1	NO. 142, ORIGINAL
2	IN THE SUPREME COURT OF THE UNITED STATES
3	
4	STATE OF FLORIDA,
5	
6	Plaintiff,
7	vs. No. 142, Original
8	STATE OF GEORGIA,
9	Defendant.
10	
11	TRANSCRIPT OF PROCEEDINGS ORAL ARGUMENT
12	BEFORE THE HONORABLE PAUL J. KELLY, JR. SPECIAL MASTER
13	THURSDAY, NOVEMBER 11, 2019, 10:00 A.M. ALBUQUERQUE, NEW MEXICO
14	
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1	ORAL ARGUMENT
2	(Court in session at 10:00 a.m.)
3	LAW CLERK ROBERT TEPPER: All rise.
4	THE COURT: Good morning. You may be seated.
5	Could we have appearances for the record, please.
6	MR. PERRY: Good morning, Your Honor. Phil
7	Perry for Florida.
8	THE COURT: Mr. Perry.
9	MR. GARRE: Good morning, Your Honor. Gregory
10	Garre on behalf of Florida.
11	THE COURT: All right.
12	MR. PRIMIS: Should I approach?
13	THE COURT: You may.
14	MR. PRIMIS: Good morning, Your Honor. Craig
15	Primis from Kirkland & Ellis for the State of Georgia.
16	And I did want to let the Court know that we have some
17	officials from Georgia here today, our Attorney General,
18	Chris Carr; our Solicitor General, Andrew Pinson; and
19	Executive Counsel to the Governor, David Dove.
20	THE COURT: Very good. And welcome.
21	All right. We're here for arguments, and we
22	have given each side 45 minutes. And if you wish to
23	reserve time for rebuttal, please let us know, and we
24	will try to keep the clock for you.

And with that, I think we can begin.

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MR. GARRE: Thank you, Judge Kelly. May it please the Court.

THE COURT: Counsel.

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MR. GARRE: I would like to begin this morning by very briefly discussing some of the key legal principles governing this remand. And then my colleague, Mr. Perry, will spend the bulk of our time discussing why we think the evidence establishes why Florida is entitled to relief under these principles.

THE COURT: Okay.

MR. GARRE: With Your Honor's permission, we would like to reserve ten minutes of time for rebuttal.

THE COURT: Ten minutes. Very good.

MR. GARRE: Thank you, Your Honor.

The Supreme Court's equitable apportionment decisions, including its June 2018 decision in this case, established several important guide posts for this proceedings. To begin with, the Court has already determined that both Florida and Georgia have an equal right to the reasonable use of the waters at issue; and that Georgia, like all states, has an obligation to take reasonable steps to preserve that resource for the benefit of other states, including Florida. Ultimately, this case is about Georgia's failure to heed that obligation.

Second, the Supreme Court has already concluded, based on its own independent examination of the record, that Florida has met its initial burden in establishing that it has suffered a substantial injury and invasion of rights due to Georgia's upstream consumption, and this case has therefore shifted to --

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THE COURT: Right, that they assumed that, just as the Special Master did, and focused on the Special Master's lack of ability to give relief.

MR. GARRE: Right. Well, Your Honor, I think on Page -- and I'm pointing to Page 2518 -- the Court did say that Florida had met its initial burden in this framework, based on its own independent examination. I think you are quite right that the Court called on Your Honor to make further findings as necessary.

THE COURT: The Court also said that the Master assumed Florida has suffered harm; the Master further assumed that Florida has shown that Georgia, contrary to equitable principles, has taken too much water; and third, the Master assumed that Georgia's inequitable use of the water injured Florida.

MR. GARRE: Yes. You are absolutely right,
Your Honor. My point is only that the case has moved to
the equitable balancing stage, and I think even the
dissent on the Supreme Court --

THE COURT: Well, I think that the case has not moved past the stage of my having to determine the findings and conclusions based on the evidence as to each of the elements.

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MR. GARRE: I agree, Your Honor. And I think in conducting the balancing, Your Honor would make findings as to each of the inquiries the Court had pointed to that Your Honor would find relevant to that determination. I think ultimately, the question for this Court is whether or not Florida has shown that the benefits of a decree substantially outweigh the cost of a decree, while making any attendant findings that Your Honor deems appropriate.

Third, in conducting the equitable-balancing inquiry, the Supreme Court has stressed several considerations, and I would like to highlight just three of those here today.

Number one. Flexibility and approximation are key to this inquiry, including when it comes to making judgments about future conditions. This was one of the central themes of the Court's decision in this case.

And in making this point about the flexibility, the Court specifically pointed to its prior decision 85 years ago in the New Jersey v. New York case, which has direct parallels to this case in terms of the nature of

the harm, to oysters in particular, and the ultimate outcome of the balancing.

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Number two. The Supreme Court's decision makes clear that in conducting this equitable-balancing inquiry, the Court must assume, and do so based on the premise that the Army Corps of Engineers will work to accommodate any decree that this Court enters in the case. This was one of the central points of contention between the parties, as well as the majority and dissenting opinion on the Court. And while Georgia has continued to insist that the Court would not facilitate a decree, the opinion for the Court, as well as the statements of the Army Corps of Engineers in its record of decision, directly refutes that contention.

Number three. The Supreme Court has stressed, in determining whether the benefits of a decree outweigh the harms of a decree, one of the important considerations — and here, I'm quoting from Colorado v. New Mexico, 459 U.S. 188 — is whether the existing users could offset the demands of the decree by reasonable conservation measures to prevent waste. This principle is especially important here, because as Special Master Lancaster explained in his report, a major reason Florida finds itself in this predicament is Georgia's unrestrained and mismanaged agricultural uses

along the Flint River.

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The last point I would make in my introductory remarks here today, Your Honor, is that we submit, respectfully, that applying these principles should lead this Court to the conclusion that the benefits of an equitable apportionment, which include saving one of the nation's iconic oyster industries and fisheries and the communities that have depended on those fisheries for way of life for centuries, substantially outweighs the cost of a decree which boiled down to preventing waste and mismanagement in agricultural practices by Georgia by adopting the same sort of reasonable conservation measures that Georgia's own officials, in their more candid moments, have proposed.

With that, I would like to turn it over to Mr. Perry to dive into the evidence more deeply.

THE COURT: Very good. Thank you.

MR. GARRE: Thank you, Your Honor.

MR. PERRY: Your Honor, if I might, I would like to start with our slide set, and in particular Slide Number 14, which is a satellite photo of Apalachicola Bay. And you can see there that it's also a photo of part of Apalachicola River. And so if I could invite your attention, Your Honor, on that slide, to the area just adjacent to where the river empties

into the bay.

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And if I might step to the map, Your Honor, I can certainly show you.

THE COURT: You may, but keep your voice up. Okay?

MR. PERRY: Thank you, Your Honor.

So here on the map, this is Apalachicola Bay. The river extends up northward. This area here under the bridge is called East Bay. This is a particularly sensitive area, an area where you have juvenile species of oysters and fish and blue crab and shrimp. It's particularly important for generating the fisheries out here in the Gulf. It's particularly important because it's a refuge for oysters, meaning that if you have predators, drills, conchs, sometimes stone crabs, that would normally be at the periphery of the bay, if after a period of very low fresh water flows those particular predators get into East Bay where that population of oysters would take refuge normally, then you have a real problem.

For all of recorded history, Florida has never seen that happen. For millennia, we think, it has never happened until 2012.

And what we can see, Your Honor, if I might step further and get the flow chart, is the cost for

this.

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THE COURT: Well, what number is that? My eyes aren't good enough to see that far away.

MR. PERRY: Your Honor, that's at the very back of the slide set at Slide 48.

THE COURT: Okay.

MR. PERRY: And it's a little hard to see on the slide set, which is why I was going to try to narrate from the actual big graph.

THE COURT: It's very hard to see.

MR. PERRY: Yes. That's the problem. It's a lot of data, difficult to get on one slide.

So if I might, Your Honor, these are the flows at a U.S. Geological Survey gage at the state line. So where Lake Seminole, which is part of Georgia, empties into the Apalachicola River, which is part of Florida, that is the flow that proceeds along the Apalachicola River and reaches this bay.

