

SUPREME COURT OF THE UNITED STATES
No. 142, Original

STATE OF FLORIDA,)
Plaintiff,)
V.) VOLUME II
STATE OF GEORGIA)
Defendants.)

TRANSCRIPT OF PROCEEDINGS

The above-entitled matter came on for HEARING before SPECIAL MASTER RALPH I. LANCASTER, held in the U. S. Bankruptcy Court, at 537 Congress Street, Portland, Maine, on November 1, 2016, commencing at 9:05 a.m., before Claudette G. Mason, RMR, CRR, a Notary Public in and for the State of Maine.

APPEARANCES:

For the State of Florida: PHILIP J. PERRY, ESQ.
JAMIE L. WINE, ESQ.
ABID R. QURESHI, ESQ.
FREDERICK L. ASCHAUER, ESQ.

For the State of Georgia: CRAIG S. PRIMIS, ESQ.
JOSH MAHONEY, ESQ.
ZACHARY A. AVALLONE, ESQ.

For the U.S.A.: MICHAEL T. GRAY, ESQ.

Also Present: JOSHUA D. DUNLAP, ESQ.

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2 PROCEEDINGS
3 SPECIAL MASTER LANCASTER: Counsel,
4 there will be a slight change in the morning
5 schedule. There will be a break. Claudette
6 is an extraordinarily talented reporter, but
7 even she gets tired. So we'll take a break
8 at a convenient time.

9 And please remember to speak into the
10 microphone.

11 Thank you.

12 MS. WINE: Your Honor, I wanted to let
13 you know that at the end of court yesterday
14 the parties did confer; and we agreed that
15 neither party would speak to their witnesses
16 during the pendency of their examinations.

17 SPECIAL MASTER LANCASTER: Thank you
18 very much.

19 REDIRECT EXAMINATION

20 BY MS. WINE:

21 Q. Good morning, Mr. Hoehn.

22 A. **Good morning.**

23 Q. Welcome back.

24 I wanted to just jump right in and pick up
25 where we left off yesterday. Georgia's counsel

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1 showed you some declarations and other documents
2 that Florida submitted -- that you and Florida
3 submitted in prior litigations. Do you recall
4 that?

5 A. **Yes, I do.**

6 Q. And I showed you documents from the Northern
7 District of Alabama case?

8 A. **Yes.**

9 Q. And from the tri-state water case in Florida?

10 A. **Correct.**

11 Q. And he suggested that in those documents, you and
12 others from Florida blamed only the Army Corps
13 for the harm to the Apalachicola River. Do you
14 recall that?

15 A. **Yes, I do.**

16 Q. And before we look again at those documents,
17 Mr. Hoehn, you said yesterday that you believed
18 the threat to the Apalachicola River is low
19 flows. Is that correct?

20 A. **That is correct.**

21 Q. And, in fact, the impact of low flows on the
22 Apalachicola River is the subject of your
23 testimony in this litigation. Correct?

24 A. **That is correct.**

25 Q. And it was the subject of your prefiled direct

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1 testimony that you submitted in this case.
 2 Correct?
 3 **A. Correct.**
 4 **Q.** And if we can just take a look at that, do you
 5 still have that in front of you along with the
 6 binder?
 7 **A. Yes.**
 8 **Q.** Okay. So for the moment, if you can just put
 9 your prefiled direct testimony in front of you
 10 dated October 26, 2016.
 11 **A. Yes.**
 12 **Let me move some of these down. I hope that**
 13 **didn't make any noise on the microphone.**
 14 **Q.** Do you have that in front of you?
 15 **A. Yes, I do.**
 16 **Q.** And if you could, sir, please turn to page 1 of
 17 that document. And, sir, you will see first in
 18 paragraph 3 you say that your testimony will
 19 describe the beauty and the majesty of the river,
 20 its floodplain, and its habitats. Do you see
 21 that?
 22 **A. Yes, I do.**
 23 **Q.** And then you go in paragraph 4, sir, to say that
 24 your testimony will address how adequate river
 25 flows and floodplain connectivity are essential

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1 to maintain the health of the many unique
 2 habitats within the Apalachicola and the species
 3 that depend on those habitats?
 4 **A. Yes, I do.**
 5 **Q.** And what do you mean by that, whatever you were
 6 referencing when you say adequate river flows and
 7 floodplain connectivity?
 8 **A. Without flowing water, the fish, wildlife, and**
 9 **the habitat will not survive. Water is the**
 10 **lifeblood. Without -- without water, it's like**
 11 **we cannot breathe. And so that is why, you know,**
 12 **during low flows it's exceedingly important that**
 13 **we have enough water to cover these habitats to**
 14 **provide for the full range of species that**
 15 **inhabit both the river and the floodplain.**
 16 **Q.** And that same topic, the impact of low flows on
 17 the Apalachicola River, was also the focus of
 18 your two prior declarations that Georgia's
 19 counsel showed you yesterday; is that correct?
 20 **A. That is correct.**
 21 **Q.** And if we -- if you could take your binder now
 22 that counsel gave you yesterday, and if you
 23 could, sir, turn to tab 5. And that is the
 24 declaration that you submitted in 2006 in the
 25 Alabama litigation.

