master assumed Florida has suffered harm as a result of decreased water flow into the Apalachicola River. Second, the Master further assumed that Florida has shown that Georgia, contrary to equitable principles, has taken too much water from the Flint River. Third, the Master assumed that Georgia’s inequitable use of the water injured Florida. At this stage of the proceeding and in light of these assumptions, Florida made a sufficient showing that the extra water that would result from its proposed consumption cap would both lead to increased streamflow in Florida’s Apalachicola River and significantly redress the economic and ecological harm that Florida has alleged. In addition, the United States has made clear that the Corps will cooperate in helping to implement any determinations and obligations the Court sets forth in a final decree in this case. While the Corps must take account of a variety of circumstances and statutory obligations when it allocates water, it cannot now be said that an effort to shape a decree here will prove “a vain thing,” *Foster, supra*, at 101, since the record indicates that, if necessary and with the help of the United States, the Special Master, and the parties, the Court should be able to fashion a decree. Pp. 824–839.

(b) Further findings, however, are needed on all of these evidentiary issues. Florida will be entitled to a decree only if it is shown that “the benefits of the [apportionment] substantially outweigh the harm that might result.” *Colorado*, 459 U. S., at 187. On remand, before fashioning a remedy, the Special Master must address several evidentiary questions that are assumed or found plausible here. Pp. 839–841.

Case remanded.

BREYER, J., delivered the opinion of the Court, in which ROBERTS, C. J., and KENNEDY, GINSBURG, and SOTOMAYOR, JJ., joined. THOMAS, J., filed a dissenting opinion, in which ALITO, KAGAN, and GORSUCH, JJ., joined, *post*, p. 843.

*Gregory G. Garre* argued the cause for plaintiff. With him on the briefs were *Pamela Jo Bondi*, Attorney General of Florida, *Amit Agarwal*, Solicitor General, *Jonathan L.*

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*Williams*, Deputy Solicitor General, *Jonathan Glogau*, Special Counsel, *Philip J. Perry*, *Jamie L. Wine*, *Claudia M. O'Brien*, *Abid R. Qureshi*, *Benjamin W. Snyder*, *Frederick L. Aschauer*, *Paul N. Singarella*, *Christopher M. Kise*, *James A. McKee*, and *Matthew Z. Leopold*.

*Craig S. Primis* argued the cause for defendant. With him on the brief were *Christopher M. Carr*, Attorney General of Georgia, *Sarah Hawkins Warren*, Solicitor General, *Christopher Landau*, *K. Winn Allen*, *Devora W. Allon*, and *Andrew Pruitt*.

*Deputy Solicitor General Kneedler* argued the cause for the United States as *amicus curiae* supporting overruling plaintiff's Exception 2C. With him on the brief were *Acting Solicitor General Walls*, *Deputy Assistant Attorney General Grant*, *Ann O'Connell*, and *Michael T. Gray*.\*

JUSTICE BREYER delivered the opinion of the Court.

This case concerns the proper apportionment of the water of an interstate river basin. Florida, a downstream State, brought this lawsuit against Georgia, an upstream State, claiming that Georgia has denied it an equitable share of the basin's waters. We found that the dispute lies within our original jurisdiction, and we appointed a Special Master to take evidence and make recommendations.

After lengthy evidentiary proceedings, the Special Master submitted a report in which he recommends that the Court deny Florida's request for relief on the ground that "Florida has not proven by clear and convincing evidence that its injury can be redressed by an order equitably apportioning the waters of the Basin." Report of Special Master 3. The

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\*Briefs of *amici curiae* were filed for the State of Colorado by *Cynthia H. Coffman*. Attorney General of Colorado, *Frederick R. Yarger*, Solicitor General, *Glenn E. Roper*, Deputy Solicitor General, *Karen M. Kwon*, First Assistant Attorney General, and *Scott Steinbrecher*, Assistant Solicitor General; and for the Atlanta Regional Commission et al. by *Chilton Davis Varner*, *Patricia T. Barmeyer*, and *Lewis B. Jones*.

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case is before us on Florida's exceptions to the Special Master's Report.

In light of our examination of the Report and relevant portions of the record, we remand the case to the Master for further findings and such further proceedings as the Master believes helpful.

## I

## A

This original action arises out of a dispute over the division of water from an interstate river basin known as the Apalachicola-Chattahoochee-Flint River Basin. The Basin drains an area of more than 20,000 square miles across the southeastern United States. Three interstate rivers form the heart of the Basin and are central to this case. They are the Chattahoochee River, the Flint River, and the Apalachicola River. It is easiest to think of these three rivers as forming the capital letter "Y," with each branch starting at a different point in northeastern Georgia near Atlanta and the stem running through the Florida Panhandle and emptying into Apalachicola Bay in the Gulf of Mexico. See Appendix, *infra*.

The Chattahoochee River is the western branch of this Y-shaped river system. It runs from the foothills of Georgia's Blue Ridge Mountains, through most of Georgia, down to Lake Seminole, just north of Florida. The United States Army Corps of Engineers operates several dams and reservoirs along the Chattahoochee where it both stores water and controls the amount of water that flows downstream to Florida in accordance with the terms of its recently revised Master Water Control Manual (Master Manual). As we shall discuss in more detail, Part IV, *infra*, the Corps' operations are important to the resolution of this case.

The Flint River, the eastern branch of the "Y," runs from just south of Atlanta down to the same lake, namely, Lake Seminole. Unlike the Chattahoochee, there are no dams

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along the Flint River; it flows unimpeded through southern Georgia's farmland, where the greatest share of the Basin's water is consumed by agricultural irrigation.

After water from the Flint and Chattahoochee Rivers mixes at Lake Seminole, the mixed water (now forming the stem of the Y) continues its southward journey. At the southern end of Lake Seminole, it flows through the Woodruff Dam—a dam also controlled by the Corps. The mixed waters then change their name. They are called the Apalachicola River, and under that name they flow 106 miles through the Florida Panhandle and finally empty into the Gulf of Mexico. There, the fresh water of the Apalachicola River mixes with the Gulf's saltwater, forming Apalachicola Bay, which the United Nations, the United States, and the State of Florida have all recognized as one of the Northern Hemisphere's most productive estuaries. In total, the Apalachicola River accounts for 35% of the fresh water that flows along Florida's western coast. See Joint Exh. 168, p. 39.

## B

Florida and Georgia have long disputed the apportionment of the Basin's waters. Florida contends that Georgia is consuming more than its equitable share of Flint River water. It adds that, were Georgia to consume less water from the Flint River, more water would flow into Lake Seminole, pass through the Woodruff Dam and subsequently flow down the Apalachicola River (the Y's stem) and into Apalachicola Bay. The additional water that would result from a cap on Georgia's consumption would, Florida argues, help (among other things) to recover and maintain its oyster industry, which collapsed following a drought in 2012. Georgia believes that it should not have to cut back on its Flint River water consumption because, in its view, it consumes no more than its equitable share.

“This Court has recognized for more than a century its inherent authority, as part of the Constitution's grant of original jurisdiction, to equitably apportion interstate streams

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between States.” *Kansas v. Nebraska*, 574 U. S. 445, 454 (2015). But we have long noted our “preference” that States “settle their controversies by ‘mutual accommodation and agreement.’” *Arizona v. California*, 373 U. S. 546, 564 (1963) (quoting *Colorado v. Kansas*, 320 U. S. 383, 392 (1943) (*Kansas II*)); see also *id.*, at 392 (“[Interstate] controversies may appropriately be composed by negotiation and agreement, pursuant to the compact clause of the federal Constitution”); *Kansas v. Nebraska*, *supra*, at 449 (describing codification of Republican River Compact); *Montana v. Wyoming*, 563 U. S. 368, 372 (2011) (interpreting Yellowstone River Compact); *Kansas v. Colorado*, 543 U. S. 86 (2004) (resolving dispute over Arkansas River Compact).

We recognize that Florida and Georgia (sometimes with the help of the Federal Government) have long tried to do so. But so far they have failed.

In 1992, for example, the States signed a memorandum of agreement in which they “committed to a process for cooperative management and development” of the three-river Basin and agreed to “participate fully as equal partners” in a “comprehensive, basin-wide study” of its waters. Joint Exh. 004, at 1. Five years later, the States signed—and Congress approved—a compact, the Apalachicola-Chattahoochee-Flint River Basin Compact, in which they agreed

“to develop an allocation formula for equitably apportioning the surface waters of the ACF Basin among the states while protecting the water quality, ecology and biodiversity of the ACF.” 111 Stat. 2222–2223.

But five years of negotiations under the Compact proved fruitless, and in 2003, the Compact expired.

More than a decade later, in 2014, Congress again recognized the need for an equitable apportionment of Basin waters. See Water Resources Reform and Development Act of 2014, Pub. L. 113–121, § 1051(a), 128 Stat. 1259. But once again, despite drought, expanding city populations, and a dramatic increase in acreage devoted to agricultural irriga-



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tion, no agreement has been reached. The “last effort to reach an amicable resolution of this complex equitable apportionment proceeding” in 2017 was “unsuccessful.” Report 24. The States instead have come to this Court.

## II

## A

In 2013, Florida, the downstream State, sought to sue Georgia, the upstream State, asking us to exercise our “original and exclusive jurisdiction” and issue a decree equitably apportioning the waters of the Basin. 28 U. S. C. § 1251(a); see U. S. Const., Art. III, § 2; see also this Court’s Rule 17. In its complaint, Florida alleged that Georgia’s consumption of Flint River water “reduce[s] the amount of water flowing to the Apalachicola River at all times,” and noted that “the effects are especially apparent during the low flow summer and fall periods.” Complaint 9, ¶21; see also *id.*, at 17, ¶49 (complaining that the impact of Georgia’s water consumption “is significant, particularly during dry periods”). In addition, Florida alleged that “[a]s Georgia’s upstream storage and consumption grows over time, low flow events will become more frequent and increase in severity, diminishing the likelihood that key species will survive and precluding any chance of recovery over the long term.” *Id.*, at 20, ¶59. To remedy these harms, Florida seeks a cap on Georgia’s consumption of water from the Flint River. *Id.*, at 21.

Georgia filed a brief in opposition, arguing that Florida failed to allege an injury sufficient to warrant this Court’s exercise of original jurisdiction. See State of Georgia’s Opposition to Florida’s Motion for Leave To File a Complaint 31 (“Florida has not pleaded facts plausibly suggesting that it will be able to establish clear and convincing evidence that it suffers substantial injury as a result of Georgia’s consumption of water”). At our request, the United States filed a brief in which it told us that “Florida has pleaded an interstate water dispute of sufficient importance to warrant this

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Court’s exercise of its original jurisdiction, and no other judicial forum is suitable for resolving the overall controversy.” Brief for United States as *Amicus Curiae* 12 (Sept. 18, 2014). But, the United States also warned that “[p]ractical considerations . . . weigh against the Court’s resolution of Florida’s claims before the Corps has completed its process of updating the Master Manual for the federal projects in the ACF Basin.” *Ibid.* It suggested that the Court could “grant Florida leave to file, but stay or provide for tailoring of any further proceedings until the Corps has issued the revised Master Manual” in March 2017, *id.*, at 13 (which Florida has now done, see Brief for United States as *Amicus Curiae* 3, n. 1, 10–12).

We subsequently agreed to exercise our original jurisdiction and appointed a Special Master “with authority to . . . direct subsequent proceedings,” “take such evidence as may be introduced and such as he may deem it necessary to call for,” and “submit Reports as he may deem appropriate.” 574 U. S. 1021 (2014).

At the outset, the United States declined to waive its sovereign immunity from suit in this case. And shortly thereafter, Georgia asked the Special Master to dismiss the case on the grounds that the United States was a necessary party but could not be forced to intervene. See Fed. Rule Civ. Proc. 19(b). The Master concluded that the motion to dismiss Florida’s complaint should be denied. The Master reasoned that a decree binding the Corps might not prove necessary. Order on State of Georgia’s Motion To Dismiss 14–15 (June 19, 2015). Rather, the Master concluded that “the few facts before me at this stage of the proceeding support the conclusion that” a cap on Georgia’s Flint River water consumption could, at least in principle, redress Florida’s injuries either by increasing the amount of water that flows into Florida’s Apalachicola River or by “render[ing] periods of reduced flow releases [into the Apalachicola River] fewer and further between because of the increased reser-

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voir levels that would result from Georgia’s reduced consumption.” *Id.*, at 14, and n. 5. The Special Master pointed out that Florida would have to show that “a consumption cap is justified and will afford adequate relief.” *Id.*, at 13.

## B

The Master then held lengthy discovery and evidentiary proceedings. See Brief for Georgia 11; *post*, at 864 (THOMAS, J., dissenting) (“During their 18 months of discovery, the parties produced 7.2 million pages of documents”). Ultimately, the Master submitted a 70-page Report to this Court in February 2017. He recommended that the Court dismiss Florida’s complaint. In particular, despite the very large factual record amassed and “the extensive testimony bearing on numerous issues,” the Special Master stated:

“I have concluded that there is a *single*, discrete issue that resolves this case: *even assuming* that Florida has sustained injury as a result of unreasonable upstream water use by Georgia, can Florida’s injury effectively be redressed by limiting Georgia’s consumptive use of water from the Basin without a decree binding the [Army] Corps [of Engineers]? I conclude that Florida has not proven that its injury can be remedied without such a decree. The evidence does not provide sufficient certainty that an effective remedy is available without the presence of the Corps as a party in this case.” Report 30–31 (emphasis added).

For present purposes, we note that Florida and Georgia agree that the Master’s recommendation “turned on a ‘single, discrete issue’—whether Florida had shown that a cap on Georgia’s consumption would redress its injury if the decree did not bind the Corps as well.” Florida Brief in Support of Exceptions 23–24; see also Georgia’s Reply to Florida’s Exceptions 23 (“The Special Master reserved ruling on any issue other than effective redress”); Brief for United States as *Amicus Curiae* 19–20 (Aug. 7, 2017) (same).

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In reviewing this determination, we do not agree with the dissent’s view that the Master applied the “ordinary balance-of-harms test” that our equitable apportionment cases require. *Post*, at 855 (opinion of THOMAS, J.); see also Part III–A, *infra* (describing equitable apportionment doctrine). As we shall explain, the dissent’s assertion that “the balance of harms cannot tip in Florida’s favor” is, at best, premature. *Post*, at 877. That judgment may eventually prove right or it may prove wrong. Here, as we just said, we consider only the “single” and “threshold” question of “redressability” upon which the Master rested his conclusion and which the parties have now argued here. In determining precisely what we now review, we rely upon (and do not go beyond) the Report’s specific and key statements, which include the following:

- “*As a threshold matter*, equitable apportionment is only available to a state that has suffered ‘real and substantial injury’ as a result of proposed or actual upstream water use” and “*the injury must be redressable by the Court.*” Report 24 (emphasis added).
- “Florida points to real harm and, at the very least, likely misuse of resources by Georgia. There is little question that Florida has suffered harm from decreased flows in the [Apalachicola] River,” including “an unprecedented collapse of its oyster fisheries in 2012.” *Id.*, at 31.
- “Much more could be said and would need to be said on these [and other] issues . . . .” *Id.*, at 34.
- “I need only address the *narrow question* of which party bears the burden of proving injury and *redressability.*” *Id.*, at 28–29 (emphasis added).
- “Florida bears the burden to prove that the proposed remedy will provide redress for Florida’s injury.” *Id.*, at 30.
- “Florida has not proven by clear and convincing evidence that *any additional streamflow* in the Flint River or

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in the Chattahoochee River would be released from Jim Woodruff Dam into the Apalachicola River *at a time that would provide a material benefit to Florida (i. e., during dry periods)*, thereby alleviating Florida’s injury.” *Id.*, at 47 (emphasis added).