These yellow marks here, this is all of recorded history since 1928. These yellow marks here are extreme low flows, the way we have defined them throughout trial, which means lower than 6,000 cubic feet per second. So the Rio Grande is at about 800 cubic feet per second right now.

This river is a huge river. But the flows, as

you can see from the yellow boxes, have rarely been below 6,000 cfs, cubic feet per second, until we hit -- I'm going to hold this up so you can see.

THE COURT: Until what?

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MR. PERRY: Until we end up in a modern period. And you can see there are a range of yellow boxes down here, all representing the same low flows as above.

The worst drought in history in this area was right here. Another very bad drought here. These droughts down in this area, in 2000 through 2012, not as bad. In this year, where oyster fishery crashed, which was 2012, 2011 and 2012. At the end of 2012 is when it became apparent it had crashed. There was 18 percent more rain during that period than here but, as you can see from the yellow marks, substantially worse flows.

So it's not a rainfall problem, Your Honor.

It's a problem with something else happening up north.

And that, Your Honor, we proved at trial was Georgia's consumption, principally for irrigation.

Now, if I might return to the slide set and go to Slide 15, again behind Tab 2, this, as you can see, is the map I was just describing. There's a couple important elements, if I might, Your Honor, here. A good portion of our proof in this case dealt with those

extreme low flows that I just described. That's not the only problem. The problem is that flows have been lower across the board every year during drought and non-drought periods. So I don't think this is reasonably disputed, Your Honor, that the flows have been lower.

I would suggest that there's two things that the Court can look at to make sure that is quite evident. One, I'm going to cite now to one of Georgia's experts. His name is Panday. In his pre-filed direct testimony at Page 30, he attached a table.

THE COURT: Page 30 or Paragraph 30?

MR. PERRY: Good question. Page 30.

THE COURT: Okay.

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MR. PERRY: And the table there shows that average flows have reduced — this is on the Apalachicola River — since 1992 by about 3,000 cfs; median flows a little bit more than that. And our experts, of course, have testified when you compare periods before 1970 to periods after irrigation began in earnest, what you have in that context is about 3,000 to 4,000 or even 5,000 cfs impact from upstream consumption. So that fundamentally changes this system.

What it means is that you have less water coming down the 106-mile river. And the 106-mile river

has floodplains on either side. The floodplains are very important for multiple reasons. Fish breed there, amphibians, all sorts of stuff. But they also carry nutrients to the bay.

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And if I might step here again? Those nutrients, for what makes this a productive estuary, is sufficient flow to create brackish water that's a refuge, plus the nutrients coming down the river. When you have substantially less flow in all years and even worse low flows, you have a problem.

And what happened here, as you can tell from Slide 16, Your Honor, is that predators invaded the bay. Here are some pictures. We had our expert out in the bay beginning in 2013 to try and diagnose what had happened, and we discovered these predators were everywhere, drills, conchs, snails, stone crabs.

The next slide, Your Honor, is 17. And on that slide, you can see graphically what the problem is. You've got predators, because of the extreme low flows over a very long period of time, essentially living their entire life cycle in the bay, getting into the refuge area and extinguishing our oysters.

We had a range of witnesses. You can see some of them pictured here, with the citations from where you can find them. But it was just night and day between

the history of this bay and what you're seeing here. Essentially, the bay was becoming part of the Gulf, no longer a unique estuary where you have a mix of flows that produce these unique places where juvenile fish and oyster can breed.

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And, of course, when our oysters crash, when they can no longer re-populate, when they can't re-seed because the refuge has been compromised, then we have a real problem. And they are, in essence, a canary in a coal mine for the other types of species that rely on that unique area.

So, Your Honor, on Slide 18 we have the citations to record evidence explaining what I've just described in some great detail.

And then at Slide 19, if I might, I would like to answer the question I think your order posed in part, and that is, "How much water is needed to fix this problem?"

And so if I might step over to the chart again, Your Honor? I'm going to focus right now at the bottom of the chart, and I will step back to the monitor to show you what I mean.

THE COURT: This is on Page 19? Slide 19?

MR. PERRY: It's on Page 19, Your Honor. All right. So you have here excerpts --

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THE COURT: That chart does not look like my chart at 19.

MR. PERRY: Let me explain, Your Honor, because these are excerpts from the bottom part of this chart.

THE COURT: Okay.

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MR. PERRY: So what we have here, Your Honor, from 2010 to 2012 is the period of time -- that's the bottom part of this chart -- in which we had our crash; in other words, where the oyster population essentially died.

There is a potential we can now recover. It could happen. But we cannot have these flows again. If these flows happen again, predators will get back in the bay, and we'll have a repeat of this ahistorical circumstance where the bay was essentially crushed and where the oysters all died.

So when you think about the question, "What types of flows do you need to prevent this from happening again, so we don't cross the tipping point?"

-- the answer is, "Let's see what low flows we were able to survive in the past, what types of drought situations, compounded by upstream consumption of water, did not produce a crash."

And the answer, Your Honor, lies in the two

sections just above the bottom. So you can see from 1999 to 2002, that was a remarkable drought period, too. And, in fact, 1999 through 2001 had the same amount of rainfall upriver as 2010 to 2012.

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One of the differences during 1999 to 2002 is that Georgia did something very helpful. This is the bright spot in this story. Georgia exercised what it called the Flint River Drought Protection Act, and it bought back irrigation rights for part of that drought period. We did not have a crash during that period. The flows are different during that period than you can see between 2010 and 2012. In that latter period when we had a crash, they did not exercise their authority.

Special Master Lancaster described this series of events on Pages 33 through 34 of his report.

We also didn't have a crash in 2009 after another round of very low flows. In fact, the oyster population was severely stressed during that period by predators, but not enough to crash.

So what we can glean from this and other periods on the map is that there is a tipping point you can't cross. If you cross that tipping point, our population dies. That's what happened in 2012.

But you can see that, if you look at our

proposed remedies in this case, we propose three types of drought year remedies. One, 1,000 additional cubic feet per second. These are all addressed in Dr. Sunding's pre-filed direct and in his testimony on redirect. At 1,000, we get into a situation where you do not have -- you have not crossed the tipping point. You can compare these flow graph sections here and discern that. At 1500 cfs, we not only avoid the tipping point, but we start returning our bay to the way it used to be before this period of extreme upstream consumption of water, principally from irrigation. And at 2,000 cfs, we are not only helping the bay, but we are also helping the river and its floodplains, which are essential for life in the bay.

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And, Your Honor, if I might just at this point add a few things? I said our case is not just about low flow years; it's also about drought years. And there has been some confusion about this, so with your indulgence, Your Honor, I would like to identify some very specific records cites showing what we put on as evidence about non-drought years and how we're harmed.

THE COURT: Well, let me ask you one question. Have you abandoned the argument from trial that the burden should shift to Georgia to show that the cost of apportionment would exceed the benefits?

1	MR. PERRY: No. No.
2	THE COURT: Well, where in your post-trial
3	briefing, in the remand briefing, do you make that
4	argument?
5	MR. PERRY: I think it's in both the
6	post-trial brief and in our actual
7	THE COURT: Can you give me a page citation?
8	MR. PERRY: I wish I had the brief up here
9	where I can give you a page citation, Your Honor, but on
10	rebuttal I might be able to.
11	THE COURT: Okay. Or you can just send it to
12	me at a later time. That's fine.
13	MR. PERRY: Yes. Thank you very much.
14	But with your indulgence, I would now identify
15	a few cites that showed at trial, we put on evidence
16	about harm we suffer in non-drought years, and the first
17	bit of evidence I would
18	THE COURT: Are you talking about non-drought
19	years now or drought years?
20	MR. PERRY: We put on evidence about harm in
21	drought years, but now I'm going to give you citations
22	for non-drought years, how we're harmed in periods even
23	when there is no drought.
24	THE COURT: But I thought that your concern

was with drought years. I didn't think that non-drought

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years were involved.

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MR. PERRY: Well, Your Honor, that's why I'm trying to make this point, because we actually put on evidence of both. And the concern was, in Special Master Lancaster's report, that we had only focused on drought years. And of course we did primarily focus on drought years, but there is a significant amount of evidence about non-drought years, and that's what I would like to lay out now if I might.