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1 Let me know when you're there, sir.
 2 **A. I'm there.**
 3 **Q.** Okay. And if you could just look at the first
 4 page of that declaration in paragraph 2, the
 5 second sentence, just confirming what you just
 6 stated that the purpose of this declaration is to
 7 explain how certain flows in the Apalachicola
 8 River impact species reliant for various life
 9 functions on the Apalachicola River and Bay
 10 ecosystems. Do you see that, sir?
 11 **A. Yes, I do.**
 12 **Q.** And what did you mean by that?
 13 **A. Once again, you know, it is the flows that are**
 14 **needed to preserve and protect the full suite of**
 15 **all the habitats of all the species that occur**
 16 **within the Apalachicola River and Bay system.**
 17 **Q.** And, sir, now, if you could turn to tab 8 in
 18 the binder that Georgia gave you yesterday. And
 19 tab 8 is the declaration that you submitted in
 20 the tri-state water case in Florida in 2007. And
 21 when you're there, sir, if you could, I want to
 22 direct you this time to page 6, paragraph 20.
 23 And there, sir -- are you there?
 24 **A. Yes, I am.**
 25 **Q.** There, sir, you say at the start of paragraph 20

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1 that the Apalachicola River has endured its
 2 longest period of sustained low flow in recorded
 3 history. Do you see that, sir?
 4 **A. Yes, I do.**
 5 **Q.** And why did you include that sentence in this
 6 declaration?
 7 **A. Because at the time in 2007, we had seen flows**
 8 **close to 5,000 cfs, which is unprecedented on the**
 9 **system. Prior to that we rarely ever saw it for**
 10 **more than, you know, a day or more. I don't have**
 11 **the full history in front of me.**
 12 **But when you get down to those low flows,**
 13 **things dry up, both -- and by things I mean**
 14 **habitat along the river critical to the full**
 15 **range of mussels, not just the endangered ones.**
 16 **The sloughs dry up. Fish no longer can survive**
 17 **that are in the sloughs. Dissolved oxygen in the**
 18 **sloughs goes down to zero. Life -- aquatic life**
 19 **is -- cannot survive. So it dries up everything.**
 20 **Q.** And, sir, since 2007, has the Apalachicola River
 21 experienced these same kind of persistent and
 22 extreme low flows that you were describing in
 23 this 2007 declaration?
 24 **A. Yes, they have.**
 25 **Q.** And what have you observed in that regard?