- “Florida has provided no evidence that a decree in this case could provide an effective remedy during normal (*i. e.*, non-drought) periods.” *Id.*, at 68.
- “[T]he Corps can *likely* offset increased streamflow in the Flint River by storing additional water in its reservoirs along the Chattahoochee River during dry periods [and so] . . . [t]here is no *guarantee* that the Corps will exercise its discretion to release or hold back water at any particular time.” *Id.*, at 69 (emphasis added).
- “[W]ithout the Corps as a party, the Court cannot order the Corps to take any particular action.” *Id.*, at 69–70.

C

Florida has filed exceptions to the Special Master’s Report. Florida first challenges the legal standard the Master applied in resolving what the Master called the “threshold” question whether Florida had “proven . . . that its injury can be redressed by an order equitably apportioning the waters of the Basin.” *Id.*, at 24, 3. The Master wrote that Florida must meet a “clear and convincing evidence” evidentiary burden. *Id.*, at 3. Second, Florida argues that, in any event, its showing in respect to redressability was sufficient. We consider each of these exceptions in turn.

## III

## A

We note at the outset that our role in resolving disputes between sovereign States under our original jurisdiction “significantly differs from the one the Court undertakes in suits between private parties.” *Kansas v. Nebraska*, 574 U. S., at 453 (internal quotation marks and alterations omit-

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ted). “In this singular sphere,” we have observed, “the court may regulate and mould the process it uses in such manner as in its judgment will best promote the purposes of justice.’” *Id.*, at 454 (quoting *Kentucky v. Dennison*, 24 How. 66, 98 (1861)). We must approach interstate disputes “in the untechnical spirit proper for dealing with a quasi-international controversy, remembering that there is no municipal code governing the matter, and that this court may be called on to adjust differences that cannot be dealt with by Congress or disposed of by the legislature of either State alone.” *Virginia v. West Virginia*, 220 U. S. 1, 27 (1911) (Holmes, J.).

Where, as here, the Court is asked to resolve an interstate water dispute raising questions beyond the interpretation of specific language of an interstate compact, the doctrine of equitable apportionment governs our inquiry. See *Colorado v. New Mexico*, 459 U. S. 176, 183 (1982) (*Colorado I*); *Virginia v. Maryland*, 540 U. S. 56, 74, n. 9 (2003) (“Federal common law governs interstate bodies of water, ensuring that the water is equitably apportioned between the States and that neither State harms the other’s interest in the river”). In this realm, we have kept in mind several related but more specific sets of principles.

*First*, as the Special Master pointed out, “the relevant guiding principle in this case” is a simple one. Report 26–27. Given the laws of the States, both Georgia and Florida possess “an equal right to make a *reasonable use* of the waters of the stream”—which, in this case, is the Flint River. *Id.*, at 26 (quoting *United States v. Willow River Power Co.*, 324 U. S. 499, 505 (1945)); see also *Colorado I*, *supra*, at 184 (“Our prior cases clearly establish that equitable apportionment will only protect those rights to water that are ‘reasonably required and applied.’ . . . [W]asteful or inefficient uses will not be protected (quoting *Wyoming v. Colorado*, 259 U. S. 419, 484 (1922)); *Idaho ex rel. Evans v. Oregon*, 462 U. S. 1017, 1025 (1983) (*Idaho II*) (“States have

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an affirmative duty under the doctrine of equitable apportionment to take reasonable steps to conserve and even to augment the natural resources within their borders for the benefit of other States”); *Nebraska v. Wyoming*, 325 U. S. 589, 618 (1945); *Kansas II*, 320 U. S., at 394; *Washington v. Oregon*, 297 U. S. 517, 522, 527–528 (1936); *New Jersey v. New York*, 283 U. S. 336, 342–343 (1931); *North Dakota v. Minnesota*, 263 U. S. 365, 372 (1923) (reaffirming that an upstream State may not “burden his lower neighbor with more than is reasonable”); *Kansas v. Colorado*, 206 U. S. 46, 102 (1907) (*Kansas I*); *Tyler v. Wilkinson*, 24 F. Cas. 472, 474 (No. 14,312) (CC RI 1827) (Story, J.) (setting forth the principle of “reasonable use”).

*Second*, our prior decisions emphasize that, when we are confronted with competing claims to interstate water, the Court’s “effort always is to secure an equitable apportionment without quibbling over formulas.” *New Jersey v. New York*, 283 U. S., at 343 (Holmes, J.). Where “[b]oth States have real and substantial interests in the River,” those interests “must be reconciled as best they may be.” *Id.*, at 342–343. We have added that “[u]ncertainties about the future . . . do not provide a basis for declining to fashion a decree.” *Idaho II*, 462 U. S., at 1026; see also *ibid.* (“Reliance on reasonable predictions of future conditions is necessary”); *Colorado v. New Mexico*, 467 U. S. 310, 322 (1984) (*Colorado II*) (requiring “absolute precision in forecasts . . . would be unrealistic”); *North Dakota v. Minnesota*, *supra*, at 386 (emphasizing the need to “draw inferences as to the probabilities”); *Kansas I*, *supra*, at 97–98.

*Third*, 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. *Connecticut v. Massachusetts*, 282 U. S. 660, 669 (1931); see *Kansas II*, *supra*, at 392 (“The reason for judicial caution in adjudicating the relative rights of States in such cases is that, while we have



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jurisdiction of such disputes, they involve the interests of quasi-sovereigns, present complicated and delicate questions, and, due to the possibility of future change of conditions, necessitate expert administration rather than judicial imposition of a hard and fast rule” (footnote omitted)). In particular, “[b]efore this court 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.’” *Washington v. Oregon*, *supra*, at 522 (quoting *New York v. New Jersey*, 256 U. S. 296, 309 (1921)). The State must make that showing by “‘clear and convincing evidence.’” *Washington v. Oregon*, *supra*, at 522 (quoting *New York v. New Jersey*, *supra*, at 309); see also *Idaho II*, *supra*, at 1027 (“A State seeking equitable apportionment under our original jurisdiction must prove by clear and convincing evidence some real and substantial injury or damage”); *Colorado I*, *supra*, at 187–188, n. 13 (“[A] state seeking to prevent or enjoin [an upstream] diversion by another State” must “bear the *initial burden* of showing that a diversion by [the upstream State] will cause substantial injury to [the downstream State’s] interests” (emphasis added)).

In addition, to the extent the Court has addressed the “initial burden” a State bears in respect to redressability, our prior decisions make clear that, as a general matter, “[t]o constitute such a controversy, it must appear that the complaining State has suffered a wrong through the action of the other State, furnishing ground for judicial redress, or is asserting a right against the other State which is susceptible of judicial enforcement according to the accepted principles of the common law or equity systems of jurisprudence.” *Massachusetts v. Missouri*, 308 U. S. 1, 15 (1939); see also *Wyoming v. Oklahoma*, 502 U. S. 437, 447, 452 (1992) (same); *Maryland v. Louisiana*, 451 U. S. 725, 735–736 (1981). More specifically, we have said that “it should be



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clear that [the complaining] state has not merely some technical right, but also a right with a corresponding benefit” as a precondition to any equitable apportionment. *Kansas I, supra*, at 109. An effort to shape a decree cannot be “a vain thing.” *Foster v. Mansfield, C. & L. M. R. Co.*, 146 U. S. 88, 101 (1892). A State “will not be granted [relief] against something merely feared as liable to occur at some indefinite time in the future,” *Connecticut v. Massachusetts, supra*, at 674, or when there is “no other or better purpose [at stake] than to vindicate a barren right,” *Washington v. Oregon*, 297 U. S., at 523. Cf. *Idaho II, supra*, at 1026 (assessing whether “the formulation of a workable decree is impossible”).

*Fourth*, in an interstate water matter, where a complaining State meets its “initial burden of showing ‘real or substantial injury,’” *Colorado II, supra*, at 317 (quoting *Colorado I*, 459 U. S., at 188, n. 13), this Court, recalling that equitable apportionment is “flexible,” not “formulaic,” will seek to “arrive at a ‘just and equitable’ apportionment’ of an interstate stream” by “consider[ing] ‘all relevant factors.’” *South Carolina v. North Carolina*, 558 U. S. 256, 271 (2010) (quoting *Colorado I*, 459 U. S., at 183); see also *id.*, at 190 (“Whether [relief] should be permitted will turn on an examination of all factors relevant to a just apportionment”); *Kansas II*, 320 U. S., at 393–394 (“[I]n determining whether one State is using, or threatening to use, more than its equitable share of the benefits of a stream, *all* the factors which create equities in favor of one State or the other *must* be weighed” (emphasis added)). These factors include (but are not limited to):

“physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas, [and] the damage to upstream areas as compared to the benefits to down-

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stream areas if a limitation is imposed on the former.” *Nebraska v. Wyoming*, 325 U. S., at 618.

Because “*all the factors* which create equities in favor of one State or the other *must* be weighed,” *Kansas II*, *supra*, at 394 (emphasis added), extensive and “*specific* factual findings” are essential for the Court to properly apply the doctrine of equitable apportionment. *Colorado I*, *supra*, at 189–190 (emphasis added). And given the complexity of many water-division cases, the need to secure equitable solutions, the need to respect the sovereign status of the States, and the importance of finding flexible solutions to multi-factor problems, we typically appoint a Special Master and benefit from detailed factual findings.

Without the full range of factual findings, we have said, the Court may lack an adequate basis on which to make “the delicate adjustment of interests” that the law requires. *Nebraska v. Wyoming*, *supra*, at 618; *Washington v. Oregon*, 297 U. S., at 519, 523–524 (emphasizing that “the Master’s Report, which finds the facts fully”); see also *Colorado I*, *supra*, at 183, 189–190 (remanding “with instructions to the Special Master to make further findings of fact”); *Colorado II*, 467 U. S., at 312–315 (explaining that because “the Master’s report [was] unclear,” the Court remanded to the Special Master “for additional factual findings on five specific issues” even after “a lengthy trial at which both States presented extensive evidence” in order “to assist this Court in balancing the benefit and harm”); *Texas v. New Mexico*, 462 U. S. 554, 575–576, and n. 21 (1983) (“[W]e return this case to the Special Master for determination of the unresolved issues framed in his pretrial order”); 3 A. Kelley, *Water and Water Rights* § 45.02(c), p. 45–14 (3d ed. 2018) (“If the factual findings in the report are insufficient for the Court to decide whether the master correctly applied the doctrine of equitable apportionment, the Court may refer the case back to the master for additional findings”).

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## B

Applying the principles just described, we conclude that the Special Master applied too strict a standard when he determined that the Court would not be able to fashion an appropriate equitable decree. See Report 3 (“Florida has not proven by clear and convincing evidence that its injury can be redressed by an order equitably apportioning the waters of the Basin”); see also *id.*, at 31 (“The evidence does not provide sufficient certainty that an effective remedy is available without the presence of the Corps as a party in this case”).

The Special Master referred to the relevant showing that Florida must make in this respect as a “threshold” showing. *Id.*, at 24. We agree that the matter is “threshold” in one particular sense—namely, the sense that the Master has not yet determined several key remedy-related matters, including the approximate amount of water that must flow into the Apalachicola River in order for Florida to receive a significant benefit from a cap on Georgia’s use of Flint River waters. See *infra*, at 833. The Master also wrote that Florida had failed to show “with sufficient certainty that the Corps must (or will choose to) operate its projects so as to permit *all* additional flows in the Flint River” or “*the entire marginal increase* in streamflow” to reach Florida “without any substantial delay.” Report 48 (emphasis added); see also *id.*, at 24, 70 (similar). He added that there “is no *guarantee*” that the Corps will exercise its relevant discretion. *Id.*, at 69 (emphasis added). And he said that Florida must show the existence of a workable remedy by “clear and convincing evidence.” *Id.*, at 3; see also, *e. g.*, *id.*, at 28–29, 47, 51, 69–70.

We believe the Master’s standard, as indicated by these statements, is too strict. In our view, unless and until the Special Master makes the findings of fact necessary to determine the nature and scope of likely harm caused by the absence of water and the amount of additional water necessary

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to ameliorate that harm significantly, the complaining State should not have to prove with specificity the details of an eventually workable decree by “clear and convincing” evidence. Rather, the complaining State should have to show that, applying the principles of “flexibility” and “approximation” we discussed above, it is likely to prove possible to fashion such a decree. See *supra*, at 818–819.

To require more definite proof at the outset may well (at least on some occasions) make little sense. Suppose, for example, downstream State A claims that upstream State B wastes at least 10,000 cubic feet per second (cfs) of water. And suppose further that no decree could enforce a 10,000 cfs consumption cap but that it may well prove possible to enforce a lesser requirement. If so, we would have to know at least approximately how much water will significantly ameliorate State A’s water problem *before* we could know whether it is possible to shape a workable decree. And the workability of decrees themselves, approximate as they may be, may depend upon more precise findings in respect to the nature and scope of the range of likely harms and likely benefits that a Special Master finds are actually likely to exist. To require “clear and convincing evidence” about the workability of a decree before the Court or a Special Master has a view about likely harms and likely amelioration is, at least in this case, to put the cart before the horse. And that, we fear, is what the Master’s statements, with their apparent references to a “clear and convincing” evidence standard in respect to “redressability” (where that refers to the availability of an eventual decree) have done here. Cf. *post*, at 860–863.

That is also why our cases, while referring to the use of a “clear and convincing” evidentiary standard in respect to an initial showing of “invasion of rights” and “substantial injury,” have never referred to that standard in respect to a showing of “remedy” or “redressability.” See *Nebraska v. Wyoming*, 515 U. S. 1, 8 (1995) (repeating that as a threshold

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matter, a “‘threatened invasion of rights must be of serious magnitude and it must be established by clear and convincing evidence’” without addressing the required initial burden in respect to remedy (quoting *New York v. New Jersey*, 256 U. S., at 309)); *Colorado II*, *supra*, at 317 (describing the “initial burden” a State bears to show “‘real or substantial injury’” (quoting *Colorado I*, 459 U. S., at 187–188, n. 13)); *Idaho II*, 462 U. S., at 1027; *Colorado I*, *supra*, at 187–188, and n. 13 (“[A] State seeking to prevent or enjoin [an upstream] diversion by another State” must “bear *the initial burden* of showing that a diversion by [the upstream State] will cause substantial injury to [the downstream State’s] interests” (emphasis added)); *Washington v. Oregon*, 297 U. S., at 522; *Connecticut v. Massachusetts*, 282 U. S., at 672; *New Jersey v. New York*, 283 U. S., at 344–345; *Kansas II*, 320 U. S., at 393–394. The dissent does not dispute this. See *post*, at 856.

As discussed, *supra*, at 817–818, our prior decisions have said that the “right” a complaining State asserts must be more than “merely some technical right” and must be “a right with *a corresponding benefit*,” *Kansas I*, 206 U. S., at 109 (emphasis added)—an effort to shape an equitable apportionment decree cannot be “a vain thing,” *Foster*, 146 U. S., at 101. See also *Idaho II*, *supra*, at 1026 (assessing whether “the formulation of a workable decree is impossible”); *Washington v. Oregon*, *supra*, at 523. But these statements apply to the general *availability* of judicial relief—not to the *details* of a final decree or to the workability of a decree that will depend on those details. Cf. *Idaho ex rel. Evans v. Oregon* 444 U. S. 380, 392 (1980) (*Idaho I*) (explaining that the question whether a State’s proposed remedy will have an “appreciable effect” is a question that “goes to the merits” of the equitable apportionment inquiry). And, of course, to insist upon the use of such a strict standard, in respect to an *eventual* decree, runs directly contrary to the statements in, and holdings of, cases to which we have referred when dis-

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cussing the need for “approximation” and “flexibility.” See *supra*, at 818–819.