THE COURT: All right.

MR. PERRY: So, Your Honor, this is going to be cite heavy.

Dr. Kimbro, principally at Paragraph 7 in 107. Dr. Glibert throughout her testimony, and in particular at Paragraph 71. Exhibit FX-379. Mr. Berrigan's testimony from Paragraphs 51 to 63. Dr. Allan's testimony about the floodplains and the river, which focused on flows from about 14,000 to 18,000; those are non-drought year flows. His testimony at Pages -- not Paragraphs, but Pages 44, 45; and in his expert report which is record evidence, too, and that's FX-790 and Figure 23.

In addition, I would cite Your Honor to an exhibit that is the EPA's and U.S. Fish and Wildlife's guidance about how much water should be flowing down to

retain a healthy river for the Apalachicola. That's FX-599. And we analyzed that in Dr. Hornberger's testimony at Paragraph 65, Paragraphs 90 to 92, and 115 through 117.

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So with that, Your Honor, I would like to turn back to Tab 1, if I might. And in particular, I would like to start with Slide 6, which is the third slide in after Tab 1.

And here, I'm focused on the evidence we put on about unreasonable and inequitable conduct upstream. So what we did -- and this can be found in the voluminous FX series of exhibits. Basically, every exhibit between 1 and about 49 addressed these issues.

I'm starting here with the slide, Your Honor, though, about specifically the Flint River Drought Protection Act.

And I say that was the bright spot in this story. The reason it was the bright spot is because Georgia recognized there was something it needed to do to address the growing consumption.

The first quote on this page refers to Georgia's Environmental Protection Division. They knew there was a problem. And this was no mystery to anybody. All these folks knew there was a problem. Exhibits FX-1 through FX-9 show this in vivid detail.

And the solution, of course, was to buy irrigation rights from these farmers in times when drought is predicted. And that happened twice, as I noted, in 2001 and 2002, and we had no crash during those periods. So what happened next, though, is also instructive because this problem persisted. The problem with irrigation persisted, and our flows just got worse over time.

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So what happens next is a critical part of our story. If you look at Slide 7, that is a list of the number of permits and permitted acreage that Georgia granted over time. And although the evidence shows that they knew they were beyond their safe permitted acreage for these areas, these farm areas in the Flint Basin in 1999, they continued to grant permits. And they granted 40 percent more acreage worth of permits after that point, which of course produced significant additional consumption of water.

And we regulate agricultural irrigation in Florida. We do it through several different means, including many of the means I'm going to get to in a minute when I talk about specific forms of a remedy. But Georgia didn't.

So the next step in this timeline about consumption is found on Slide 8. It's a copy of a

report put out by a number of people in Georgia who were attempting to find a solution to this problem. And they recognized, again, that agricultural irrigation is compounding the effect of drought and that there was a solution that was required.

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So the solution, of course, was to exercise the Flint River Drought Protection Act and buy back irrigation rights when drought is predicted. But that never happened again, so it was never funded. They had no money to buy them.

And part of what Special Master Lancaster identified in the analysis section, Pages 33 through 34 of his report, is what actually happened. And so that's part of the story.

Another part of the story is in 2010 through 2011 when, under Georgia law, the various different regional water boards are going out to try to determine what they should do, and they engaged in modeling, they engaged in analysis, and they determined that although a certain amount of irrigation is appropriate — and this is on Slide 10, Your Honor — Georgians, farmers in the Flint Basin, were using far too much water. They published that result.

And they also at that time -- and this is going to be important to our remedies proposals --

identified a number of steps that could be taken to fix that problem. And there, you can find those steps in Florida Exhibit 24 at 6-5 to 6-9. There are a whole range of things. They include building reservoirs. They include exercising the Flint River Drought Protection Act, which is in the second box. They include things that we think are appropriate exercises of regulatory authority that we indeed already do in our part of the basin and throughout Florida, including something called aquifer storage, whether you essentially build an underground reservoir.

THE COURT: Uh-huh.

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MR. PERRY: We do all those things. Georgia hasn't. We limit the amount of actual irrigation water that can be applied in a drought. Georgia hasn't.

So if I might, Your Honor, now --

THE COURT: Well, you agree that Florida has the burden of showing that the benefits of a decree would substantially outweigh the harms, correct?

MR. PERRY: Yes, Your Honor, and that's what I'm moving to at this moment.

THE COURT: Okay.

MR. PERRY: So if I might turn to Tab 8, which is Slide 40 in your book, and I would like to address what we did to show that the harm we suffered, the loss

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of our oyster fishery, can be readily justified, and that the substantial benefit we would receive is outweighed -- or outweighs the cost.

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So what we did is, we took a look at what
Georgia itself had said. We did discovery. We found
our own analysis. We looked at what measures they
thought they could actually accomplish. And then we
went through and we did an analysis of how that could be
done. And, in fact, it's readily possible. And our
expert is a person who represents the State of
California, is involved in water issues in Oregon. He's
involved in a whole range of cases where these sorts of
remedies are employed, and he knows about how these can
work.

And so what we did was, we took a look at menu options that we thought were appropriate and responsible. Not that we wanted to dictate to Georgia exactly how to accomplish its result, but we wanted to show that they could accomplish the result.

And so, as Mr. Garre explained, there are documents that we have put forward here, including this Exhibit, JX-154, which show what Georgia thinks when they're talking frankly to their own citizens and stakeholders. They know they can fix the problem, and they can do it at a reasonable price, too.

And so now I would like to take a moment to rebut what their expert said at trial about the cost of these things. And I would suggest, Your Honor, that the cross-examination of their expert is very important because you can see exactly what he looked at, what he didn't look at, whether he actually did something that was a genuine assessment of the measures Georgia knows it can take. And he didn't. And that's what's found at Slide 41.

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And these are almost all costs to the Georgia government, and not costs that would have a significant burden on farmers themselves. These are things that we do in Florida, in part, and other states do when they have serious issues with the availability of water for farming.

So, as you can see here, the list starts with aquifer storage recovery, and it goes on from there.

And this is perhaps a change in culture for the farmers in the Flint Basin. They are not used to being regulated in this way. But we regulate in this way.

States all over the country regulate in this way. And when you encounter a problem with a shortage of water, this is what regulated riparian regimes do. You have to make the water use reasonable under the circumstances.

And with these low flows we've encountered over the last

20 years, it is no longer reasonable to allow the same irrigation practices to persist.

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The following slides after that walk through the very specific instances where Georgia's expert, we think, made errors in his calculations. One example, to our point to acquire irrigation rights permanently, we went and looked at how much it would cost. U.S.D.A. puts out data for the cost of irrigation rights plus the equipment on the land. And Georgia's expert multiplied that number by ten.

And, in addition, as we do in Florida, during droughts we regulate how much irrigation water can be applied. That is sometimes called deficit irrigation and sometimes called limited irrigation. But you don't lose your entire yield from reducing the amount of water. There are also efficiency matters that the state can help people employ in their irrigation systems. But just reducing water use does not destroy your crop. It's not as if you are not using irrigation water. And certainly there is insurance, federally subsidized, in case you lose yield.

But it's not appropriate what Georgia's expert did. And in some analyses, he assumed there would be zero irrigation; in some analyses, he assumed there would be no productive use of the land.

And, in fact, about half of all of the farmland in Georgia is not irrigated, so it's not impossible to make a living.

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So I would suggest also that one thing Georgia has said quite a bit is that it has a large population and it's only using 48 percent of the water. In fact, at Slide 45 you can see both our view and Georgia's real view of how much water Georgia is using during these drought years in the summer.

So that brings me, Your Honor, to our approach to costs and benefits more generally. Our targeted remedies go to farmers.

THE COURT: I'm sorry? Go to what?

MR. PERRY: Our targeted remedies go to controlling how farmers conduct their business, not in a way that's draconian. We do it. Other states do it. It's something that you have to do to minimize waste and mismanagement. And the farmers are obviously experts at how to manage water, but right now Georgia puts no constraints at all in any effective way on them. Almost all the permits have no constraints as to how to use water.