## IV

We next address Florida’s exceptions to the Master’s evidentiary determinations. In doing so, we recognize that the record in this case is long. It addresses a number of highly technical matters on a range of subjects—from biology to hydrology to the workings of the Corps’ newly revised Master Manual governing the organization’s complex operations in the Basin. Insofar as the Special Master made findings of fact, those findings “deserve respect and a tacit presumption of correctness.” *Colorado II*, 467 U. S., at 317. But at the end of the day, “the ultimate responsibility for deciding what are correct findings of fact remains with us.” *Ibid.* We have therefore read those portions of the record to which the parties, *amici*, or the Master refer, along with several other portions that we have found potentially relevant. Our “independent examination of the record,” *Kansas v. Missouri*, 322 U. S. 213, 232 (1944), leads us to conclude that, at this stage, Florida has met its “initial burden” in respect to remedy. But, we also believe that a remand is necessary to conduct the equitable-balancing inquiry. Cf. *Colorado I, supra*, at 183–190.

We reserve judgment as to the ultimate disposition of this case, addressing here only the narrow “threshold” question the Master addressed below—namely, whether Florida has shown that its “injur[ies can] effectively be redressed by limiting Georgia’s consumptive use of water from the Basin without a decree binding the Corps.” Report 30–31. This dispositive threshold question leads us, in turn, to focus upon five subsidiary questions:

*First*, has Florida suffered harm as a result of decreased water flow into the Apalachicola River? (The Special Master assumed “yes.”)

*Second*, has Florida shown that Georgia, contrary to equitable principles, has taken too much water from the Flint

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River (the eastern branch of the Y-shaped river system)? (Again, the Special Master assumed “yes.”)

*Third*, if so, has Georgia’s inequitable use of Basin waters injured Florida? (The Special Master assumed “yes.”)

*Fourth*, if so, would an equity-based cap on Georgia’s use of the Flint River lead to a significant increase in streamflow from the Flint River into Florida’s Apalachicola River (the stem of the Y)? (This is the basic question before us.)

*Fifth*, if so, would the amount of extra water that reaches the Apalachicola River significantly redress the economic and ecological harm that Florida has suffered? (This question is mostly for remand.)

As our parentheticals suggest, the Special Master assumed that the answer to the first three questions was “yes.” The fourth question is the question before us now. And the fifth question is partly for us now and partly for the Master to answer on remand.

A

The Report indicates that the Special Master assumed the answer to the first question is “yes.” The Report says that the Special Master reached his conclusion on the “single, discrete issue that resolves this case” by “*assuming* that Florida has sustained injury.” *Id.*, at 30 (emphasis added); see also *id.*, at 2 (repeating Georgia’s argument that “without an order binding the Corps, Florida will not be assured any relief—*assuming it has suffered any injury at all*—by a decree entered in this proceeding because the Corps has the ability to impound water in various reservoirs that it maintains in the Basin” (emphasis added)); *id.*, at 65 (“[e]ven if there were evidence of harm from other than low-flow conditions . . .”).

At the same time, the Report states that “Florida points to real harm.” *Id.*, at 31. And the Master specified that there is “little question that Florida has suffered harm *from decreased flows* in the [Apalachicola] River.” *Ibid.* (em-



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phasis added). That harm—caused (at least in part) by increased salinity—includes “an unprecedented collapse of [Florida’s] oyster fisheries in 2012.” *Ibid.*; see *id.*, at 32 (stating that “the evidence presented tends to show that increased salinity . . . led to the collapse” of Apalachicola Bay’s oysters and “greatly harmed the oystermen of the Apalachicola Region, threatening their longterm sustainability”). Cf. *New Jersey v. New York*, 283 U. S., at 343, 345 (finding redressable harm to oysters caused by diminished water flow and increased salinity). The harms of reduced streamflow may extend to other species in the Apalachicola Region, including in the river and its flood plain, which, as the Master noted, “is home to the highest species density of amphibians and reptiles in all of North America, and supports hundreds of endangered or threatened animal and plant species,” including three “endangered” or “threatened” mussel species, the “[t]hreatened Gulf sturgeon,” and the largest stand of tupelo trees—of Tupelo Honey fame—in the world. Report 7–8; see also Joint Exh. 168, at 193, 195–196.

## B

The Master also appears to have assumed the answer to the second question is “yes.” The Report reached its key conclusion that Florida’s (assumed) injuries cannot “effectively be redressed” by “*assuming* that Florida has sustained injury as a result of *unreasonable upstream water use by Georgia*.” Report 30 (emphasis added). But, at the same time, the Master acknowledged that “Florida points to real harm and, at the very least, *likely* misuse of resources by Georgia.” *Id.*, at 31 (emphasis added). And the Report “provide[s] the Court a brief descriptive background regarding . . . the unreasonableness of Georgia’s consumptive water use.” *Ibid.*; see, e. g., *id.*, at 32 (“Georgia’s upstream agricultural water use has been—and continues to be—largely unrestrained”); *id.*, at 33 (“Despite early warnings of oncoming



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drought, Georgi[a] . . . chose not to declare a drought in 2011—apparently hoping for the best, and clearly not wishing to incur the cost of preventative action”); *id.*, at 34 (“Georgia’s position—practically, politically, and legally—can be summarized as follows: Georgia’s agricultural water use should be subject to no limitations, regardless of the long-term consequences for the Basin”).

## C

In respect to the third question, the Master again assumed the answer “yes.” In particular, the Report “assume[s]” that “Florida has sustained injury *as a result of* unreasonable upstream water use by Georgia.” *Id.*, at 30 (emphasis added). And as relevant to each of the first three questions, the Master added that “[m]uch more could be said and would need to be said about” Florida’s injuries, the reasonableness of Georgia’s water consumption, and “other issues, such as causation,” if the case proceeds. *Id.*, at 34. As we have explained, our prior equitable apportionment decisions make clear that “*all factors* which create equities in favor of one State or the other *must be weighed.*” *Kansas II*, 320 U. S., at 393–394 (emphasis added). Thus, a remand is necessary to consider each of the relevant factors, including those upon which the dissent focuses. See *infra*, at 835–836; *Nebraska v. Wyoming*, 325 U. S., at 618; cf. *Colorado II*, 467 U. S., at 323–324.

## D

We now turn to the fourth question, the basic question before us. Would an equity-based cap on Georgia’s use of the Flint River lead to a significant increase in streamflow from the Flint River into Florida’s Apalachicola River (the stem of the Y)? The answer depends upon (1) the amount of extra water that would flow into *Lake Seminole* as a result of a cap on Georgia’s Flint River water consumption; and (2) the amount of water that could actually flow through

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the Corps-controlled Woodruff Dam at Lake Seminole's southern end and into *Florida's Apalachicola River*.

## 1

The record shows that Florida's proposed cap on Georgia's water consumption could result in the release of considerable extra water into Lake Seminole. Florida's expert, Dr. David Sunding, testified that the cap would limit the average amount of water that Georgia could use annually and also reduce the amount of water that Georgia could use during drought years, which could "materially reduce [Georgia's] depletions of river flows . . . by 1,500 to over 2,000 cubic feet per second (cfs) in peak summer months of drought years." Updated Pre-Filed Direct Testimony (PFDT) of Sunding ¶8; see also *id.*, ¶¶88–90. Dr. Sunding added that it would cost Georgia roughly \$35 million annually (less than 0.2% of Georgia's annual budget) to reduce streamflow depletions by 2,000 cfs. *Id.*, ¶113, Table 4. Georgia's expert, Dr. Robert Stavins, disputed these conclusions. See Direct Testimony of Stavins ¶¶4, 90, 136; see also Brief for Georgia 18. The Master did not make specific findings of fact regarding this aspect of Florida's proposed remedy. Rather than expressly making any findings, the Master apparently "accept[ed] Florida's estimates of the increased streamflow that would result from a consumption cap." Report 67, n. 43. At this stage, we shall do the same.

And as we shall later discuss, the record suggests that an increase in streamflow of 1,500 to 2,000 cfs is reasonably likely to benefit Florida significantly. See *infra*, at 834–835 (citing record evidence of benefits); see also Updated PFDT of J. David Allan ¶¶3d, 26, 67 (Allan) (discussing ecological benefits of increasing streamflow by 300 to 500 cfs); 10 Tr. 2629:7–15 (Kondolf) (detailing benefits of increasing streamflow into the Apalachicola River from 5,000 to 7,000 cfs); 3 *id.*, at 591:6–593:4, 596:17–598:1 (Allan).

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## 2

The key question, however, is whether the 1,500 to 2,000 cfs of extra water that will flow into Lake Seminole from the Flint River as a result of a cap on Georgia’s water consumption will flow beyond Lake Seminole, through the Woodruff Dam, and into the Apalachicola River at the relevant times. That is where the Army Corps of Engineers enters the picture. And it is where Florida disagrees with the Special Master and with Georgia. The Special Master and Georgia believe that—at any relevant time—the Corps might “offset” any extra Flint River water that flows into Lake Seminole by simultaneously reducing the amount of water that flows into that lake from the Chattahoochee River. See Report 48–53. Thus, if the 1,500 to 2,000 cfs of *extra* water that would reach Lake Seminole from the Flint as a result of Florida’s proposed consumption cap, the question is whether and to what extent the Corps will “offset” that extra streamflow by releasing 1,500 to 2,000 cfs *less* water into Lake Seminole from its upstream Chattahoochee reservoirs.

Of course, the Corps might, under certain circumstances, be authorized to “offset” extra streamflow from the Flint River. As the Special Master wrote, “[t]here is no guarantee that the Corps will exercise its discretion to release or hold back water at a particular time.” *Id.*, at 69. But as the United States has explained, increased streamflow into Lake Seminole (that is, increased Basin Inflow) “would generally benefit the ACF system by delaying the onset of drought operations, by allowing the Corps to meet the 5000 cfs minimum flow longer during extended drought, and by quickening the resumption of normal operations after drought.” Brief for United States as *Amicus Curiae* 28 (Aug. 7, 2017). And our reading of the record convinces us it is highly unlikely that the Corps will always reduce the flow in this way; it leads us to believe that, acting in accordance with its own revised Master Manual, the Corps is likely to permit, and in some cases may be *required* to ensure

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that, material amounts of additional Flint water to flow through the Woodruff Dam and into the Apalachicola River. At the very least, we believe that more proceedings are necessary to reach a definitive determination.

As an initial matter, the Master Manual makes clear that the amount of water the Corps will release turns in part on the amount of water stored in the Corps' Chattahoochee reservoirs. See U. S. Army Corps of Engineers, Master Manual, Apalachicola-Chattahoochee-Flint River Basin, Florida and Georgia, App. A, pp. 7-4 to 7-5, 7-7. More specifically, the amount of water storage in those reservoirs dictates whether the Corps is conducting one of two possible types of "operations"—namely, "drought operations" or "nondrought operations." These are technical terms. See *id.*, at 7-14 to 7-16. The term "drought operations" need not correspond to dry periods, nor need the term "nondrought operations" refer to wet periods. Rather their applicability depends in part upon the amount of water that is stored behind the Corps' Chattahoochee dams. As the United States explained, "[t]he term 'drought operations' refers to more conservative operations that [the Corps conducts, which] are intended to enable the Corps to preserve water and operate its reservoir projects more effectively as drought conditions arise." Brief for United States as *Amicus Curiae* 9 (Aug. 7, 2017). We therefore must clearly distinguish what the record tells us about the amount of extra water that could flow into Florida as a result of a consumption cap during each of these two distinct types of Corps operations.

## a

*Nondrought Operations*

When the Corps is conducting "nondrought operations," the Master Manual requires the Corps to release into Florida all or some of any extra water that flows from the Flint River into Lake Seminole, where it will then flow through the Woodruff Dam. See App. to Brief for United States as

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*Amicus Curiae* 2a (Aug. 7, 2017) (detailing Corps operational protocol). As the United States has explained, when the total streamflow into Lake Seminole is between 5,000 and 10,000 cfs during “nondrought operations,” the following facts are true:

“[A]ny additional basin inflow . . . would generally be passed straight through to Florida. If, for example, the conservation measures advocated by Florida as part of a consumption cap actually resulted in an increased flow in the Flint River of 2,000 cfs, *see* Pre-Filed Direct Testimony of David Sunding, Ph. D. at 44, Table 4, then flows into Florida would also increase by roughly that amount.” United States Post-Trial Brief 12–13 (Dec. 15, 2016).

See also Brief for United States as *Amicus Curiae* 18 (Aug. 7, 2017) (reaffirming that under these circumstances “flows in the Apalachicola would increase by the amount of increased Flint River flows” including during summer months).

As far as we can tell, under the Corps’ current operational protocol, the Corps may remain in “nondrought operations” even during the driest summer months of the driest years. For example, in 2007 the Corps conducted “nondrought operations” not only during late autumn, winter, and spring months, but also during the hottest summer and early autumn months “when streamflow is at its lowest.” See Direct Testimony of Phillip Bedient ¶¶48–53 (Bedient) (stating that “[i]f 2007’s Basin Inflow were repeated today and Drought Operations were not triggered,” the Corps would have had 92 days of “nondrought operations,” including 19 days “during summer and fall months, when streamflow was at its lowest” on which 100% of extra water resulting from a consumption cap would reach Florida). We note that these 19 days fell during a period of severe drought in which no extra water (let alone 2,000 cfs of extra water) was flowing into Lake Seminole. And, unsurprisingly, the same trend ap-

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pears to be true in dry summer months of other years: All or some of the extra water that would result from a consumption cap would also pass through to Florida. See, *e. g.*, Ga. Exh. 949 (reporting streamflow data indicating several days in 2009 on which extra Flint River water would have passed through to Florida); Joint Exh. 128 (providing link to U. S. Geological Survey data indicating a similar trend based on streamflow into the Apalachicola River, including in 2016 and 2017).

## b

*Drought Operations*

The Corps' "drought operations" are different. Again, whether the Corps must initiate drought operations is not a matter of discretion; it depends, as we have said, upon the total amount of water the Corps has stored behind the dams it controls along the Chattahoochee River. The Master Manual requires that, when the total amount of water stored in pools behind the Corps' Chattahoochee dams drops below a certain level, the Corps must reduce the amount of water it releases from the Woodruff Dam to 5,000 cfs, or, in instances of extreme low water levels in the storage pools, to 4,500 cfs. Master Manual App. A, at 7–14 to 7–16. Accordingly, if additional water were to flow into Lake Seminole from the Flint River while the Corps is in *drought operations*, the Corps, pursuant to its Master Manual, must reduce the flow of its controlled upstream Chattahoochee water in order to maintain a defined water level in the pools behind its Chattahoochee dams, and no more than 4,500 cfs or 5,000 cfs can flow beyond the Woodruff Dam regardless. Brief for United States as *Amicus Curiae* 7.

But even then, as we just said, the Corps must make certain that at least 4,500 cfs and more often 5,000 cfs flows through the Woodruff Dam. And, if more water flows from the Flint into Lake Seminole, and if the Corps uses that water to keep the water level high in its Chattahoochee reservoirs, then there will be fewer days in which the Corps is conducting either "drought operations" or "extreme drought

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operations.” Instead, there will be more “nondrought operations” days where the Corps must pass most or all additional streamflow that exceeds 5,000 cfs through the Woodruff (because there will be more days, given the added Flint water, when its upstream Chattahoochee reservoirs are sufficiently high). The United States adds that “a cap on Georgia’s consumption” could, among other things, generate increased streamflow that

“would provide a cushion during low-flow periods, so that it would be possible to maintain a flow rate of *greater than* 5,000 cfs for a longer period of time without any alteration of the Corps’ operations.” United States Post-Trial Brief 18–19 (Dec. 15, 2016) (emphasis added).

See also Brief for United States as *Amicus Curiae* 18 (Aug. 7, 2017) (same).

We repeat this point with an example for purposes of clarity. Assume the following: (1) that it is August 13 and the Corps is conducting “drought operations”; (2) that as a result of a cap on Georgia’s consumption, 2,000 cfs more water flows down the Flint and into Lake Seminole; and (3) that, consistent with the Master Manual, 5,000 cfs will flow from Lake Seminole, through the Woodruff Dam, and into Florida’s Apalachicola River. On these three assumptions in all likelihood, as the dissent points out, *no extra water* will flow into Florida.

But (and this “but” is key), the extra 2,000 cfs of water that flows into Lake Seminole on August 13 as a result of a cap on Georgia’s from the Flint River water consumption will allow the Corps to store more water behind its upstream Chattahoochee dams (while still complying with the Master Manual’s minimum release requirements). And that fact means that the Corps is likely to remain in “drought operations” for fewer days because whether the Corps remains in “drought operations” depends upon the water level behind the Chattahoochee dams. And the fewer days the Corps conducts “drought operations,” the more days the Corps,



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consistent with its Master Manual, will allow all (or some) of the 2,000 cfs extra water that would result from a consumption cap to flow through the Woodruff Dam and into Florida's Apalachicola River. Again, record evidence makes clear that this is not a fanciful possibility. For example, Florida points to record evidence that suggests a consumption cap could have prevented the Corps from entering drought operations in 2011–2012 without departing from the terms of its Master Manual. See, *e. g.*, Florida Brief in Support of Exceptions 48–49, and n. 12 (citing record evidence, including Ga. Exh. 924 and Fla. Exh. 811, that the Special Master did not address suggesting that Florida's proposed consumption cap could have helped the Corps to “avoid[d] drought operations entirely” in 2011–2012 without departing from the Master Manual's requirements).

The upshot is that, even when the Corps conducts its operations in accordance with the Master Manual, Florida's proposed consumption cap would likely mean more water in the Apalachicola—as much as 2,000 cfs more water when the Corps is conducting normal or “nondrought operations,” which could take place in dry periods, including the driest days of summer, and 500 cfs more on days when the Corps is conducting “drought operations.” And a cap would likely allow the Corps to conduct “nondrought operations” (*i. e.*, reservoirs-sufficiently-full operations) more often as well.

## 3

We cannot agree with the dissent's efforts to deny these conclusions. To begin with, the dissent says that our conclusion “depends on the premise that, during droughts, the natural streamflow into Florida is between ‘5,000 and 10,000 cubic feet per second.’” *Post*, at 869. If the dissent means by “droughts” simply dry days, or summer days, then it is obviously wrong, for pursuant to the Corps' Master Manual, the Corps must allow all or some of the 2,000 cfs extra water that would flow into Lake Seminole to continue through the



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Woodruff Dam into Florida during dry summer days when the Corps is *not* conducting “drought operations.” This was true, as the dissent concedes, even during 19 summer days in 2007, which was among the driest years in the Basin’s history. Or, does the dissent mean by “droughts” days on which the Corps is conducting “drought operations”? If so, then we agree that on such days, the Corps will normally allow no more than 5,000 cfs to flow into Florida. But, for the reasons just stated in the last few paragraphs, Florida’s proposed consumption cap—which could result in as much as 2,000 extra cubic feet of water per second flowing from the Flint into Lake Seminole—will mean (consistent with the testimony of the very Georgia expert that the dissent so frequently quotes) that there will be significantly fewer such days.

Is there a mistake then in the “concrete example” the dissent offers to support its point? See *post*, at 871–872. Invoking a hypothetical posed by Georgia’s expert, the dissent says:

“[I]f the natural flows in the Apalachicola River were 2,600 cubic feet per second, then the Corps would release 2,400 cubic feet per second from its [Chattahoochee] reservoirs. . . . And if a cap on Georgia[’s Flint River consumption] increased the River’s natural flow to 4,100 cubic feet per second, the Corps would release 900 cubic feet per second. . . . In either case, the total flow on the Apalachicola River would remain the same: 5,000 cubic feet per second. Thus, so long as the natural flows remain significantly less than 5,000 cubic feet per second, a cap on Georgia would only decrease the amount of water that the Corps releases from storage; it would not increase the overall amount of water flowing into the Apalachicola River.” *Ibid.* (citing Bedient ¶¶45–47).

If, however, a consumption cap causes 1,500 cfs extra water (from the Flint) to flow into Lake Seminole (as we

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assume Florida’s proposed cap would), under the dissent’s example, the Corps will *reduce* (or “offset”) the amount of water it releases from its upstream Chattahoochee dams from 2,400 cfs to 900 cfs. That is because 2,400 cfs minus 900 cfs is 1,500 cfs. What happens to that 1,500 cfs extra water?

When the Corps is in drought operations, the answer according to the Master Manual is that the Corps must store that water in its upstream Chattahoochee reservoirs. And with that 1,500 cfs extra water each day, the water levels in those reservoirs will rise (or, at a minimum, deplete less rapidly) and allow the Corps to resume “nondrought operations” more quickly. The United States repeats precisely this point—namely, when more water flows into Lake Seminole, it benefits Florida by “quickening the [Corps’] resumption of normal [*i. e.*, ‘nondrought’] operations.” Brief for United States as *Amicus Curiae* 28 (Aug. 7, 2017). (That extra water also means that there will be more days when 5,000 cfs, rather than 4,500 cfs, flows from Lake Seminole into the Apalachicola River.) And it means, as no one denies, that on days when the Corps conducts “nondrought operations” (which, as Georgia’s own expert report shows, occur even during dry summer months), more water will reach Florida when Florida needs it.

What about the dissent’s point that Georgia’s expert, Dr. Bedient, said that the extra 2,000 cfs would mean more water for Florida “only 19 days ‘during the summer and fall months when streamflow was at its lowest’”? *Post*, at 871. Dr. Bedient’s exact words, as the dissent points out, were that in “‘dry years (*e. g.*, 2007 and 2011), . . . even significant changes in Georgia’s consumptive use would lead to virtually no change in state-line flows during the low-flow months (*e. g.*, June, July, August, September).’” Bedient ¶78.

At this point, in our view, the dissent has pointed to record evidence with which other record evidence conflicts. It seems from record evidence, from the statements of the United States, from geological data, and from laws of me-

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chanics, that 2,000 cfs extra water flowing into Lake Seminole when, in the dissent's words, "drought operations were not in effect" would have to mean more water in Florida. *Post*, at 871. And the dissent does not dispute that some of these days are in the summer. *Ibid.* Our own check of the record reinforces the point. In particular, data from the U. S. Geological Survey's website, which the parties entered into the record at Joint Exh. 128, indicates that between May 2016 and August 2016, streamflow into the Apalachicola River was above 6,000 cfs each day with the exception of two days: August 30, 2016, and August 31, 2016. Nothing in the record suggests that the Corps was in drought operations during these days, and so it appears that under these conditions, any additional streamflow resulting from a cap on Georgia's Flint River consumption would pass through into Florida. However, without explicit findings, it is neither possible nor prudent for us in the first instance to read through this voluminous record and discover who is right on this matter of how much extra water there will be, when, and how much Florida would benefit from the extra water that there might be. That is why we are sending this case back for more findings.

Finally, while the dissent suggests that "[i]t is incredibly odd to conclude that a Special Master's merits determination is 'premature' after a full trial," *post*, at 858, this Court has repeatedly concluded that remand is "appropriate" to resolve certain issues in an equitable apportionment case even where, as here, there has already been a "lengthy trial at which both States presented extensive evidence," *Colorado II*, 467 U. S., at 313. See also *Wyoming v. Colorado*, 259 U. S., at 455–456 (explaining that "the evidence was taken" over the course of two years and presented to the Court two years later and that "[t]he case has been argued at bar three times" including because of the "importance of some of the questions involved"). Moreover, we note that adequate fact-

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finding is especially important where, as here, no interstate compact guides our inquiry or sets forth a congressionally ratified water allocation formula. When such a compact exists, as it often does, our effort is relatively simple and focuses upon “declar[ing] rights under the Compact and enforc[ing] its terms.” *Kansas v. Nebraska*, 574 U. S., at 455 (citing *Texas v. New Mexico*, 462 U. S., at 567); *id.*, at 567–568 (“If there is a compact, it is a law of the United States, . . . and our first and last order of business is interpreting the compact”). Here, no compact guides our inquiry and it would appear to be important that we approach this complex controversy with the care and thoroughness that our precedent requires.

## E

Our final question is this: Would the amount of extra water that reaches the Apalachicola significantly redress the economic and ecological harm that Florida has suffered? There is evidence indicating that the answer to the question is in the affirmative. See, *e. g.*, Allan ¶¶3d, 26, 67 (“Even relatively modest increases in flows—on the order of 300 to 500 cfs during key periods of the year—could reduce harm to the [Apalachicola Region’s] ecosystem and halt the cycle that is leading to irreversible harm” while “[g]reater increases could make even more dramatic improvements”); Updated PFDT of Patricia Glibert ¶¶5, 28–32, 58–60, and Table 1, Figs. 10, 19b; *supra*, at 827 (citing record evidence of benefits); see also 10 Tr. 2629:7–15 (Kondolf) (detailing benefits of increasing streamflow from 5,000 to 7,000 cfs); 3 *id.*, at 591:6–593:4, 596:17–598:1 (Allan). But the Master’s Report does not explicitly answer this question. We consequently must remand the case to find the answer to this question (and others).

\* \* \*

In sum, in respect to the evidentiary questions at issue, the Master assumed that: (1) Florida has likely suffered harm as

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a result of decreased water flow into the Apalachicola River; (2) Florida has made some showing that Georgia, contrary to equitable principles, has taken too much water from the Flint River; and (3) Georgia's inequitable use of the water may have injured Florida, but more findings are needed. And in light of the Master's assumptions, we conclude that: (4) An equity-based cap on Georgia's use of the Flint River would likely lead to a material increase in streamflow from the Flint River into Florida's Apalachicola River; and (5) the amount of extra water that reaches the Apalachicola may significantly redress the economic and ecological harm that Florida has suffered. Further findings, however, are needed on all of these evidentiary issues on remand.

We add the following: The United States has made clear that the Corps will work to accommodate any determinations or obligations the Court sets forth if a final decree equitably apportioning the Basin's waters proves justified in this case. It states in its brief here that if a decree results "in more water flowing to Florida . . . under existing Corps protocols, then the Corps would likely not need to change its operations." Brief for United States as *Amicus Curiae* 28 (Aug. 7, 2017). It has added that, in any event, a decree "would necessarily form part of the constellation of laws to be considered by the Corps when deciding how best to operate the federal projects." *Id.*, at 32. And in issuing its revised Master Manual, the Corps stated that it would "review any final decision from the U. S. Supreme Court and consider any operational adjustments that are appropriate in light of that decision, including modifications to the then-existing [Master Manual], if applicable." Record of Decision 18. The United States has "continually asserted its preparedness to implement, in accordance with federal law, any [agreed-upon] comprehensive water allocation formula." *Id.*, at 4; see also Joint Exh. 124, at 6–35. And, of course, the Administrative Procedure Act requires the Corps to make decisions that are

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reasonable, *i. e.*, not “arbitrary, capricious, an abuse of discretion,” or “in excess of [the Corps’] statutory jurisdiction.” 5 U. S. C. § 706(2).

We recognize that the Corps must take account of a variety of circumstances and statutory obligations when it allocates water. New circumstances may require the Corps to revise its Master Manual or devote more water from the Chattahoochee River to other uses. But given the considerations we have set forth, we cannot agree with the Special Master that the Corps’ “inheren[t] discretio[n]” renders effective relief impermissibly “uncertain” or that meaningful relief is otherwise precluded. Report 56, n. 38. We cannot now say that Florida has “merely some technical right” without “a corresponding benefit,” *Kansas I*, 206 U. S., at 109, or that an effort to shape a decree will prove “a vain thing.” *Foster*, 146 U. S., at 101. Ordinarily “[u]ncertainties about the future” do not “provide a basis for declining to fashion a decree.” See *Idaho II*, 462 U. S., at 1026. And in this case, the record leads us to believe that, if necessary and with the help of the United States, the Special Master, and the parties, we should be able to fashion one.

## V

We keep in mind what our prior decisions make clear: “‘The difficulties of drafting and enforcing a decree’” do not necessarily provide a convincing “‘justification for us to refuse to perform the important function entrusted to us by the Constitution.’” *Idaho I*, 444 U. S., at 390, n. 7 (quoting *Nebraska v. Wyoming*, 325 U. S., at 616); see also *Idaho II*, *supra*, at 1027 (“Although the computation is complicated and somewhat technical, that fact does not prevent the issuance of an equitable decree”). For this reason and the others we have discussed, we agree with Florida that it has made a legally sufficient showing as to the possibility of fashioning an effective remedial decree.

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We repeat, however, that Florida will be entitled to a decree only if it is shown that “the benefits of the [apportionment] substantially outweigh the harm that might result.” *Colorado I*, 459 U. S., at 187. In assessing whether that showing has been made, the Master may find it necessary to address in the first instance many of the evidentiary and legal questions the answers to which we have here assumed or found plausible enough to allow us to resolve the threshold remedial question. In order to determine whether Florida can eventually prove its right to cap Georgia’s use of Flint River waters, it may find it necessary for the Special Master to make more specific factual findings and definitive recommendations regarding such questions as: To what extent does Georgia take too much water from the Flint River? To what extent has Florida sustained injuries as a result? To what extent would a cap on Georgia’s water consumption increase the amount of water that flows from the Flint River into Lake Seminole? To what extent (under the Corps’ revised Master Manual or under reasonable modifications that could be made to that Manual) would additional water resulting from a cap on Georgia’s water consumption result in additional streamflow in the Apalachicola River? To what extent would that additional streamflow into the Apalachicola River ameliorate Florida’s injuries? The Special Master may make other factual findings he believes necessary and hold hearings (or take additional evidence) as he believes necessary. Cf. *Colorado I*, 459 U. S., at 190, n. 14.

Consistent with the principles that guide our inquiry in this context, answers need not be “mathematically precise or based on definite present and future conditions.” *Idaho II*, 462 U. S., at 1026. Approximation and reasonable estimates may prove “necessary to protect the equitable rights of a State.” *Ibid.* And the answers may change over time. Cf. *New Jersey v. New York*, 347 U. S. 995, 996–1005 (1954); *New Jersey v. New York*, 283 U. S., at 344–346. Flexibility and approximation are often the keys to success in our ef-

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forts to resolve water disputes between sovereign States that neither Congress nor “the legislature of either State” has been able to resolve. *Virginia v. West Virginia*, 220 U. S., at 27.

We consequently do not dismiss this case. Rather, we remand the case to the Special Master for further proceedings consistent with this opinion.