So when you look at costs and benefits, we're focused on targeted remedies as to a very small number of people in relative terms. We're talking about a few

thousand farmers and the people that work on the farms. And we're not talking about eliminating the crops.

We're talking about more efficient use of water. We're talking about different ways to ensure that your crops rotate in a way that uses less water. All of this is in the cross-examination of Georgia's expert, Dr. Stavins.

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But there are really two ways to balance this.

One is, you pit that reasonable regulation, which we think is required in a riparian regime, of those farm uses against the other side of the balance which, one, it's a widely recognized unique natural system. There are very few people that live in the Apalachicola. It has been preserved by the Florida government for a very long time. It's a 106-mile river. It's a unique bay. It's recognized by the United Nations. There's a federal and state estuarine reserve there. It's a beautiful place in the country.

And so one way to balance this is the inconvenience to those particular farmers, which can be borne by the government, against this beautiful natural area.

THE COURT: What is the population of this area that you're speaking of?

MR. PERRY: A few thousand, Your Honor. About 10,000, 15,000, depending on which part of the area.

But let me address that.

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Because if you just were to step back and look at the economic impacts, what we have is a few thousand farmers and their businesses upstream that we think can be reasonably regulated without really imposing significant financial impact to them, if any. And then we have a series of a couple thousand people in the Apalachicola. They are not people, in general, of significant means. They have relied on this oyster fishery for generations to make a living. They have been careful stewards of this fishery, and they live up and down the river and fish on the river.

And so if you are just looking only at the economic comparisons, it's a few thousand people here and a few thousand people there. But I would suggest that this environmental --

THE COURT: It's a few million people there and a few thousand people here.

MR. PERRY: Well, Your Honor, here's the point we're making. This remedy we're talking about is not a million people. This remedy is much more narrow. It is targeted. We know Georgia can do it because we've seen their internal documents. We are not trying to take water away from Atlanta. All right? They can do -- all we're asking them to do is don't allow people to water

their lawns when there's a drought in the basin, which is already part of their law.

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Now, we are not imposing any significant basin-wide impact on the millions of people. This is about a very small number of farmers and a very small number of people in Apalachicola. It's that balance on the economic side, but the overlay is this incredibly unique ecological area that is fundamentally changing.

So, Your Honor, with my remaining two minutes, I would like to, if I could, invite your attention to Slide Number 20 at Tab 3. And there, Your Honor, at Slide Number 20 and 21 are two examples of what Georgia and Georgians have determined is a reasonable balance in the past, and this is evidence that was put on at trial.

So Slide 20 is evidence from Georgia's own witnesses about settlement proposals they have made in the past. Their point was that we should have accepted their settlement proposals and that they made them.

But in particular, at the bottom of the slide, it says, "Georgia considered bringing Glades Reservoir online." And then further, "groundwater augmentation" and "flow support reservoirs." Those latter two are things we proposed. They were willing to do it, and this was in 2012. This is something they thought was a reasonable and, more importantly, feasible solution.

The truth of what can be done is right here on this slide. This is 1,000 cfs remedy.

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THE COURT: Well, where do we look at the respective costs, for example, of the Glades Reservoir, what it would cost to put it in, how it would affect anything?

MR. PERRY: Well, Your Honor, they have said their cost would be \$803 million, but they proposed it. They proposed that as part of their solution in 2012.

We're not asking them to do Glades Reservoir. We have those targeted measures just as to farming.

We're not asking them to spend hundreds of millions of dollars.

In fact, what we're asking them to do is far less expensive than what they have proposed.

So, Your Honor, if I might, the next page,
Slide 21, is a document created by a consensus group
that was looking for a solution. It didn't involve the
government of Florida or the government of Georgia, at
least the state government. It involved the Atlanta
Regional Commission, it involved representatives of
Flint Basin farmers. And there was a whole range of
solutions that they put together in a consensus
proposal, but one of those measures was to send more
water to Florida.

This can be done. This is reasonable. And Georgia, I'm sure that they've got their views. They disagree with us. But I think that the evidence shows it can be done and it should be.

THE COURT: Thank you.

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MR. PERRY: Thank you.

MR. PRIMIS: May I have a moment just to get set up, Your Honor?

THE COURT: Certainly.

MR. PRIMIS: Thank you. Judge Kelly, may it please the Court. Craig Primis for the State of Georgia.

To be entitled to an equitable apportionment in this case, Florida must prove by clear and convincing evidence that the benefits of its proposed remedies substantially outweigh the harm that might result.

In remanding the case, the Supreme Court asked for specific answers to a number of questions before the Court could determine whether Florida had met that burden.

Following the Court's direction, Your Honor entered Case Management Order Number 25, which posed those same questions, and Your Honor asked the parties to be specific. As Your Honor put it, the more specific, the better.

Florida either cannot or will not answer with specificity the most important questions that the Court and Your Honor posed. Florida's case fails in multiple levels, and we have addressed all of those in our briefs.

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In my time today, however, if the Court would allow -- or I'm certainly happy to answer any questions the Court has -- I would like to focus on three critical questions, the answers to which will confirm that Florida has not proved its case.

The first question is: How much water does Georgia actually use, and how much would Florida receive from a cap?

The second: Are there any ecological benefits from any additional water Florida might receive?

And three: What are the costs to Georgia, its economy, and its citizens were the Court to award the relief Florida seeks, and does that benefit to Florida substantially outweigh the costs?

Florida urges Your Honor and the Supreme Court to forgive its inability to answer these questions with evidence and facts, with appeals to flexibility and approximation and to reasonable estimates. And while there may be flexibility in the doctrine, flexibility is not a substitute for evidence.

As the Supreme Court has put it, the state seeking an apportionment must present hard facts in support of its case. That's Colorado v. New Mexico II. That, Florida has completely failed to do.

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On this record, we respectfully submit that the Court cannot possibly find that the benefit to Florida would substantially outweigh the cost to Georgia.

So now I would like to turn to the first question, which we think is central to resolving this dispute, and it is disputed by the parties. The starting point is: How much water does Georgia actually use? How much is available to even go to Florida?

On this point, Georgia's estimates of its own consumptive use are the only reliable data in this case. Using those data, we know that Georgia's consumption is a fraction of the amount estimated by Florida. Florida made no argument on the amount that we use here today, no citations to the record in the presentation today. And we know that Florida's estimates are wrong because, unlike Georgia's which rely on actual real data, they are based on litigation-driven models of their experts, and they have inherent flaws.

So let's start with Georgia's data. Where does it come from? Georgia is the only entity, federal

or state, that keeps accurate statewide water use data. The state has a dedicated team of hydrologists, trained professionals, and most of them have Ph.D.s, and all they do for their living is track water usage, water consumption, and water availability.

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That data is then supplied -- I'm going to go through how they do it, briefly. That data is then supplied to federal regulators like the Army Corps, Fish and Wildlife, U.S. Geological Survey, and those entities rely on Georgia's data. No one from the Corps, Fish and Wildlife, or U.S.G.S. has ever raised the kinds of criticisms of Georgia's consumptive use data that Florida has advanced in this case, and no one has ever said what Florida is saying, which is that Georgia understates its use by 50 percent.

Now, the best source for all of this evidence and testimony is the written direct testimony and the trial testimony of Dr. Wei Zeng, Z-E-N-G. He's the chief hydrologist for the State of Georgia, and he walked through in detail how Georgia does this. He has more than 20 years of experience, he has a Ph.D. from the University of Georgia, and he's a licensed professional hydrologist at the American Institute of Hydrology. He knows what he's doing.

Georgia maintains a comprehensive database

that tracks Georgia's municipal and industrial use,
that's up around Atlanta, and the agricultural
consumptive use in the ACF Basin. And while this remand
is --

THE COURT: Let me ask you a question on that.

MR. PRIMIS: Yes.

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THE COURT: Do they read those meters in the agricultural area annually or monthly?

MR. PRIMIS: There are two types of meters.

Most of them are read annually. There is a subset of about 70 or 80 that are read monthly, that they then use to estimate monthly variation.

THE COURT: Wouldn't it be more accurate to do it monthly for everybody?