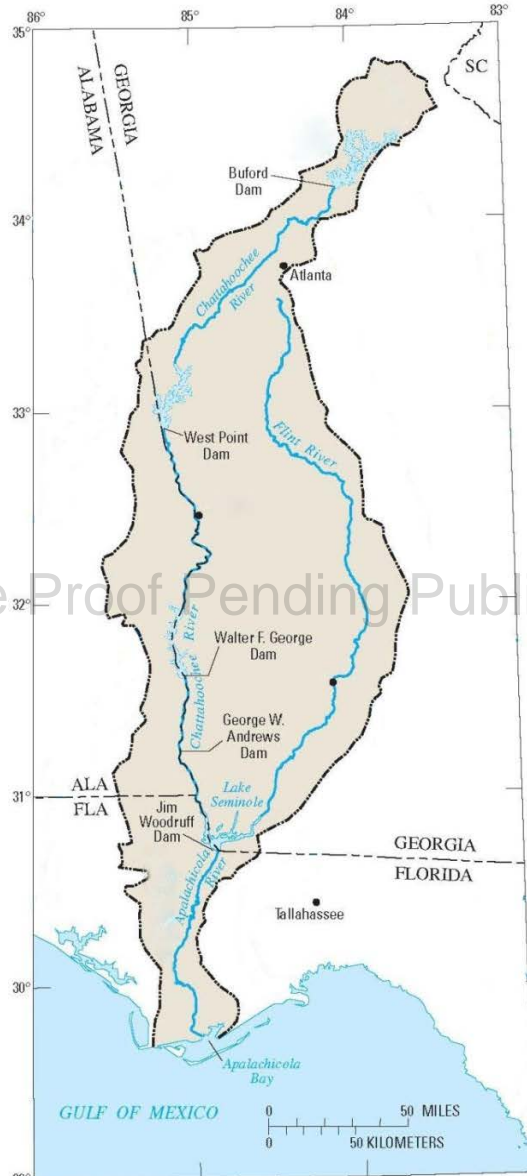
*It is so ordered.*

Page Proof Pending Publication



Appendix to opinion of the Court

APPENDIX



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Base from U.S. Geological Survey digital data, 1972  
Albers Equal-Area Conic projection  
Standard Parallels 29°30' and 45°30', central meridian -83°00'

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JUSTICE THOMAS, with whom JUSTICE ALITO, JUSTICE KAGAN, and JUSTICE GORSUCH join, dissenting.

Florida asks this Court to cap Georgia’s use of water in the Apalachicola-Chattahoochee-Flint River Basin (Basin). Florida claims that such a cap would allow additional water to flow into the Apalachicola River and Bay, which would benefit Florida by alleviating certain ecological harms. To prevail under our precedents, Florida must present clear and convincing evidence that its proposed cap will benefit Florida more than it harms Georgia. See *Colorado v. New Mexico*, 459 U. S. 176, 187 (1982) (*Colorado I*). The Special Master applied this balance-of-harms standard and, after presiding over a 1-month trial involving 40 witnesses and more than 2,000 exhibits, found that Florida had not met its burden. Because that finding is well supported by the evidence, I would have overruled Florida’s objections to the Special Master’s Report (Report) and denied Florida’s request for relief. I respectfully dissent.

## I

The Court’s recitation of the facts focuses on the geography of the relevant rivers and the failed compact negotiations between Florida and Georgia, but does not provide any details about the respective interests of Florida and Georgia or the extensive operations of the United States Army Corps of Engineers (Corps). See *ante*, at 807–810. Because these missing details are crucial to determining whether equitable relief is warranted, I will supply them.

## A

This case concerns Georgia’s use of water in the Basin. Spanning Georgia, Alabama, and Florida, the Basin consists of three rivers—the Chattahoochee, the Flint, and the Apalachicola. The Chattahoochee River starts in northern Georgia, just north of Atlanta, and flows southwest along the Alabama-Georgia border until it reaches Florida. The Flint

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River starts east of the Chattahoochee, just south of Atlanta, and flows south until it reaches Florida. The Chattahoochee and Flint Rivers meet at the border of Florida, forming Lake Seminole. From Lake Seminole, the Apalachicola River flows south through the Florida Panhandle and into the Gulf of Mexico at Apalachicola Bay.

Both Georgia and Florida depend on Basin water. The Chattahoochee River supplies most of the water for metropolitan Atlanta. And the Flint River supplies most of the water for southern Georgia's large agricultural industry. In Florida, the Apalachicola River sustains a unique ecosystem that is home to a number of species, including mussels, sturgeon, and tupelo trees. Flows from the Apalachicola River (or River) also support the Apalachicola Bay (or Bay) ecosystem—one of the most productive estuaries in the Northern Hemisphere. The Apalachicola Bay's low-salinity and high-nutrient waters make it an extraordinarily productive habitat for oysters and other sea life.

Although both Georgia and Florida depend on the Basin, the Florida portion of the Basin is significantly less populated and productive. The Georgia portion has a population of more than 5 million and accounts for around \$283 billion in gross regional product per year. Direct Testimony of Robert Stavins 2, 16 (Stavins). The Florida portion, by contrast, has a population of fewer than 100,000 people and generates around \$2 billion in gross regional product per year. *Id.*, at 17. In relative terms, Georgia accounts for 98% of the population and 99% of the economic production. *Ibid.*

## B

Florida and Georgia are not the only stakeholders in the Basin. The United States, through the Corps, operates five dams and four reservoirs on the Chattahoochee River. Only the three northernmost dams can store significant amounts of water. The two dams that are farthest south on the Chattahoochee—the George W. Andrews Dam and the Jim Wood-

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ruff Dam—cannot store an appreciable amount of water. The Corps does not operate any dams on the Flint River, which flows unimpeded until it reaches the Jim Woodruff Dam at Lake Seminole.

The Corps operates its dams as a unit. It must do so in a way that achieves its congressionally authorized purposes, such as facilitating navigation, generating hydroelectric power, protecting the national defense, promoting recreation, maintaining the commercial value of riparian lands, and protecting the water supply for the surrounding metropolitan Atlanta area. See H. R. Doc. No. 342, 76th Cong., 1st Sess., 77 (1939); River and Harbor Act of 1945, 59 Stat. 17; *In re MDL-1824 Tri-State Water Rights Litigation*, 644 F. 3d 1160, 1167 (CA11 2011). The Corps also must ensure compliance with other federal laws, including laws governing the conservation of fish and wildlife, the quality of water, and the protection of threatened and endangered species. See, e. g., Endangered Species Act of 1973, 16 U. S. C. § 1531 *et seq.*; Flood Control Act of 1944, 33 U. S. C. § 701 *et seq.*; Water Supply Act of 1958, 43 U. S. C. § 390b.

Given these numerous demands, the Corps has long relied on water-control manuals to guide its operations of the dams. The current manual dictates the minimum amount of water that the Corps must provide to the Apalachicola River under various conditions. Three variables affect that minimum amount of water: the time of year, the amount of water in the Corps' storage reservoirs, and the amount of additional water entering the Basin.

The manual is very complex, spanning 1,190 pages, but only a few provisions are relevant here. The manual provides that, as a general rule, most additional water that enters the Basin will pass through to Florida via the Apalachicola River. But, in certain circumstances, the Corps will artificially increase or decrease the amount of water that passes through to ensure that 5,000 cubic feet per second flows into the Apalachicola River. For example, if the natu-

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ral streamflow entering the Basin (Basin inflow) is less than 5,000 cubic feet per second, then the Corps will artificially augment the flow by releasing additional water from its reservoirs. Or, if the amount of water in the Corps' reservoirs falls below a certain amount, the Corps will trigger what it calls "drought operations." During drought operations, no matter how much water is entering the Basin, the Corps will generally release only 5,000 cubic feet per second into the Apalachicola River until its reservoirs are completely replenished.<sup>1</sup>

The Corps' current manual reflects many lessons that it has learned over the past decade. In March 2006, for example, the Corps created an interim operating plan, which set high flow requirements to protect endangered species in the Apalachicola River. Direct Testimony of Wei Zeng 44–45 (Zeng). But those high flow requirements prevented the Corps from saving enough water during droughts to refill its reservoirs, putting all its other projects at risk. *Id.*, at 45. So the Corps switched to more storage-friendly rules. *Id.*, at 45–46. In December 2006, the Corps modified its operating plan to require a portion of the water entering the Basin to be devoted to refilling the Corps' reservoirs. *Id.*, at 46. When this modification proved insufficient, the Corps created special rules for droughts, which saved even more water by decreasing the minimum flow into the Apalachicola River. *Id.*, at 46–47. Later, the Corps altered its operations to save still more water, by increasing the amount it could dedicate to refilling its reservoirs during nondroughts and lowering the threshold for triggering the special drought rules. *Id.*, at 47; Brief for United States as *Amicus Curiae* 11 (Brief

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<sup>1</sup>If the amount of water in the Corps' reservoirs falls to critically low levels, then the Corps will release only 4,500 cubic feet per second into the Apalachicola River. These extreme drought operations have not been triggered in recent droughts. See Direct Testimony of Phillip Bedient 14 (Bedient) (showing that flows remained around 5,000 cubic feet per second during the 2011 and 2012 droughts).

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for United States). The Corps' current manual is a product of this decade of trial and error.

The current manual also reflects decades of litigation. The Corps' first manual went into effect in 1958, and the Corps did not propose a new one until 1989. As soon as it did, Alabama sued. Florida, Georgia, and other stakeholders eventually sued as well. For its part, Florida alleged that the Corps' operations under the proposed manual and subsequent interim operating plans violated the Endangered Species Act by injuring mussels and sturgeon, as well as non-covered species like oysters and tupelo trees.<sup>2</sup> The various lawsuits were eventually consolidated in the Middle District of Florida. Twenty years after Alabama first sued, the District Court ruled for Alabama but against Florida. The United States Court of Appeals for the Eleventh Circuit reversed with respect to Alabama. *In re MDL-1824 Tri-State Water Rights Litigation, supra*, at 1192, 1205. And Florida's case became moot in 2012, once the Corps issued the immediate predecessor to its current manual.

## II

### A

Soon after the litigation against the Corps ended, Florida sought leave to file this lawsuit against Georgia, requesting an equitable apportionment of Basin water. This Court granted Florida leave to file its complaint in 2014. Florida's complaint alleged that Georgia was consuming more than its fair share of water in the Basin, causing economic and ecological harms to Florida. Florida sought relief only against Georgia and disclaimed seeking any "affirmative relief against the United States . . . with respect to the Corps'

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<sup>2</sup>The U. S. Fish and Wildlife Service did not agree. It concluded that the minimum flows in the proposed manual and interim operating plans were sufficient to protect endangered species in the Apalachicola River. Zeng 46–47.

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operation of the federally authorized dam and reservoir system.” Complaint ¶15. The United States could not be joined as a party because it declined to waive its sovereign immunity.

Georgia moved to dismiss Florida’s complaint for failure to join the United States as a necessary party. Florida opposed the motion, arguing that the United States was not necessary because Florida “‘ha[d] no quarrel’ with the Corps’ operation of dams, and [its] lawsuit is not seeking to impose a ‘minimum flow’ regime on the Corps.” Florida Brief in Opposition to Motion To Dismiss 26. Florida reiterated that it “is not seeking any relief whatsoever with respect to the operations of the dams” and is “not seeking any relief asking the Corps to control the dams or pull the levers in any specific way.” Tr. of Oral Arg. on Motion To Dismiss 27. Florida conceded that “if [the Special Master] conclude[s] after a trial that caps on [Georgia’s] consumption will not redress Florida’s harm, then Florida will not have proved its case.” *Id.*, at 29.

Based on Florida’s concessions, the Special Master denied Georgia’s motion to dismiss. The Special Master recognized that Florida had “disclaimed any intention to seek a decree” binding the Corps in order to “sideste[p] the need to join the United States as a party.” Order on Motion To Dismiss, p. 12. The Special Master warned Florida that this strategy was a “‘two edged sword.’” *Id.*, at 13. “Having voluntarily narrowed its requested relief and shouldered the burden of proving that the requested relief is appropriate,” the Special Master explained, “Florida’s claim will live or die based on whether Florida can show that a consumption cap [on Georgia alone] is justified and will afford adequate relief.” *Ibid.*

## B

The parties proceeded to trial. Florida sought to cap Georgia’s use of Basin water at its current levels through at least 2050. See Florida Pre-trial Brief 5; Updated Pre-Filed Direct Testimony (PFDT) of Dr. George M. Hornberger 58



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(Hornberger). And, during drought years, Florida sought to reduce Georgia's use of Basin water by between 1,500 and 2,000 cubic feet per second. See Florida Pre-trial Brief 5; Hornberger 58; Updated PFDT of David Sunding 42 (Sunding); Florida Post-Trial Brief 18.

To support its proposed caps, Florida first presented testimony about how much additional water it would receive during droughts. According to Florida's evidence, Georgia is currently using enough water during droughts to decrease streamflow on the Apalachicola River by around 4,000 cubic feet per second. See Hornberger 2. Florida proposed cutting that amount by half. One of its experts opined that, by implementing several conservation measures, Georgia could increase flows in the Apalachicola River during droughts by 1,500 to 2,000 cubic feet per second. See Sunding 3; Hornberger 4. Florida estimated that these measures would cost Georgia an additional \$35.2 million per year. Sunding 44.

Florida next presented evidence about how this additional water would benefit various species in the Apalachicola River. It argued that additional flows could benefit mussels, which need consistent flows of at least 6,000 cubic feet per second in the summer; sturgeon, which need consistent flows of at least 7,000 cubic feet per second in the summer; and tupelo trees, which need consistent flows of at least 14,100 cubic feet per second in the summer. See Updated PFDT of J. David Allan 23–24, 26, 32–33, 41, 44–45 (Allan). Additional flows could also benefit the oysters in the Apalachicola Bay by lowering its salinity. See Updated PFDT of J. Wilson White 48 (White); PFDT of Marcia Greenblatt 15. All of Florida's evidence about these species, however, addressed the benefits of additional water during droughts. See Report 63. Florida presented no evidence of any benefits during nondroughts.

Finally, Florida attempted to prove that the additional water would actually reach Florida when it needs the water—*i. e.*, during droughts. To do this, Florida needed to show that the Corps would deviate from its normal operating

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protocols, which specify that the Corps will generally release only 5,000 cubic feet per second during droughts. Florida relied on Dr. Peter Shanahan to make this showing. Dr. Shanahan testified that “the Corps would not . . . hold back water and thwart the additional flow benefits [that] Florida would receive from Georgia[’s] conservation efforts.” Updated PFDT of Dr. Peter Shanahan 1 (Nov. 15, 2016). He reasoned that the Corps would either choose to release the additional water in its discretion or be compelled to release the additional water because its upstream dams have limited storage capacity and it does not operate any dams on the Flint River. *Id.*, at 17–27.

In its defense, Georgia presented evidence that its current use has only a negligible impact on the amount of water that Florida receives through the Apalachicola River. Georgia’s experts showed that the State’s water use amounted to just 4% of Basin flows in an average year and 8% of Basin flows in a dry year, leaving anywhere from 92% to 96% of Basin water for Florida. See Stavins 16–18; Bedient 44–45. According to Georgia’s experts, the primary factor that dictates flows in the Apalachicola River is precipitation, not consumption. See Direct Testimony of Charles A. Menzie 15.

Georgia’s experts also testified that Georgia’s water use was entirely reasonable. Metropolitan Atlanta had taken substantial steps to conserve water, reducing its consumption to levels that even Florida’s expert admitted demonstrated effective water conservation. Direct Testimony of Peter Mayer 2; see also *id.*, at 18 (showing that Florida’s Basin residents used more water per capita than residents in metropolitan Atlanta). And, instead of Florida’s estimate of 4,000 cubic feet per second, Georgia estimated that its water use had never decreased streamflow by more than 2,000 cubic feet per second, and only rarely by more than 1,400 cubic feet per second. See Zeng 2, 7.

Georgia also presented evidence that Florida’s proposed caps would cost Georgia significantly more than they would

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benefit Florida. Georgia's economic expert estimated that Florida's proposed caps would impose costs of more than "\$2.1 billion for municipal and industrial water users and \$335 million for Georgia farmers . . . every single year." Stavins 2. Georgia's expert also testified that Florida's expert had dramatically lowered his initial evaluation of the costs to Georgia, which was initially \$191 million. *Id.*, at 31; see also 11 Trial Tr. 2787. That change apparently occurred because Florida's expert narrowed his definition of "cost" to exclude anything but additional, direct governmental expenditures. See *id.*, at 2791. But regardless of the precise cost, Georgia's expert testified that it would be inequitable to impose it on Georgia. "Georgia has 5 times the land area, 56 times the population, 80 times the number of employees, and 129 times the [gross regional product] of . . . Florida. [Yet it] consumes only 4 percent of the total waters available in the . . . Basin in an average year, and only 8 percent of the total waters available in the . . . Basin in a dry year, leaving the rest for Florida's use." Stavins 2. Further, Florida's own expert estimated that a cap on Georgia would produce only minimal benefits for Florida: Cutting Georgia's water use in half would increase the oyster biomass in Apalachicola Bay by less than 0.6% in most instances, and only 1.2% during the worst droughts. White 50–51. These additional oysters would be worth only a few hundred thousand dollars. Stavins 51–52.

Finally, Georgia rebutted Florida's assertion that, despite the Corps' operations, Florida would actually receive the additional water that a cap on Georgia would create during droughts. Using models that accounted for the Corps' prior operations, Georgia's expert on the Corps, Dr. Philip Bedient, testified that Florida would receive only 5,000 cubic feet per second during droughts, no matter how much additional water was created by a cap on Georgia and regardless of whether that water flowed into the Flint or the Chattahoochee River. See Bedient 23–26, 28–30. The United States

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filed an *amicus* brief to the same effect. It confirmed that, during droughts, “[t]he Corps expects . . . that Apalachicola River flows would be very similar with or without a consumption cap [on Georgia].” Post-Trial Brief 17–18 (United States Post-Trial Brief).<sup>3</sup>

## C

All told, the trial lasted one month. After hearing the witnesses and reviewing the evidence, the Special Master recommended ruling against Florida. Report 70. The Special Master found that Florida likely had proved harm to its oysters,<sup>4</sup> and assumed that Georgia was using too much water for agricultural purposes.<sup>5</sup> *Id.*, at 31–34. But the Special Master did not decide whether Georgia’s agricultural water use caused the harm to Florida’s oysters. *Id.*, at 34. Instead, he concluded that Florida had failed to prove that a cap on Georgia would appreciably benefit it given the Corps’ operations in the Basin. *Id.*, at 3, 31–34.

Citing this Court’s precedents requiring States to prove an appreciable benefit before they can obtain an equitable apportionment that interferes with established uses, the Special Master concluded that Florida could not prove that its injury was “redressable by the Court.” See *id.*, at 24 (citing, *inter alia*, *Idaho ex rel. Evans v. Oregon*, 444 U. S. 380, 392 (1980) (*Idaho I*); *Washington v. Oregon*, 297 U. S. 517, 523 (1936)); Report 30 (same); see also *id.*, at 27 (citing *New Jersey v. New York*, 283 U. S. 336, 342–345 (1931); *Colo-*

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<sup>3</sup>The United States has made similar representations to this Court. See, *e. g.*, Brief for United States 26–29 (explaining that the Corps “would not generally expect” flows into Florida to increase during droughts, even if Florida convinced this Court to cap Georgia’s water use).

<sup>4</sup>The Special Master noted that Florida’s alleged injuries to mussels, sturgeon, and tupelo trees were “less compelling.” Report 64, n. 42.

<sup>5</sup>As for Georgia’s municipal and industrial water use, the Special Master concluded that it was “less clear” that these uses were “unreasonable,” given that Georgia had “taken significant steps to conserve water in the Atlanta metropolitan region.” *Id.*, at 34, n. 28.

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*rado I*, 459 U. S., at 187). According to the Special Master, Florida “ha[d] not proven by clear and convincing evidence that any additional streamflow in the Flint River or in the Chattahoochee River would be released from Jim Woodruff Dam into the Apalachicola River at a time that would provide a material benefit to Florida (*i. e.*, during dry periods).” Report 47. The Special Master also found that “Florida ha[d] not met its requirement to show by clear and convincing evidence that its injury can be redressed by increased flows during non-drought conditions” because its “trial presentation did not address the benefits of increased flows during ‘normal’ periods” and Georgia’s evidence showed “an absence of any significant benefit to Florida.” *Id.*, at 63–65.

### III

Before delving into the parties’ arguments, it is helpful to have a basic understanding of the rules that govern this Court’s equitable-apportionment jurisprudence—or at least what used to be the rules before the Court’s opinion muddled them beyond recognition.

First, in equitable-apportionment cases, as in all cases, this Court requires the complaining party to prove standing. *Maryland v. Louisiana*, 451 U. S. 725, 735–736 (1981); *Wyoming v. Oklahoma*, 502 U. S. 437, 447, 452 (1992); see also 3 A. Kelley, *Water and Water Rights* § 45.02(b), p. 45–12 (3d ed. 2018) (Kelley) (noting that standing is a justiciability requirement for equitable-apportionment cases). To prove standing, a complaining State must demonstrate that it has “‘suffered a wrong through the action of the other State . . . which is susceptible of judicial enforcement according to the acceptable principles of the common law or equity systems of jurisprudence.’” *Maryland, supra*, at 735–736; *Wyoming, supra*, at 452.

Second, this Court requires the State seeking an apportionment to show by clear and convincing evidence a “threatened invasion of rights . . . of serious magnitude.” *New*

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*York v. New Jersey*, 256 U. S. 296, 309 (1921); accord, *Colorado I, supra*, at 187, n. 13; Kelley §45.04. Our precedents do not clarify whether this requirement goes to the case’s justiciability, the merits of the complaining State’s claim, or the propriety of affording injunctive relief. See Kelley §45.04. But they are clear that such a showing must be made to obtain relief. See *Connecticut v. Massachusetts*, 282 U. S. 660, 669 (1931).

Third, the State seeking an apportionment must “demonstrat[e] by clear and convincing evidence that the benefits of the [apportionment] substantially outweigh the harm that might result.” *Colorado I, supra*, at 187; accord, *Colorado v. New Mexico*, 467 U. S. 310, 316–317 (1984) (*Colorado II*); Kelley §45.06, at 45–34 to 45–35. Since this Court’s first equitable-apportionment case, this balance-of-harms test has been the basic merits inquiry that decides whether a State is entitled to an apportionment. See *id.*, §45.06(c)(1), at 45–39 to 45–40 (“Harm-benefit comparison goes back to the Court’s first equitable apportionment case, *Kansas v. Colorado*[, 206 U. S. 46, 113–114 (1907) (*Kansas I*)]”). As part of the balance-of-harms test, this Court has required the State seeking an apportionment to prove that it would appreciably benefit from the apportionment—otherwise, the State could not possibly prevail in the balance-of-harms analysis. *Idaho I, supra*, at 392; *Washington, supra*, at 523; see also Kelley §45.06(c)(1), at 45–39 (explaining that this appreciable-benefit requirement is part of the “harm-benefit” balance).

Fourth, if the State seeking an apportionment makes all these showings, this Court must craft an equitable-apportionment decree. Our precedents hold that a State should not be denied a remedy merely because calculating the appropriate apportionment is difficult. See *Idaho ex rel. Evans v. Oregon*, 462 U. S. 1017, 1026 (1983) (*Idaho II*). Reasonable predictions about future conditions are sufficient. *Ibid.*

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This case is about the third rule: the balance-of-harms analysis and, specifically, its appreciable-benefit requirement. The Special Master found that Florida had not proved that its requested cap on Georgia's water use would appreciably benefit it, since Florida could not prove that it would receive more water when it needed it. That this case is about the third rule is important. Throughout its opinion, the Court mashes the requirements from our precedents together, merging cases and principles from one area with cases and principles from another—sometimes in the same sentence. But our precedents are not so convoluted. They articulate clear rules, and the Special Master correctly applied one of them when making his recommendation in this case. He did not err by failing to apply the unrecognizable mishmash of principles set out in the Court's opinion.

#### IV

Florida raises three objections to the Special Master's Report. First, it argues that the Special Master required it to satisfy a legal standard that was too demanding. Second, Florida argues that it should prevail under the correct standard because, if this Court enters an equitable-apportionment decree, the Corps will likely allow more water to flow into Florida during droughts. And third, even if the Corps does not release more water into Florida during droughts, Florida argues that a cap on Georgia would still benefit it during nondroughts. None of these arguments has merit.

#### A

Florida's first objection fails because the Special Master applied the correct legal standard. A careful reading of his Report demonstrates that he applied the ordinary balance-of-harms test dictated by this Court's precedents. He did not, as the Court implies, deny Florida relief because calculating an appropriate apportionment was too difficult or be-



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cause Florida failed to satisfy the “threshold” redressability requirement for Article III standing. And even if the Special Master did apply the wrong standard, his misstep would not justify a remand because his findings are plainly correct and establish that Georgia should prevail under the balance-of-harms test.

1

The Special Master applied the balance-of-harms test from this Court’s precedents. A State seeking an equitable apportionment that interferes with established uses must “demonstrat[e] by clear and convincing evidence that the benefits of the [apportionment] substantially outweigh the harm that might result.” *Colorado I*, 459 U. S., at 187; accord, *Colorado II*, *supra*, at 316–317. This heavy burden reflects the need for “judicial caution” before granting equitable apportionments, which “involve the interests of quasi-sovereigns, present complicated and delicate questions, and . . . necessitate expert administration.” *Colorado v. Kansas*, 320 U. S. 383, 392 (1943) (*Kansas II*); accord, *Colorado II*, 467 U. S., at 316 (explaining that the clear-and-convincing-evidence burden “appropriately balance[s] the unique interests involved in water rights disputes between sovereigns”). It also reflects “this Court’s long-held view that the proposed diverter should bear most, if not all, of the risks of erroneous decision” because the benefits he claims for proposed future uses are usually “speculative and remote” while the costs of disrupting established uses are “typically certain and immediate.” *Ibid.* (quoting *Colorado I*, *supra*, at 187).

As part of the balance-of-harms analysis, this Court has repeatedly held that the State seeking to divert water from existing uses must show that it will obtain some appreciable benefit from an equitable apportionment. See, *e. g.*, *Idaho I*, 444 U. S., at 392; *New Jersey*, 283 U. S., at 345. This appreciable-benefit requirement reflects the fact that a minimal benefit cannot outweigh the heavy costs that inevitably accompany equitable-apportionment decrees. See *Colorado I*, *supra*, at 187 (“[T]he equities supporting the [status quo]

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will usually be compelling”); *Kansas II*, *supra*, at 393 (expressing “great and serious caution” over granting equitable apportionments because they “interfer[e] with the action of a State”). Put another way, the Court will not “bring distress and even ruin to a long-established [water use] for no other or better purpose than to vindicate a barren right.” *Washington*, 297 U. S., at 523; see also *Kansas I*, 206 U. S., at 109 (“[B]efore, at the instance of a sister state, [a State’s water use] is destroyed or materially interfered with, it should be clear that such sister state has not merely some technical right, but also a right with a corresponding benefit”). Such an action would run contrary to “the high equity that moves the conscience of the court in giving judgment between states.” *Washington*, 297 U. S., at 523.

For example, in *Washington v. Oregon*—a case with facts strikingly similar to this one—the Court refused to cap Oregon’s water use because it “‘would materially injure Oregon users without a compensating benefit to Washington users.’” *Ibid.* In that case, Washington complained about “temporary dams” that Oregon residents had erected to irrigate their crops during “seasons of [water] shortage.” *Id.*, at 522. Removing the dams, however, would mean that, “[d]uring the period of water shortage, only a small quantity of water would go by” and “would be quickly absorbed and lost in the deep gravel beneath the channel.” *Id.*, at 522–523. Because a cap on Oregon would not benefit Washington by supplying water when it most needed it, the Court declined to grant Washington’s requested relief. *Id.*, at 520–523.

The Special Master applied this appreciable-benefit requirement. As he explained, Florida “ha[d] not proven by clear and convincing evidence” that the Corps would release any additional water “at a time that would provide a material benefit to Florida (*i. e.*, during dry periods).” Report 47; see also *id.*, at 47–48 (“[T]he Corps’ operation[s] . . . rende[r] any potential benefit to Florida from increased streamflow in the Flint River uncertain and speculative”). The Special Master likewise found “an absence of any significant

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benefit to Florida” during nondrought conditions. *Id.*, at 65; see also *id.*, at 69 (“Florida has not shown that it would benefit from increased pass-through operations under normal conditions”); *id.*, at 62–63 (“[T]he potential benefits to Florida of increased flows . . . when the Corps is not in drought operations are uncertain, rendering the efficacy of any relief speculative”). Tellingly, the Special Master relied exclusively on this Court’s precedents applying the appreciable-benefit requirement. See *id.*, at 24 (citing, *inter alia*, *Idaho I*, *supra*, at 392; *Washington*, *supra*, at 523); Report 30 (same); *id.*, at 27 (citing *New Jersey*, *supra*, at 345; *Colorado I*, *supra*, at 187). And Florida agreed that it had to present proof of some benefit. See, *e. g.*, Florida’s Post-Trial Response Brief 63 (conceding that it had to “prove that additional flows from a . . . reduction in Georgia’s consumption will result in meaningful benefits to the Bay and River”). In short, the Special Master correctly applied our precedents and required Florida to show that it would obtain some appreciable benefit from an equitable-apportionment decree.

## 2

The Court does not disagree that Florida failed to prove an appreciable benefit. Instead, it simply asserts that a decision on that question is “premature.” *Ante*, at 813. It is incredibly odd to conclude that a Special Master’s merits determination is “premature” after a *full trial*. The Court can draw that strange conclusion only by conflating the rules that govern our equitable-apportionment jurisprudence and then faulting the Special Master for misapplying two rules that he never applied.

The Court criticizes the Special Master for applying “too strict a standard” when deciding the “‘threshold’” question whether the Court would be “able to fashion an appropriate equitable decree.” *Ante*, at 820. Although the Court’s reasoning is far from clear, it appears to mean one of two things. The Court either means that the Special Master erred by denying relief on the ground that it was too difficult to calcu-

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late the appropriate apportionment—the fourth rule mentioned above. Or the Court means that the Special Master erred by denying relief on the ground that Florida could not prove Article III standing—the first rule mentioned above. But the Special Master did not deny relief for either of these two reasons.

a

Both the Court and Florida suggest that the Special Master contravened this Court’s statement in *Idaho II* that “[u]ncertainties about the future . . . do not provide a basis for declining to fashion a decree.” *Ante*, at 816, 839 (quoting *Idaho II*, 462 U. S., at 1026); see also *ante*, at 818, 822 (suggesting that the Special Master violated *Idaho II* by concluding that “‘the formulation of a workable decree is impossible’”); Brief for Plaintiff 30–31. But the Special Master nowhere contradicted this rule.