MR. PRIMIS: I think more data is generally more accurate, yes, Your Honor, but the professionals who do this for a living feel that the current blend of extensive annual meter reading, combined with the monthly data that's available, and historical knowledge, is sufficient to give them reliable estimates.

So while the remand is principally focused on the Flint, it is worth just noting that in Atlanta, they have very detailed -- the water providers have very detailed records of what is used and, more importantly or equally importantly, what is returned into the basin.

That's an important concept because even though Atlanta might pull out a lot of water, it puts back 70 percent or more of that water. And they have data from 300 withdrawing facilities and 1,000 discharging facilities.

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Now, on the agricultural side -- you anticipated some of what I was going to say -- but Georgia has a network of people who collect this data, state agencies, universities, water contractors, the water planning districts, and Georgia has invested heavily in this technology and in expanding this program.

THE COURT: How do you respond to the suggestion of 90,000 acres of unpermitted irrigation going on in Georgia?

MR. PRIMIS: Yes, Your Honor. For the purpose of actually estimating how much Georgia uses in the Flint, that point is really not relevant because the way Georgia determines how much water is pumped or is taken from the Flint River is through its wetted acreage database. And as its name suggests, they actually had people go out and do field surveys for wetted acreage apart from the permitting.

So, true, we don't want people watering unpermitted acres, but in terms of counting or accounting for that water that is used on unpermitted

acres, it is in the consumptive use database, and Georgia is able to estimate and track it.

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THE COURT: But if it's unpermitted, wouldn't it make a difference at some point with how much water could go downstream?

MR. PRIMIS: Well, no, not for present purposes because Georgia already accounts for it. We know.

THE COURT: I mean, let's say it's one gallon an acre, so you have got 90,000 acres, or gallons, that might not be used otherwise. Doesn't that --

MR. PRIMIS: Certainly if the unpermitted acres, to the extent that they are actually used for groundwater pumping, if you said, "Don't do that anymore," that would reduce the groundwater pumping in that area, for sure.

The impact on the stream flow is a very complex question of how close it is to the river, the interaction with the river. So it doesn't necessarily mean that if you took out those unpermitted acres, all of that, 100 percent, goes into the river. In fact, I think it's highly likely it would not. It would be some smaller fraction of that.

But just in terms of how much water is available if a cap were put on and the reduction were

ordered, we're already accounting for those unpermitted acres, and they go into the total amount that is advanced as our consumptive use in this case. So it's not like they are undetected or lost. We know how much it is.

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And so what they do is, they have the wetted acreage database which I've described, and then they have the meter readings, both the blend of annual and monthly. And from all of that data, they are able to determine how many inches of water the farmers in Georgia are using at any particular point in time. They can multiply that by the wetted acreage information and come up with reliable, dependable information about Georgia's groundwater use.

Now, Florida -- this matters because when Mr. Perry says, "We just want 2,000 cfs," well, we do genuinely believe, and we put in the record our position, with facts and evidence, that that's not possible. 1500, not possible. And so it is an important determination that needs to be made to determine whether it's worth doing all of this to Georgia. Is it going to get any benefit to Florida?

Now, Florida's experts used what they call the rainfall runoff models -- I'm not going to go into great detail on that -- and they advanced those in their

brief. I did want to just say, with regard to that,

Florida's brief says that the rainfall runoff models are

used by various federal agencies for various purposes.

I think there was a suggestion that they were used to

determine consumptive use. That's not true. This model

is not used to determine consumptive use.

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What Florida did was take a model that is used to determine how much rainfall through runoff will get into the river, and try to back into consumptive use numbers by using that model. But no federal agency has used it for consumptive use. Indeed, the federal agencies use Georgia's data to determine what Georgia is using.

And Florida's experts, both of them, admitted at trial, and it's all spelled out in Dr. Bedient's testimony, that the rainfall runoff models they used have an inherent error that is very, very large. In fact, as far as experts attribute the difference between their model and the actual stream flows, everything in there to Georgia's water consumption, the error inherent in their model is larger than the amount that they attribute to Georgia. It could be 100 percent error. They never made any estimation or determination that in fact it was Georgia's consumption, and not error, that was yielding their results.

So when you get back to the data, the actual real data, again, this is laid out in detail in Wei Zeng's testimony and also Dr. Bedient's testimony. But on an annual basis in non-drought years, Georgia consumes an annual average of 540 cfs; and in dry years, an annual average of 750 cfs.

Now, I do want to be clear. We also always look at this data on a monthly or a seasonal basis because it is true that there is more irrigation in the summer when it's dry and there will be more irrigation in a drought when it's dry because the farmers need the water for their crops.

THE COURT: Uh-huh.

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MR. PRIMIS: And so we have always been very up front that it is higher. But even when you get to the highest amounts that ever get used, the most extreme consumptive use on the Flint was 1400 cfs, and that was one time. And so it's just not possible to achieve the types of water savings, even if you have draconian complete elimination of Georgia's agriculture use.

THE COURT: Let me ask you this.

MR. PRIMIS: Yes.

THE COURT: Let's say that Georgia doesn't waste any water and that they are very efficient when its consumption continues to increase. At what point

does the consumption become unreasonable, assuming no waste and very efficient?

MR. PRIMIS: Well, Your Honor, there's a lot that goes into that question, and that is just one subpart of the overall broader question that was remanded to this Court.

THE COURT: Right.

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MR. PRIMIS: Which is: The harm to Florida, is it substantially -- does that substantially outweigh the cost to Georgia to fix it?

And so with regard to Georgia and its agricultural water usage, I just want to say as a predicate that they have taken steps to improve efficiency, to meter, to use better technology that mandate highly efficient center pivot irrigation units. So Georgia is taking action, and there's a lot of funding at the University of Georgia extension school to assist farmers in those efforts.

But if Georgia were to increase, were to look and see what is the actual effect on stream flow into the Flint, and then it may not be that much because Georgia uses a lot less than Florida contends, and the impact is really dependent upon where that water is pumped. If it's not near the river or it's coming from a different aquifer or it doesn't interact with the

river in a significant way, it may have very little impact.

THE COURT: Well, suppose it does.

MR. PRIMIS: Okay.

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THE COURT: At some point do you say to Florida, "Well, I'm sorry, there's no more water for you because we're using it all efficiently, and that's just the way it is"?

MR. PRIMIS: Well, I don't think we're going to get there because there is not -- I don't even think there's enough farmland left to do that. There is a moratorium right now on new permits.

THE COURT: I understand that.

MR. PRIMIS: And so it's a difficult hypothetical to address because under current planning, we don't foresee that ever happening. And I do just want to say briefly that some of Florida's more alarmist arguments come from some documents that were drafted nearly 30 years ago, two decades ago. The data was very poor, the models were very crude. There is no current belief that under the current amount of farming, that Georgia could dry out the Flint. That's just not going to happen. In addition, the Army Corps is supplementing with 5,000 cfs from its network of reservoirs and dams under its current water control manual. So Florida is

going to receive that water regardless.

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Now, in terms of what the cuts to Georgia's water use could mean for additional stream flow, Mr.

Perry talked about Dr. Sunding and his estimates as to what could be achieved. The first thing I just want to note is, Dr. Sunding is an economist. He's not a hydrologist. And another thing I want to point out is that none of the remedy scenarios that Florida presented at trial were tied to Dr. Sunding's estimate. That's just not the way they tried the case. So there is no evidence of what benefit might come to the ecology of Apalachicola Bay from anything that Dr. Sunding did.

The other thing I want to point out is, he has been a moving target throughout this case. He literally started out in his expert report by saying that you could get 2,000 at a certain price, and then he said, "No, I'm sorry, 1,000 at a certain price." And then he doubled that at trial and said you could get 2,000 at half the price.

And we have laid out in detail Dr. Stavins' testimony, but also in the cross-examination of Dr. Sunding, just why his estimates are so unreliable and how he could have such wild swings. He just excludes costs, he excludes impacts, and he overstates how much actual groundwater pumping Georgia is doing.

So through all of those errors, that's the only way they can even approximate what he suggests.

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And the one other point I would make is that Mr. Perry here said today their focus is on the Flint. But when Dr. Sunding talks about 2,000, 1500, I think something like a quarter or a third of those estimates are actually based on reductions to metropolitan Atlanta and high water use, so it even further reduces even his approach what Florida is able to accomplish.

And so you have Georgia's data, which we contend is highly reliable and is much lower than what Florida estimates. And then you have the role of the Army Corps. The Army Corps has a water control manual, and we have demonstrated that under its present operations, the additional water in a drought will not get through to Florida. We put that on at trial, and it's still true today.

The starting point is with the Corps' operational rules. The Corps operates, as Your Honor knows, five federal dams and reservoirs, and those reservoirs have multiple project purposes. It's not just, "Give us extra water and we'll shoot it down to Florida for the oysters." That's not how it works. The Corps has to constantly balance water supply to Atlanta, flood control, navigation, water quality, and, to be

sure, endangered species. That is part of their mandate, which is why they had a 5,000 cfs minimum flow, which has been reviewed and signed off on by the United States Fish and Wildlife Service, which has assessed and determined that that is adequate to protect their endangered species.

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And when Special Master Lancaster found this, and we believe the Army Corps has confirmed this in all of its filings, when they're in drought operations or when basin inflow is very low, their mandate is to send 5,000 or approximately 5,000 cfs down to Florida and to put the rest into storage so that it can continue to balance all of these project purposes for as long as possible.

And one remarkable thing about this part of the case is that Florida's own expert, Dr. Hornberger, did the same modeling that we did. He used the Corps' model, ResSim, and he determined that this water was not going to get to Florida. Now, he didn't put that in his expert report, but they turned over his analysis and we were able to find it in his data, and his results were the same as ours. And that's something that Special Master Lancaster noted.

And so it was only then that Florida came up with this new model, the Lake Seminole model, which just

models only one reservoir, Lake Seminole. As a result, it doesn't account for any offsetting that the Army Corps may do upstream, and the model basically just forces every drop of water saved through to Florida, but we know from the Corps and from the reliable modeling that that is not how it works.

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And so when you add all that up, there just is not enough additional water coming in under the Army Corps' operations to make any meaningful difference in terms of flows to Florida.

And there were questions from the Supreme

Court about whether it might shorten drought operations if more water was coming in. Georgia is the only party that put on any evidence on that question, and that evidence showed that it would not. And the reason why is, if you can't generate enough water on the Georgia side, and even if you could -- to make a difference -- and even if you could, the Army Corps only assesses drought operations one day every month, so even if you got 20 extra days, it wouldn't make any difference to Florida because --

THE COURT: That would be because they wouldn't go into their drought operations until the following -- the beginning of the next month?

MR. PRIMIS: Correct. They just do it once a

month.

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THE COURT: Could they change that?

MR. PRIMIS: Well, the Army Corps could change that, and that is one issue that I wanted to make sure I address, the question of reasonable modifications. The Army Corps could change it, but in order to change it, it would have to go through a full administrative process, and it has already said in its filing in this Court about a year ago that it's not going to do anything until this Court and the Supreme Court rule and enter a final decree. And even then, all they said is that they will consider it.

And so I know there has been a lot of debate and discussion about what the Army Corps will do and predictions about the future. Even after the Supreme Court entered its ruling, when they filed their brief in this Court, all they said was, "You-all do all your work, and we'll consider it when you're done," which is not an emphatic endorsement that they are on the cusp of making any reasonable modifications of the kind that Your Honor suggests.

And the one thing I want to say, in conclusion on this point -- sorry. I just want to see how much time I've got. The one thing I want to say in conclusion on this point is that Florida asked,

specifically filed a brief in this Court, saying: Your Honor, we need to brief this issue of reasonable modification. We want to argue what our facts are on that so you can have it for your balancing test.

Florida put on no evidence of any reasonable modification, and their brief doesn't discuss any reasonable modification.

THE COURT: That's of the Army Corps' procedure?

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MR. PRIMIS: Correct. Exactly. And so to the extent they are hinging their case or saying that they have met their burden of proof by clear and convincing evidence because the Army Corps is going to do something, Florida has neither argued nor pointed to any evidence to support the contention that the Army Corps is actually going to take action to make the changes they need based on a final decree from this Court.

What I would like to turn to now is the second question I identified, which is: What ecological benefit is Florida going to get from its requested cap?

So I described what Florida's plan here was.

They had a remedy scenario which was created by Dr.

Hornberger, and that entailed elimination of 50 percent of the irrigation on the Georgia side of the border.

And then they had a number of experts assess what would

that do, what ecological benefit or impact would they have on that.

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Now, in terms of -- Your Honor asked for specific evidence on this. What I just described I'll get to in a minute, but it's not specific at all to any particular species or any particular time or flow. We asked for that in our interrogatory during discovery. We specifically said, "Identify the minimum volumetric flow rate, including the timing and duration of such, that Florida contends must be maintained to prevent or alleviate any harm to any species of wildlife."

And they just never answered the question.

They never said specific amounts and specific times with specific species that would benefit. And that's notwithstanding having 20 experts on their side.

And then Your Honor said, "I want you to answer that question, too, the more specific, the better."

So we were waiting for where the specifics were, and neither in the briefing nor today did we get any specific species that will benefit by any amount, reasonable approximation or otherwise, at any particular time from any particular flow.

THE COURT: Let me ask you this.

MR. PRIMIS: Yes.

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THE COURT: In your opinion, does the population, the various populations, impact this whole situation?

MR. PRIMIS: Yes. And I think we're talking human population, correct?

THE COURT: Yes.

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MR. PRIMIS: Okay. Georgia has argued that human population and animal populations are both relevant, and we don't deny or in any way suggest that if they had a case on ecological benefit, that that should be considered. But human population, certainly. I mean, the amount of production and livelihoods and existing economies that exist on the Georgia side are staggering when compared to what's occurring on the Florida side.

And so you have on the Florida side an oyster industry of six to eight million dollars a year at its high point. And in Georgia, you have billions of dollars of agricultural production every year that would be at stake from an order from this Court. And when I say six to eight million, I'm talking about revenue, so the profit on that would be even significantly lower. So we're talking about very, very small economies on the Florida side, as compared to massive economies on the Georgia side, and that is something that Dr. Stavins did

address in detail.

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But part of what this Court was asked to resolve from the Supreme Court on remand was, okay, if we take that -- let's look at the oysters, for instance. If we put all this extra water into Florida, what's the benefit to the oysters? Are they actually going to improve?

And what's remarkable on this front, this is Florida's evidence. Florida's own expert said if we take the water from Dr. Hornberger and put water resulting from 50 percent in cut of agriculture, and assuming that Georgia uses all the water that Florida sends, twice what we believe or three times what we believe, put all that into the bay, Dr. White, Dr. Wilson White for Florida, he said that would have a maximum benefit of 1.4 percent in terms of increase of oyster biomass.

THE COURT: What would it do to the salinity?

MR. PRIMIS: Well, it has virtually no impact
on the salinity, either. Just for the record, I'll cite
Dr. White, Figures 14 and 15 in his written direct
testimony.

On the salinity, Florida put forward Dr.

Greenblatt, and her job was to take all this water from

Dr. Hornberger and measure salinities. And if you look

at her report, what's interesting about her report is, she has a series of charts that look just like

Apalachicola Bay, and she said, "I'm going to put color code where there are changes in salinity."

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And if you flip through these charts attached to her written direct testimony, they're all white.

There is no color. It's remarkable. There is virtually no change. One part per thousand. And, again, that's Florida's evidence. Georgia had its own experts on both of these issues who came to roughly similar conclusions. But this is Florida trying to meet its burden of proof, and its oyster expert says it's like one and a half percent benefit to the oysters. The bay salinity expert says with a 50 percent cut to agriculture, it's about one part per thousand throughout the bay.

She even assumed a scenario where you eliminate all water from Georgia, and I think that only got up to two or three parts per thousand. And our expert, Dr. Menzie, and I believe even their experts confirmed that that will have no positive biological impact, changes that are that small.