The rule from *Idaho II* is a rule about fashioning an appropriate remedy when the complaining State has prevailed on the merits. In *Idaho II*, the Special Master concluded that he could not determine Idaho’s entitlement to fish “for any past or future year” because “several unknown variables” made it too difficult to decide how many fish would be available to harvest at any given time. Special Master’s Report, O. T. 1982, No. 67, Orig., p. 30. The Special Master rejected Idaho’s proposed formula for calculating its entitlement because he could not understand the predictive models or mathematics involved in applying it. *Id.*, at 40–42. Before this Court, Idaho objected to the Special Master’s conclusion, arguing that its proposed formula relied on procedures “that are either being currently employed by defendants or which involve simple mathematical computations.” Brief for Plaintiffs in O. T. 1982, No. 67, Orig., p. 82. The Court accepted Idaho’s argument, noting that a decree need not “always be mathematically precise or based on definite present and future conditions” and that “Idaho’s proposed formula for apportioning the fish is one possible basis for a decree.” *Idaho II*, 462 U. S., at 1026. “Uncertainties about the fu-

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ture,” the Court explained, “do not provide a basis for declining to fashion a decree.” *Ibid.*

Unlike the Special Master in *Idaho II*, the Special Master in this case did not conclude that it was too difficult to calculate the amount of water that Florida should receive. As the Court acknowledges, *ante*, at 827, the Special Master assumed it was feasible to impose Florida’s requested cap on Georgia’s water use and “accept[ed] Florida’s estimates of the increased streamflow that would result from a consumption cap.” Report 67, n. 43; see *id.*, at 34–35. But even if a cap on Georgia generated the additional water that Florida claimed it would (1,500 to 2,000 cubic feet per second), the Special Master concluded that it would not appreciably benefit Florida because it would not be passed through when Florida needed it. See *id.*, at 47–48, 62–65, 69. That is why the Special Master cited the appreciable-benefit rule from *Idaho I*, 444 U. S., at 392, and *Washington*, 297 U. S., at 523. He did not fail to make reasonable predictions in shaping a remedy or otherwise contravene the rule from *Idaho II*.

b

Florida alternatively contends that the Special Master applied the “redressability” requirement of Article III standing. See Brief for Plaintiff 29–32. At some points, the Court appears to agree with this characterization, as it describes the appreciable-benefit rule as an Article III standing requirement. See *ante*, at 817–818 (quoting the Article III standing rule from *Wyoming v. Oklahoma*, 502 U. S., at 447, 452, *Maryland v. Louisiana*, 451 U. S., at 735–736, and *Massachusetts v. Missouri*, 308 U. S. 1, 15 (1939), and describing the appreciable-benefit rule from *Kansas I* and *Washington* as a “[m]ore specifi[c]” articulation of that rule). This argument is incorrect.

As explained, the Special Master applied the ordinary balance-of-harms analysis and found that Florida had not

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demonstrated an appreciable benefit from a cap on Georgia’s use. Tellingly, the Special Master relied exclusively on cases conducting the balance-of-harms analysis. His Report does not cite any standing cases, or even mention “standing” or “Article III.” Neither do any of the pre-trial or post-trial briefs that the parties filed. True, the Special Master’s Report sometimes describes the appreciable-benefit requirement as a question of “redressability”—a word that is also associated with Article III standing. But the Special Master was merely following the parties’ lead, as they phrased the appreciable-benefit requirement in terms of “redress” throughout the litigation. See Tr. of Oral Arg. on Motion To Dismiss 29 (Florida admitting that it must show “that caps on consumption will . . . redress [its] harms” to “prov[e] its case”); Florida Pre-Trial Brief 37–39 (describing how a consumption cap “can redress Florida’s worsening injuries” and “significantly benefit Florida’s ecology”); Georgia Post-Trial Brief 80–88 (describing the appreciable-benefit aspect of the balance-of-harms test as a “redress” requirement); Georgia’s Post-Trial Response Brief 3, 7 (same); see also United States Post-Trial Brief 19 (taking no position “on whether Florida has proved that a consumption cap would produce enough additional [B]asin inflow at the right times to *redress* Florida’s alleged harm and justify the cost of imposing a consumption cap” (emphasis added)). That the parties and the Special Master adopted this shorthand does not change the Special Master’s analysis, which focused squarely on the appreciable-benefit requirement.<sup>6</sup>

<sup>6</sup>The Court places great weight on the fact that the Special Master referred to redressability as a “threshold” requirement. See *ante*, at 813–814, 820, 823. But showing an appreciable benefit *is* a “threshold” requirement for prevailing under the balance-of-harms test, as a State that cannot show an appreciable benefit obviously cannot show that the balance of harms tilts in its favor. In other words, the Court need not engage in a full-scale balancing of benefits and harms if the party that bears the burden of proof has nothing to place on its side of the scale; it

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c

Because the Court wrongly assumes that the Special Master denied relief on the basis rejected in *Idaho II* or for lack of Article III standing, it faults the Special Master for imposing the higher burden of proof that governs the merits—*i. e.*, “clear and convincing evidence.” See *ante*, at 820–823.<sup>7</sup> Of course, the far simpler explanation for why the Special Master applied the merits standard is that he was, in fact, making a decision about the merits, not about remedies or standing.

The Court also appears to fault the Special Master for addressing the appreciable-benefit requirement without first making several preliminary findings. The Court asserts that Special Masters must make specific factual determinations in every case about the harm that the complaining State suffered, the exact amount of water needed to remedy that harm, and a host of other factors. See *ante*, at 817–821.

The Court’s suggested order of operations, which it appears to invent out of thin air, would fundamentally transform our equitable-apportionment jurisprudence. It will require States to litigate (and this Court to resolve) a host of complex factual questions, even where the State seeking the apportionment is obviously not entitled to relief because it cannot show an appreciable benefit—a requirement that Florida agrees is necessary for it to prevail, see Florida Post-Trial Response Brief 63 (agreeing it must “prove that addi-

can reject that type of case at the “threshold.” That the Special Master used the word “threshold” does not suggest that he was doing anything other than applying the ordinary balance-of-harms test.

<sup>7</sup>In faulting the Special Master for requiring clear and convincing evidence, the Court combines the rule from *Idaho II* with the balance-of-harms test from *Kansas I*, *Washington*, and *Idaho I*. See *ante*, at 822–823. The Court reconciles these precedents as follows: “[T]hese [cases] apply to the general *availability* of judicial relief—not to the *details* of a final decree or to the workability of a decree that will depend on those details.” *Ibid.* I do not understand this sentence, and I pity the litigants and Special Masters who will be forced to decipher it.



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tional flows from a . . . reduction in Georgia’s consumption will result in meaningful benefits to the Bay and River”); Tr. of Oral Arg. on Motion To Dismiss 29 (admitting it must show “that caps on consumption will . . . redress [its] harms” to “prov[e] its case”). In no other area of the law do we require unnecessary findings and conclusions when a key element of the plaintiff’s case is missing. And we have not applied this rule in equitable-apportionment cases either. See, e. g., *Idaho II*, 462 U. S., at 1027–1029 (denying relief, despite the Special Master’s erroneous ruling on the requested remedy, because his findings also supported the conclusion that Idaho could not show injury and thus was not entitled to relief on the merits). The inefficiencies that this would create, and the costs it would impose on States, are obvious. Yet the Court faults the Special Master for resolving the dispositive question in this case first, without jumping through a series of unnecessary hoops. This is precisely the opposite of what Special Masters should be doing and what this Court should be encouraging.

3

Even if the Court is correct that the Special Master denied Florida relief for some reason other than the merits, there is no reason to send this case back for a do-over. As the Court acknowledges, “the ultimate responsibility for deciding what are correct findings of fact remains with us.” *Ante*, at 823 (quoting *Colorado II*, 467 U. S., at 317). We must bring our independent judgment to bear based upon “our own independent examination of the record.” *Kansas v. Missouri*, 322 U. S. 213, 232 (1944). An independent examination of the record confirms that the Special Master was correct to find that the Corps would not change its operations during droughts if this Court capped Georgia’s water use and thus Florida would not benefit from a cap during droughts. See Part IV–B–1, *infra*. The Special Master also was correct to find that Florida presented no evidence of a benefit during nondroughts. See Part IV–B–2, *infra*. Those findings

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support a judgment in Georgia’s favor under the traditional balance-of-harms analysis.

It makes little sense to send this case back to the Special Master so that he can amend his Report to say “appreciable benefit” instead of “redress” and then send this case right back to this Court.<sup>8</sup> That pointless exercise will only needlessly prolong this litigation. The Court’s subtle suggestion that Florida could present “additional evidence” on remand, *ante*, at 840, is not a satisfactory response. During their 18 months of discovery, the parties produced 7.2 million pages of documents, served 130 third-party subpoenas, issued more than 30 expert reports, and conducted nearly 100 depositions, including 29 expert depositions. Florida thus had a more-than-ample opportunity to gather its evidence and then present it at a 1-month trial. Giving Florida another bite at the apple will likely yield no additional evidence, but it will be unfair to Georgia, which has already spent the time and resources to defeat the case that Florida chose to present. In short, we have all the evidence we need to decide this case now. We should have done so.

## B

Florida’s second and third objections—which challenge the Special Master’s finding that Florida had not met its burden under the balance-of-harms test—also fail. As explained, a State seeking to interfere with established uses must prove its case by clear and convincing evidence—a “much greater” burden than the one normally imposed in civil cases. *Connecticut*, 282 U. S., at 669. To meet this burden, Florida

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<sup>8</sup>The Court concedes that Florida cannot prevail in this case unless it proves, by clear and convincing evidence, that it would obtain an appreciable benefit from an equitable apportionment. See *ante*, at 822 (noting that the appreciable-benefit test “‘goes to the merits’ of the equitable apportionment inquiry”); *ante*, at 823 (noting “a remand is necessary to conduct the equitable-balancing inquiry”); *ante*, at 840 (noting that Florida must ultimately prevail in the balance-of-harms test).

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must present enough evidence to leave this Court with an “abiding conviction that the truth of its factual contentions are ‘highly probable’” and to “instantly til[t] the evidentiary scales in the affirmative when weighed against the evidence . . . offered in opposition.” *Colorado II, supra*, at 316. As the Special Master found, Florida has not met this burden. The evidence demonstrates that, if this Court imposed Florida’s proposed cap on Georgia, Florida would not receive an appreciable amount of additional water during droughts. And Florida would not benefit from the additional water that it received during nondroughts.

1

Florida did not demonstrate that, if this Court caps Georgia’s water use, Florida would receive a meaningful amount of additional water during droughts. For Florida to receive more water, the Corps must change its current operating procedures. But the Corps is not a party, and it would not be bound by any decree issued by this Court. Because Florida cannot ask this Court to require the Corps to change its existing operations, it must prove by clear and convincing evidence that the Corps will voluntarily make the necessary changes. Florida cannot do so. The United States’ representations in this litigation and the Corps’ history and practice in the Basin all reveal that the Corps will not change its existing practices, even if this Court caps Georgia’s water use.

Throughout this litigation, the United States has consistently maintained that the Corps “would not generally expect” to release more water into Florida during droughts, even if Florida convinced this Court to cap Georgia’s use. Brief for United States 28; see also United States Post-Trial Brief 17–18 (“The Corps expects [during drought operations] that Apalachicola River flows would be very similar with or without a consumption cap until enough water is stored to return the system to normal operations”). This is because

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“[B]asin inflow . . . has historically not been the primary factor in the Corps’ decisionmaking process for making additional releases above 5,000 [cubic feet per second] during drought operations.” Brief for United States 28. The Corps’ “overriding” priorities during droughts are preserving enough water “to comply with the [Endangered Species Act] while avoiding catastrophic depletion of storage and refilling [its] reservoirs as rapidly as possible.” *Id.*, at 27. Deviations are made only “as needed to serve congressionally authorized project purposes” or “in emergency circumstances.” *Ibid.* Since a general need to provide more water to Florida does not fall within either exception, the additional water that would flow into the Basin would not translate into additional flows for Florida. See *id.*, at 29.

The United States’ representations are consistent with the Corps’ historical practice. During droughts, the amount of water entering the Basin is almost always insufficient to meet the Corps’ minimum-flow requirement of 5,000 cubic feet per second. See Bedient 24–27. Thus, a cap on Georgia would simply decrease the amount of water that the Corps must release from storage; it would not increase the amount of water flowing into the Apalachicola River. *Id.*, at 21, 25–26. And once drought operations are triggered, the Corps limits its releases to around 5,000 cubic feet per second regardless of the amount of water entering the Basin. See United States Post-Trial Brief 9; Brief for United States 24–28. Indeed, during past drought operations, even when Basin inflow varied by tens of thousands of cubic feet per second, the measured flow from Jim Woodruff Dam into the Apalachicola River has consistently remained around 5,000 cubic feet per second. See Bedient 23, 62–63.<sup>9</sup> Further,

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<sup>9</sup>It makes no difference whether the additional water generated by a cap on Georgia would enter the Flint River. Contra, Brief for Plaintiff 26, 38–39. If additional water entered the Flint River during droughts, the Corps would release less water from its upstream reservoirs on the Chattahoochee River to maintain a consistent flow of around 5,000 cubic

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the models presented by Georgia’s expert showed that, if Florida’s proposed caps had been in place during the drought years of 2007 and 2012, Florida would not have received appreciable additional flows when the water was most needed. Cutting Georgia’s use in half would have produced additional flows for only 14 to 19 days in the summer and fall of 2007, and would not have produced any additional flows during the summer or fall of 2012. *Id.*, at 27–30; see also *id.*, at 38 (showing the same for 2011).

Florida argues that the Corps might exercise its discretion to ensure that additional water reaches Florida during droughts. Brief for Plaintiff 40–44. But Florida supports this claim with nothing more than speculation. See *Colorado II*, 467 U. S., at 320 (explaining that a State cannot carry its burden in an equitable-apportionment action except “with specific evidence” and that “[m]ere assertions . . . will not do”). All available evidence suggests that the Corps would not exercise its discretion to release more water into the Apalachicola River during droughts.

Before this Court, the United States expressly rejected Florida’s contention that “the Corps is likely to exercise its authority within existing operational protocols to provide Florida with additional flows produced by a cap on Georgia’s consumption.” Brief for United States 23. Basin inflows, it explained, simply do not dictate how much water the Corps releases into the Apalachicola River. *Ibid.* And the Corps could not make discretionary releases “that [are] not specifically provided for in the [water-control manual], not specifically authorized by Congress or mandated by general statute, [and not] required by a court order directed to the Corps,” without raising “significant and difficult question[s]” about whether it had exceeded its authority. *Id.*, at 29.

Florida also suggests that the Corps might amend its water-control manual in response to an equitable decree from

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feet per second from the Jim Woodruff Dam at Lake Seminole. See *Bedient* 24–26; Brief for United States 24–25.

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this Court. Florida's only support for this argument is a statement from the Corps that it will "take . . . into account" this Court's decision. Brief for Plaintiff 44 (quoting Record of Decision Adopting Proposed Action Alternative for Implementation of Updated Apalachicola-Chattahoochee-Flint River Basin Master Manual 18 (Mar. 30, 2017)). But this vague statement was not a promise that the Corps will change its procedures, and there are a host of reasons to doubt that the Corps would voluntarily change its procedures just because this Court capped Georgia's use.

For one, the Corps has already tried procedures that passed more water to Florida during droughts. The results were dreadful: Reservoir storage plummeted to dangerously low levels, putting all of the Corps' authorized project purposes at risk. Zeng 45–46. Since that time, the Corps' operating protocols have become increasingly protective of reservoir storage, particularly during droughts. As the Corps explained, it intends to pursue "a more proactive approach to conserve reservoir storage as drier conditions develop in the [B]asin" because the "[s]torage of water during drought operations is critically important to retain sufficient water in the system." Brief for United States 11.