Now, they have tried to take some testimony from Dr. Glibert to suggest that there will be some benefit because of the nursery function in East Bay, but if you want specifics, she didn't count or estimate the

number of actual fish that would benefit. Florida has no evidence on how many fish will benefit, how many shrimp will benefit, how many of the other myriad of things that live in Apalachicola Bay — they just didn't do that. They didn't measure that at all.

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And then finally, I just want to address benefit to the river. With regard to benefit to the river, this is where they went with Dr. Allan, and Dr. Allan measured 15 different scenarios as to whether additional water -- again, using Hornberger's remedy scenario with 50 percent ag cut -- what would that look like for the river species. And he found on 12 out of 15, that there would only be less than a two and a half percent benefit to all of the species over a 16-year period.

THE COURT: Over a 16-year period?

MR. PRIMIS: Correct. And that testimony -we used a demonstrative on his cross-examination which I
believe is in the record. We provided all of that to
Special Master Lancaster. That was Demonstrative 2.
And then when Dr. Allan was asked, "Well, less than two
percent, that doesn't seem like very much, and you're
putting in all this water. Is that significant?"

And his testimony was that those changes were, quote, "very small," end quote, and probably not

biologically significant. That's 409 to 410 of the trial transcript.

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He also admitted, Dr. Allan did, that the changes he projected for the tupelo trees -- these are the trees that benefit from the inundation -- that he did not know whether the remedy scenario would have any impact at all on those trees. And I believe that was another one where it showed a very small positive change that would not be biologically significant.

And then finally, Florida talked about these sloughs. They're spelled S-L-O-U-G-H.

THE COURT: Right.

MR. PRIMIS: Not everyone knows how to pronounce it. I did not before I got involved in this.

THE COURT: Right.

MR. PRIMIS: But they say even just a couple hundred cfs will help the sloughs. But that was an after-thought because no one, not Dr. Allan, ever went and measured how many mussels were in the sloughs; how many more mussels might be in the sloughs from these amounts.

In fact, Dr. Allan never made any determination whether mussel populations or sturgeon populations were increasing, decreasing, or were stable. He just didn't do that as part of his analysis.

The Fish and Wildlife Service looked at that in their biological opinion, and they concluded both mussels -- in fact, the fat threeridge mussel, there are 18 million of them now, like 18 times what they thought previously, and that the sturgeon are doing just fine.

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So finally, let me just conclude. When we get to the balancing test of how much is it going to cost Georgia and how much will it benefit Florida, I've already touched on this, so I don't think I need to dwell on it too long.

But the economies on the Georgia side are significant. They are very significant, 4.7 billion in agriculture-related economies, 1.7 billion in row crops, and a lot of people depend on those businesses for their livelihood. And our expert, Dr. Stavins, assessed an additional 680 million in gross regional product from industries that use agricultural production as commodities for inputs for their business.

You know, Georgia has five times the land area, 56 times the population, 80 times the number of employees. And our expert actually went through their models that economists use to assess the impact, and he went through and he used the IMPLAN model and the REMI model -- it's all laid out in Dr. Stavins' testimony -- and he assessed that cutting that much business, that

much of the southwest Georgia economy, would have ripple effects throughout the economy that would cost, just from Dr. Sunding's proposal, 330 million in direct costs per drought year, an additional 322 million in lost gross regional product, and then 15 and a half million in lost tax revenue — these are in Stavins' direct at Paragraphs 65 and 90 — 4,000-plus job loss. That's what would be going on, on the ag side, plus billions more for these M&I, municipal and industrial changes that they've advocated for Atlanta.

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And even Dr. Sunding, even under his erroneous and underestimated costs -- remember, I described how he got twice as much for half the money. Even under his analysis, it would still cost \$105 million per drought year to implement what he wants, what he suggests. That would eliminate, in our view, 100 percent of agriculture on our side -- even if we use their numbers, it's still 70 -- and it would have an additional \$69 million in indirect economic cost, which Dr. Sunding testified to at 2801 of the transcript.

So in conclusion, Your Honor, the test the Supreme Court laid down is whether the benefits to Florida substantially outweigh the cost to Georgia. I believe Mr. Perry agreed that the burden is on Florida to show that.

Given the amount of water Georgia actually consumes, the fact that the Army Corps under its current system is not going to pass any of those savings through, but will hold it in drought, the fact that Florida presented no evidence on reasonable modifications to the Army Corps operations, the absence of any meaningful benefit even using their own testimony, and the massive cost to Georgia in terms of economics and disruption, we ask that Your Honor enter a report that finds that Florida has not met its burden.

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THE COURT: Let me ask you one additional question.

MR. PRIMIS: Yes, Your Honor.

THE COURT: Florida concedes it carries the burden. What is the standard of proof that you think should be applied?

MR. PRIMIS: Your Honor, we think unequivocally it's a clear and convincing standard.

THE COURT: And that's across the board? Or just on the showing as to harm?

MR. PRIMIS: Yes. Well, it certainly applies to their obligation or burden to show that they have suffered a significant harm or injury, but we also believe, and we think the Supreme Court has been quite clear, it also pertains to the ultimate balancing test.

So not any particular piece of it, but just whether the benefit will substantially outweigh the harm, that is a clear and convincing test, and we think that's clear from Colorado v. New Mexico.

THE COURT: But it doesn't apply to the remedy?

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MR. PRIMIS: That's what the Supreme Court held in this case, correct. And that was a narrow question, and I think Justice Breyer, in his opinion, was quite clear about that, that what they were addressing was whether Florida had to show at the outset of the case, as a threshold matter, that they could create a remedy by clear and convincing evidence. He said that's too high a burden.

THE COURT: So what is the burden that should be enforced?

MR. PRIMIS: Clear and convincing evidence that the benefit to Florida will substantially outweigh the harm to Georgia, and that burden rests with Florida.

THE COURT: All right. Thank you.

MR. PRIMIS: And I would just say, Your Honor, we think that that's clear from Colorado v. New Mexico, I and II. And Justice Breyer, in his majority opinion, did cite to that part of Colorado. In fact, he quoted part of the sentence.

And we think it would be highly unusual to think that the Supreme Court overturned, sub silentio, a decision that it was citing and actually quoting from the very same sentence.

THE COURT: Thank you.

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MR. PRIMIS: Thank you, Your Honor.

MR. PERRY: Your Honor, if I might, I would like to spend eight of my ten minutes, and invite my colleague --

THE COURT: Spend it however you wish.

MR. PERRY: -- to address the burden issue.

First, Your Honor, we had a five-week trial, and there was extensive cross-examination, including of Mr. Zeng, who Mr. Primis mentioned, and of Mr. Stavins. And I think if the Court were to focus, as Special Master Lancaster did, on those, including Special Master Lancaster's questions for Mr. Zeng, I think that would shed light on the credibility determinations to make and how to look at this.

And to that end, if I might, I would like to invite your attention to Page 27 of the slide set, which is behind Tab 5. And this is, Your Honor, really directed to Mr. Primis' first argument, and that's about how much water is actually being used upstream. And I want to be practical about this, because Mr. Zeng, who

he identified, his estimate of the number of acres that were being irrigated was 582,000. All right? That's the lowest estimate they've had in 15 years of the number of acres that were being irrigated.

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Our estimate, which we went out and compiled using satellite data from U.S.D.A., is 824,000.

THE COURT: But how much of that is from different aquifers, or is not being irrigated, or wasn't being irrigated, but it has been within the parameters of the wetted acreage?

MR. PERRY: So let me refer to the map here, if I might, Your Honor, because it's a question that is addressed in the briefs. So you can see here, this is the Flint River. It comes down here. And there is just extensive irrigation in here. And the aquifer, if they're not withdrawing from the river, they're almost all withdrawing from the Upper Florida Aquifer. The Claiborne and Clayton Aquifers underlie by some degree, but they're much closer to the surface up here than they are down here. And so if you're irrigating up here and you're using the Claiborne Aquifer, it can have a big effect on flows of the river. But not down here.

So, in fact, part of the remedy that we proposed, that Georgia itself was discussing internally, was: Can they, down in this area, in the southern part

of the Flint Basin, drill down deeper, withdraw water in a way that doesn't affect river flow?

And absolutely they can do it. They did, in FX-56, an analysis where they can take an enormous number of acres from the Lower Flint, move them to lower aquifers, and just remove the impact on the river system.

One other issue here while I'm working with the map. One of these issues that we talked about at trial is called impact factor.

THE COURT: Uh-huh.

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MR. PERRY: So if you take people out of irrigation from the aquifer or from withdrawing just from the river in the way I just described, replace that irrigation, the state can fund it from a lower aquifer, the question is: How much impact does it have?

Well, if you're over here, not so much impact.

If you're right along the river, a very significant

amount of impact.

So the question is: What is the right part of the equation to use?

Because a gallon withdrawn over here towards the western side, or over here that's pretty far from the river, it will eventually have an effect on river flow. It might take 1,000 days, it might take a couple

of months, but it's all -- almost all of it, 90 percent, is going to affect river flow. It's just a question of when.

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So there are documents in the record where Georgia's own technical experts are highly skeptical about what Georgia's analytical approach is for this, and about their acreage totals. And one example is Exhibit 49-R, where their technical expert basically says none of the data that Georgia is using in adding up acres, in calculating impact, is actually reliable.

Your Honor, if I might just return to this question about the acre estimate, if you look at that which I just described, the 300,000-acre difference, if they just went back to the number that they said in 2006 was the maximum amount of acreage they would irrigate in droughts, it was about 450,000. That's in JX-21. That would provide enough water to solve this problem. I mean, there is a bright line solution that Georgia endorsed in 2006 that can solve our problem.

Now, they'll say, "Well, you know, that might cause these effects on farmers."

And we have, by looking at their menu of potential solutions, come up with our own costs that don't affect the entire basin, that don't affect Atlanta in any significant way. All they do is require that

Georgia take the types of steps we take in Florida, and other states, too.

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And so when Mr. Primis was up here saying,

"This is catastrophic, it's going to destroy the

availability of water in Atlanta or elsewhere," it's

not. These are limited, specific, targeted reforms that

Georgia's own people, when they talk to each other in a

candid format, say are necessary.

So the other reasons why Georgia is wrong about its own estimations of how much it's consuming, apart from the acreage total, is because they don't account at all for the effect of 20,000 farm ponds in the basin. Now, you have evaporative loss from those ponds. Now, those ponds could essentially be used in lieu of irrigating from the river or irrigating from the aquifer in droughts. They don't use them that way. What happens is, the water evaporates. Internally, Georgia's own analysis says this is a real problem.

They did not put on any evidence about how much of a problem that is. They withheld it as privileged. We didn't get to see what their numbers were. Their own experts say it could be 1,000; it could be 1,000 cubic feet per second impact. To give you a sense of that, it's 64,000 square acres of farm ponds and small impoundments. That amount of water is almost

the same size as Lake Seminole and Lake Lanier combined.

That's a profound amount of water that wasn't in

Georgia's estimates anywhere. That's one of the reasons

why their numbers are so low.

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Also, the multi-year impact of removing acres.

So if you prevent a farmer from withdrawing from the Florida Aquifer here and use another solution, that eventually is going to have a cumulative impact on the flows. So the idea that you, in a multi-year drought, don't count that cumulative impact means you depress the total amount of flow impact that's having, that is being had, and that's something that Georgia didn't account for, that cumulative impact, pumping at great speed, year after year after year after year.

That's what I was showing you on the chart. That's how we got such bad flows towards the end. You're depleting the aguifer.

FX-82 is an important document to look at.

That is Wei Zeng, the person that Mr. Primis referred

to, and that person is saying, "We didn't understand how
the aguifer was being affected."

It was stunning, what we found. That's 2011, right before the crash. I mean, this type of evidence, this type of cross-exam we did at trial shows that these numbers don't hold up.

But apart from all that, we also looked at objective measurements. It's not all modeling. In fact, Slides 27 through 29 examine that issue specifically and show all of the confirmatory evidence which included, but was not limited to, modeling; plus, the analysis of Georgia's own experts that said that here at Newton on the Flint, because of irrigation, there was 2600 cfs in long-term flow reduction. That's a lot of water. That's irrigation.

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So Georgia counts all those acres and says, "We couldn't possibly have done it."

Their own experts internally say they did, Your Honor.

So if I might, before turning over the podium to Mr. Garre, just briefly address Slides --

THE COURT: You have two minutes.

MR. PERRY: One minute, Your Honor. We think that the Court has made a finding it has enough water. That's on Slide 20. It doesn't need the additional water. It does not need to seize water that the Supreme Court apportions to Florida in order to meet its needs. It has made a finding. And, in fact, on the following pages of that particular range of slides are the things they have said about not prejudicing the Supreme Court's decision.

MR. GARRE: Thank you, Your Honor.

I have three very quick points.

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First, on the burden of proof, we addressed it in our opening brief on remand, Page 4, Note 1, in our response brief, Page 4, Note 1, where we explain that in this case, Georgia occupies the same position as Colorado as the diverting party.

Second, Mr. Primis said that the Supreme Court held that we bore the burden of clear and convincing evidence on the balancing. You will look for that in the Court's opinion, but you won't find it. What you will see is that the Court's --

THE COURT: What burden of proof should we utilize?

MR. GARRE: I believe it would be a preponderance, ultimately, on the balancing. But the Court, when the Court described the balancing — this is on Page 2527, I believe — it did not refer to clear and convincing evidence. The Court referred to clear and convincing evidence only on the initial stage of whether we've shown shifting of equitable balancing, which it held that we met.

The dissent several times referred to clear and convincing evidence, but the Court didn't. It instead stressed the need for flexibility.

In any event, we believe we meet any burden of proof.

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Second, on the balancing, I would refer this
Court to New Jersey v. New York, where the Court
balanced the interests of the oyster beds in New Jersey
to the need for New York City to have more water.

And finally, I would stress what I began with, which is that this is a case about eliminating waste and mismanagement. That's what distinguishes this case from Washington v. Oregon and Idaho v. Oregon, where the Court found that the uses there were reasonable. Here, as Special Master Lancaster laid out, Georgia's irrigational practices are unreasonable, unrestrained, and ultimately --

THE COURT: I disagree with you. Lancaster didn't find anything. He assumed it.

MR. GARRE: Yes, Your Honor. And we believe his discussion there is compelling, although we recognize this Court can revisit that and make its own findings.

Ultimately, this gets back to what Justice
Holmes said in New Jersey v. New York, which is that a
river is a treasure and should not be wasted.

Georgia today indicated in response to Your Honor's questions that there is no limit on the amount

1	of water that they believe that they can consume.
2	Florida is seeking to protect an irreplaceable
3	ecological resource that once gone, will never come
4	back.
5	Thank you, Your Honor.
6	THE COURT: Thank you very much. Your
7	arguments were very helpful.
8	We will take this matter under advisement, and
9	we'll let you know in due course. Thank you.
10	We are in recess.
11	LAW CLERK ROBERT TEPPER: All rise.
12	(Proceedings concluded at 11:25 a.m.)
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UNITED STATES OF AMERICA 1 2 DISTRICT OF NEW MEXICO 3 CERTIFICATE OF OFFICIAL REPORTER 4 I, Julie Goehl, RDR, CRR, RPR, RMR, 5 6 New Mexico CCR #95, Federal Official Realtime Court 7 Reporter, in and for the United States District Court 8 for the District of New Mexico, do hereby certify that pursuant to Section 753, Title 28, United States Code, 9 10 that the foregoing is a true and correct transcript of 11 the stenographically reported proceedings held in the 12 above-entitled matter and that the transcript page 13 format is in conformance with the regulations of the 14 Judicial Conference of the United States. 15 Dated this 14th day of November, 2019. 16 17 JULIE GOEHL FEDERAL OFFICIAL COURT REPORTER 18 Registered Diplomate Reporter 19 Registered Professional Reporter Registered Merit Reporter 2.0 Certified Realtime Reporter NM Certified Court Reporter #95 21 333 Lomas Boulevard, Northwest Albuquerque, New Mexico 22 Phone: (505)348-2209Email: Julie_Goehl@nmd.uscourts.gov 23 2.4 25