For another, the last time the Corps attempted to change its water-control manual, it required more than two decades of litigation and administrative review to finalize those changes. Indeed, the main reason that the United States chose not to participate in this case is because it wanted "to avoid being bound by a decree that could directly affect the Corps operations before the Corps had a chance to finally complete its process of updating the [water-control manual]." *Id.*, at 32. Given this, there is no reason to think that the Corps will volunteer to undertake the process of updating its manual again—especially so soon after it completed this arduous task.

Florida's speculation is even more suspect in view of the changes that the Corps would have to make to benefit Florida during droughts. To even propose a new water-control

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manual, the Corps must “examin[e] . . . the congressionally authorized purposes,” “determin[e] . . . how providing additional flows will impact those purposes [and] other laws,” and “supplemen[t] documentation of environmental impacts as required by [the National Environmental Policy Act].” *Id.*, at 31. Providing more water to Florida does not help the Corps satisfy any of these legal requirements. It is not one of the congressionally authorized purposes, see *id.*, at 29, 31–32, and, by dropping its lawsuit against the Corps, Florida now accepts that a minimum flow of 5,000 cubic feet per second is sufficient to comply with the Endangered Species Act. Florida cannot claim that the law requires the Corps to provide it with more water. And the idea that the Corps will change its operating protocols to serve an unauthorized purpose when doing so could jeopardize its authorized purposes is simply not plausible.

Taking a different tack, the Court suggests that additional water will pass through to Florida even if the Corps does not change its manual. Specifically, the Court concludes that the additional water will pass through to Florida during droughts so long as the Corps does not enter drought operations. See *ante*, at 829–831. According to the Court, the Corps will allow additional water to pass through to Florida whenever the natural flow of the Apalachicola River is between 5,000 and 10,000 cubic feet per second during normal or “nondrought” operations. See *ante*, at 829–830.

The Court’s conclusion depends on the premise that, during droughts, the natural streamflow into Florida is “between 5,000 and 10,000” cubic feet per second. *Ibid.* That premise is false.<sup>10</sup> During droughts, the natural streamflow

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<sup>10</sup>The Court contends that I have confused “droughts” and “drought operations.” See *ante*, at 833–834. I have not, but the Court has. During droughts—periods in which there is a “lack of rain,” 4 Oxford English Dictionary 1076 (2d ed. 1989)—the amount of water that naturally flows into the Basin rivers usually falls below 5,000 cubic feet per second, particularly in the summer and fall months. See *infra*, at 871–873. Since the Corps must ensure that the Apalachicola River always receives at least



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in the Apalachicola River is usually less than 5,000 cubic feet per second. *Supra*, at 866; see also Bedient 23 (showing that Basin inflow in 2012 was generally below 5,000 cubic feet per second between June and December); *id.*, at 27 (same for 2007). To maintain a minimum flow of 5,000 cubic feet per second during droughts, the Corps must artificially augment the River's natural flow—even when the Corps is in non-drought operations. *Id.*, at 21.<sup>11</sup> For instance, during the 2011 drought (when the Corps was in nondrought operations), “Basin Inflow was below 5,000 [cubic feet per second] for most of th[e] period [between June and December], and the Corps was ‘augmenting’ streamflow by releasing water

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5,000 cubic feet per second, the Corps augments the natural streamflow during droughts—even when the Corps is not in drought operations. Bedient 21. Thus, any additional water that a cap on Georgia generates during droughts would only increase streamflow into the Apalachicola River if it caused the natural streamflow to exceed 5,000 cubic feet per second. If the additional water increased streamflow to some amount less than that, then it would not increase flows in the Apalachicola River; it would simply decrease the amount of water that the Corps must release from its reservoirs. See *ibid.* Thus, as Georgia's expert explained, “reducing Georgia's consumptive use would only lead to additional . . . flow into Florida under specific and limited circumstances. First, the Corps cannot be in Drought Operations or [Extreme Drought Operations]. Second, *Basin Inflow cannot be below 5,000 [cubic feet per second], even if the Corps is in normal operations.*” *Id.*, at 26 (emphasis added).

<sup>11</sup>The Court contends that additional water from a cap on Georgia likely would have passed through to Florida in the summer of 2009. See *ante*, at 830–831. But this evidence is irrelevant. As Florida's own expert testified, “[t]he year 2009 was a relatively wet year.” Hornberger 49; accord, Bedient 45. And Florida has only asked this Court to reduce Georgia's consumption by 1,500 to 2,000 cubic feet per second during “severe drought years,” which 2009 was not. Hornberger 58.

The Court also contends that additional water from a cap on Georgia likely would have passed through to Florida in the summers of 2016 and 2017. See *ante*, at 830–831, 836. The Court's data was generated simultaneously with or after most of the testimony in this case, so the experts do not speak to it. But even considering the data that the Court has found, I suspect that 2016 and 2017 are not “severe drought years” either and, thus, are irrelevant.

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from the reservoirs to satisfy the 5,000 [cubic feet per second] minimum.” *Id.*, at 15; see also *id.*, at 27 (same for 2007). Once the Corps adds enough water to reach 5,000 cubic feet per second, however, it generally adds no more than that. *Id.*, at 21. To give a concrete example, if the natural flows in the Apalachicola River were 2,600 cubic feet per second, then the Corps would release 2,400 cubic feet per second from its reservoirs. See *id.*, at 25–26. And if a cap on Georgia increased the River’s natural flow to 4,100 cubic feet per second, the Corps would release 900 cubic feet per second. See *ibid.* In either case, the total flow on the Apalachicola River would remain the same: 5,000 cubic feet per second. Thus, so long as the natural flows remain significantly less than 5,000 cubic feet per second, a cap on Georgia would only decrease the amount of water that the Corps releases from storage; it would not increase the overall amount of water flowing into the Apalachicola River.

For this reason, even when the Corps is in nondrought operations, a cap on Georgia would generally not increase flows to Florida. Georgia’s expert proved that fact with evidence about past droughts where drought operations were not in effect. Using data from the 2007 drought, Georgia’s expert concluded that the additional water from a cap on Georgia would be passed through to Florida almost entirely during the winter and spring months “when water in the [Basin] would be relatively plentiful.” *Id.*, at 28. Florida would receive the additional water from a cap on Georgia only 19 days “during the summer and fall months, when streamflow was at its lowest.” *Ibid.*; accord, *id.*, at 40. Data from the 2011 drought showed similar results. See *id.*, at 37 (“[During] dry years (*e.g.*, 2007 and 2011), . . . even significant changes in Georgia’s consumptive use would lead to virtually no change in state-line flows during the low-flow months (*e.g.*, June, July, August, September)”).<sup>12</sup> Florida

<sup>12</sup>The Court claims that “Florida’s proposed consumption cap . . . will mean (consistent with the testimony of the very Georgia expert that the dissent so frequently quotes) that there will be significantly fewer such

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has not shown that these infrequent and sporadic additional flows during droughts would appreciably benefit it.<sup>13</sup>

The Court hypothesizes that a cap on Georgia could benefit Florida by decreasing the length of drought operations and by increasing the number of days that the Corps can meet its minimum-flow requirements of 5,000 cubic feet per second (during normal drought operations) and 4,500 cubic feet per second (during extreme drought operations). *Ante*, at 828, 831–833. The Court cites the United States’ assertion in its brief that increased Basin inflows “‘would generally benefit the [Basin] system by delaying the onset of drought operations, by allowing the Corps to meet the 5000 [cubic feet per second] minimum flow longer during extended drought, and by quickening the resumption of normal operations.’” *Ante*, at 828 (quoting Brief for United States 28); see also *ante*, at 832 (quoting a similar statement in the United States Post-Trial Brief 18–19). Of course, statements in briefs are not evidence. And, as the United States recognizes in the very next sentence, Florida would have to show that these “benefits are of sufficient quantity to justify relief in this case.” Brief for United States as *Amicus Curiae* 28 (Aug. 7, 2017); see also United States Post-Trial Brief 19 (Dec. 15, 2016) (taking “no position on whether Florida has proven that a consumption cap would produce enough additional [B]asin inflow at the right times to redress Florida’s alleged harm and justify the cost of imposing a consumption cap”).

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days [of drought operations].” *Ante*, at 834. I assume that the “Georgia expert” in this sentence is Dr. Philip Bedient. But I am aware of no testimony from Dr. Bedient that supports the Court’s assertion, and the Court cites none.

<sup>13</sup>If the Corps had been in drought operations, the results would not have differed much, demonstrating that whether the Corps is in drought or nondrought operations is not dispositive. Had the Corps been in drought operations during 2007, for instance, Florida would have received the additional water from a cap on Georgia during 14 days in the summer and fall—a difference of only five days as compared to nondrought operations. Bedient 28.

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Florida offered no proof that a cap on Georgia would produce any appreciable benefit of this kind. And the evidence presented at trial suggests that these proposed benefits are wholly speculative. As explained above, the benefits to Florida from a cap on Georgia do not meaningfully change, regardless of whether the Corps enters drought operations. And there is no evidence that the Corps has had trouble meeting its minimum-flow requirements during recent droughts, when Georgia's use remained uncapped. Even during the severe droughts of 2011 and 2012, the Corps consistently maintained flows of 5,000 cubic feet per second, never entered extreme drought operations, and never reduced flows on the Apalachicola River to 4,500 cubic feet per second. See *Bedient* 14. And the Corps is even more unlikely to run out of water during future droughts, given that its current manual is more proactive in conserving water during droughts. See Brief for United States 11–12.

In sum, Florida has not shown that it is “‘highly probable’” that a cap on Georgia will result in meaningful additional flows in the Apalachicola River during droughts. *Colorado II*, 467 U. S., at 316. It is thus not entitled to an equitable apportionment on this basis.

2

Because Florida will not receive additional water during droughts, it argues that it will benefit from additional water during nondroughts. As the Special Master correctly found, however, Florida presented no evidence to support such an assertion. That is because no such evidence exists. Florida would not benefit from additional water during nondroughts, because flows on the Apalachicola River during nondroughts are already plentiful.

The Court does not contend that Florida would benefit from additional water during nondroughts, and Florida all but conceded the point below. When framing its case before the Special Master, Florida requested only that the Court

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order Georgia to reduce its water use during droughts; Florida did not ask the Court to reduce Georgia's current water use during nondroughts. See Florida Pre-trial Brief 5; Hornberger 58. Consistent with this request, Florida's evidence focused exclusively on the harms that it suffered during droughts. Florida's hydrology expert testified extensively about droughts. See *id.*, at 2–3, 15–26, 41–46, 49–50. He testified that the Basin usually receives “a rather good amount of rainfall,” so “major problems arise” only during “the low rainfall years.” *Id.*, at 13. That is why he limited his testimony to the “impacts of [Georgia's] consumption during drought.” *Id.*, at 15; see also *id.*, at 20–22.

Florida's other experts followed this drought-centric approach. For instance, one of Florida's experts on the harm to Florida's oysters connected that harm to “severe drought,” which “reduced the discharge of fresh water from the Apalachicola River.” Updated PFDT of David Kimbro 14. Florida's expert on the harm to sturgeon, mussels, and tupelo trees in the Apalachicola River similarly emphasized “dry periods of episodically dry years.” Allan 17; see also *id.*, at 25–27 (emphasizing the effects of sustained flows below 6,000 cubic feet per second). As one Florida expert put it, “[t]he discussions that [he] had, especially with the biologists and the hydrologists, were largely almost exclusively focused on dry years” and he “[c]ouldn't think of any” “issues [that] other experts raised about average or wet-year problems.” 11 Trial Tr. 2811.

The other evidence presented at trial leaves little doubt that Florida would not benefit from additional water during nondroughts. For starters, when the Basin is not experiencing a drought, water is plentiful. Florida's expert testified that “[a]verage rainfall in the portion of the . . . Basin above [Lake Seminole] is 51.5 inches per year, a rather good amount of rainfall.” Hornberger 13. As a result, average monthly flows in the Apalachicola River are nearly 20,000 cubic feet per second. Direct Testimony of Sorab Panday 30 (Panday). More than 95% of the time, Apalachicola River

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flows exceed 6,000 cubic feet per second. Brief for United States 12. And it is not unusual for flows in the Apalachicola River to exceed 50,000 cubic feet per second in the wetter months. See Panday 30. Even during drought years, flows in nonsummer months are relatively high. For instance, in the severe drought year of 2012, flow in the late winter and early spring regularly exceeded 10,000 cubic feet per second. See Bedient 29.

Almost all of the additional water generated by a cap on Georgia would reach Florida during these high flow periods, when it would provide no benefit to Florida. See *id.*, at 27–30. Take, for instance, the oysters in Apalachicola Bay—the only harm to Florida that the Special Master found in this case. See Report 31–32. Florida’s own experts testified that, even if Georgia cut its agricultural water use in half during droughts, the resulting increase in Apalachicola River flows would have a negligible effect during nondroughts. During years of normal rainfall and the wetter months of drought years, the effect of additional flows on the Bay’s salinity is less than one part per thousand. See 7 Trial Tr. 1768–1775. This immeasurable effect on the Bay’s salinity would have no appreciable impact on oyster biomass. See White 50–51 (showing a less than 0.6% impact on oyster biomass, except in drier months and drought years).

Assuming Florida’s claims of harm to mussels, sturgeon, and tupelo trees have merit—something the Special Master never found—the harm to those species also would not be remedied by increased flows during nondroughts. Florida’s expert on these species opined that significant harm to mussels occurs when flows drop below a threshold of 6,000 cubic feet per second for more than seven consecutive days between June 1 and September 30, Allan 33; that significant harm to sturgeons occurs when flows drop below a threshold of 7,000 cubic feet per second for more than 60 total days between May 1 and September 30, *id.*, at 41; and that significant harm to tupelo trees occurs when flows drop below a threshold of 14,100 cubic feet per second for more than 90

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consecutive days between March 20 and September 22, *id.*, at 33, 41, 44–45. Accepting these statements as true, passing more water through to Florida during nondroughts would not do these species any good. All would still suffer the same harms during the summers of drought years when flows remain fixed at 5,000 cubic feet per second because of the Corps' operations.

If we contrast the *de minimis* benefits that Florida might receive from small amounts of additional water during nondroughts with the massive harms that Georgia would suffer if this Court cut its water use in half during droughts, it is clear who should prevail in this case. Florida's expert estimated that a cap on Georgia would have an "[i]ncremental [f]iscal [c]ost" of \$35.2 million per year. Sunding 44. This figure included only additional costs that would require "the [Georgia] legislature . . . to appropriate money." 11 Trial Tr. 2791. The real cost of such a cap, which includes nongovernmental costs like welfare losses, would range anywhere from \$191 million, *id.*, at 2787; Stavins 31, to more than \$2 billion per year, *id.*, at 2. And the cap would trigger resulting losses in Georgia's gross regional product and employment, totaling around \$322 million and 4,173 jobs annually. *Id.*, at 40. Regardless of the measure used, this harm dwarfs the value of Florida's entire fishing industry in Apalachicola Bay, which produces annual revenues of \$11.7 million. *Id.*, at 16. And it greatly outweighs the value of the additional oysters that a cap on Georgia's use might produce—*i. e.*, no more than a few hundred thousand dollars. *Id.*, at 52. Imposing an enormously high cost on one State so that another State can achieve a hollow victory is "not the high equity that moves the conscience of the court in giving judgment between states." *Washington*, 297 U. S., at 523.

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In the final analysis, Florida has not shown that it will appreciably benefit from a cap on Georgia's water use. Ab-



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sent such a showing, the balance of harms cannot tip in Florida's favor. Accordingly, I would have overruled Florida's objections to the Special Master's Report and denied Florida's request for relief. I respectfully dissent.

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