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1 **A. We have seen substantial drying of bank habitat.**
 2 **We have seen substantial mortality of a full**
 3 **range of mussel species up and down the system.**
 4 **We have seen drying of the sloughs, some that,**
 5 **you know, hadn't gone dry before. We have seen**
 6 **changes in the -- and if you need an explanation,**
 7 **I can give it -- but in year classes of various**
 8 **fish that we have been monitoring for over 10**
 9 **years. And we have seen the decrease in those**
 10 **populations of those year classes. We have seen**
 11 **species of trees that are more tolerant of upland**
 12 **conditions migrating into the floodplain. And we**
 13 **have also seen parts of the floodplain that used**
 14 **to be wide open that would be muddy or, you know,**
 15 **full of cypress trees starting to come up with**
 16 **grasses, which is not usual in a floodplain.**
 17 **Q.** And, sir, these observations and these extreme
 18 low flows have all occurred since Florida stopped
 19 the dredging activities in 2000 -- well, around
 20 2000 and then officially in 2005. Correct?
 21 **A. That is correct.**
 22 **Q.** And it's all occurred during the period that the
 23 river has otherwise shown recovery from those
 24 prior Corps activities. Correct?
 25 MR. PRIMIS: Your Honor, I'm -- your
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1 Honor.
 2 SPECIAL MASTER LANCASTER: Yes?
 3 MR. PRIMIS: Sorry to interrupt. I have
 4 been patient, but the -- counsel is leading;
 5 and I object.
 6 SPECIAL MASTER LANCASTER: Counsel?
 7 MS. WINE: Can I continue?
 8 Sir, I'm just recounting testimony that
 9 he gave yesterday. I'm just trying to move
 10 things along. He testified yesterday that
 11 the dredging activity stopped and --
 12 officially in 2005. The actual activity had
 13 actually stopped in 2000. And I'm just going
 14 through that again with him.
 15 SPECIAL MASTER LANCASTER: Proceed.
 16 MS. WINE: Thank you.
 17 BY MS. WINE:
 18 **Q.** Now, Georgia's counsel yesterday directed you to
 19 language in your prior declaration where you said
 20 that the Corps operations have the potential to
 21 impact dramatically and directly the well-being
 22 of the river ecosystem because the Corps operates
 23 upstream dams and reservoirs that release water
 24 contributing to the flow of the Apalachicola
 25 River.
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1 Do you recall that questioning?
 2 **A. Yes, I do.**
 3 **Q.** And, sir, have you ever stated in these
 4 declarations or otherwise that the Army Corps
 5 operations are the only cause of low flows to the
 6 Apalachicola River?
 7 **A. No.**
 8 **Q.** And what else can impact the flow of water to the
 9 Apalachicola River?
 10 **A. The flows into the Apalachicola River are**
 11 **governed by both the Corps operations of the**
 12 **dams, but also as -- going back into the -- into,**
 13 **you know, the early '80's, Florida and my**
 14 **observations and participations in various**
 15 **meetings have always indicated and focused on**
 16 **consumptive use in the upstream portions of the**
 17 **basin, which include, as we used to call in the**
 18 **Comprehensive Study, the pipes, which is**
 19 **municipal and industrial demand, and agriculture,**
 20 **agricultural irrigation. And both of these**
 21 **significantly impact the amount of water that is**
 22 **available to come down into the Apalachicola**
 23 **system.**
 24 **Q.** And, sir, where does the water come down from
 25 into the Apalachicola River system?
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1 If it would be helpful to use the map, please
 2 feel free.
 3 That one might not show it precisely.
 4 **A. Yes.**
 5 **Q.** We had another one up yesterday as well.
 6 But the best you can describe for the Special
 7 Master, where are the sources of water that are
 8 flowing into the Apalachicola River?
 9 **A. The Chattahoochee, which starts in the mountains**
 10 **of north Georgia, which flows through Atlanta and**
 11 **goes through the federal reservoirs and then**
 12 **joins along the Florida, Georgia, Alabama line**
 13 **over on the west. And then you have the Flint**
 14 **River which, if you look at Lake Seminole and how**
 15 **it's going -- kind of going off to the east, the**
 16 **Flint River actually starts just south of the**
 17 **Atlanta Regional Airport and then flows down**
 18 **through the State of Georgia. They combine to --**
 19 **right here at Lake Seminole to form the**
 20 **Apalachicola River.**
 21 **Q.** And the federally operated dams that we have been
 22 talking about, which river are they along?
 23 **A. They're along the Chattahoochee.**
 24 **Q.** And are there any federally operated dams along
 25 the Flint River?
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1 **A. None.**
 2 **Q.** So what happens from any unconsumed water that's
 3 flowing down the Flint River? Where does it go?
 4 **A. It comes straight into Lake Seminole. And then,**
 5 **because Jim Woodruff is what is considered a run**
 6 **of the river, which means whatever comes in, goes**
 7 **out, it comes into Lake Seminole and then will**
 8 **come into the Apalachicola River.**
 9 **Q.** So any unconsumed water from the Flint River
 10 comes straight into the Apalachicola River?
 11 **A. Correct.**
 12 **Q.** Now, I think you just said that historically you
 13 and others in Florida have been focused on
 14 Georgia's consumptive use in addition to Corps
 15 operations when talking about flows into the
 16 Apalachicola River; is that correct?
 17 **A. That is correct.**
 18 **Q.** And what do you recall about meetings or other
 19 events dating back to the early '80's, I think
 20 you just said, where you and Florida were focused
 21 on Georgia's consumptive use?
 22 **A. In the 1980's we had -- and this is when I first**
 23 **started; and it was, you know, only for a brief**
 24 **amount of time, there was a -- what was then**
 25 **called a 308 study, which was the precursor to**

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1 **process, we looked at all the other basin**
 2 **Commissions around the country and decided we**
 3 **really didn't want to have litigation. And so**
 4 **there was an open-ended allocation formula that**
 5 **was to be determined. And that was the sticking**
 6 **point. And the States tried and could not come**
 7 **up with an agreeable allocation formula, at which**
 8 **point the Compact ended.**
 9 **Q.** And, sir, you participated in these Compact
 10 negotiations?
 11 **A. I was not a direct member of the negotiating**
 12 **team.**
 13 **Q.** What was your role in connection with the Compact
 14 negotiations?
 15 **A. My role was strictly as various proposals were**
 16 **developed by the three states, including Florida,**
 17 **is to take a look at what was being proposed and**
 18 **then coordinate our agency's review to determine**
 19 **what the biological effects of whatever the**
 20 **proposal was and provide that back to the**
 21 **negotiators.**
 22 **Q.** And do you recall approximately what time period
 23 over which these negotiations took place?
 24 **A. Precisely, no.**
 25 **Q.** Roughly late '90's, early 2000's?

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1 **the Comprehensive Study and Compact which looked**
 2 **at what to do during droughts and how water could**
 3 **be adjusted and, again, conserved in the upstream**
 4 **basin to provide water for everyone's needs.**
 5 **Again, it was pre-Compact. It failed.**
 6 **In 1989, 1990, which is when we started the**
 7 **Alabama case and then the Comprehensive Study,**
 8 **the main focus of that was what is being used,**
 9 **what is being consumed. And, you know, that took**
 10 **up, I would say, a good 60 to 75 percent of**
 11 **almost every single meeting.**
 12 **Q.** And, sir, you have mentioned the Comprehensive
 13 Study and then the ACF Compact. Because we're
 14 still at the start of this litigation, can you
 15 just tell us all what the ACF Compact was?
 16 **A. The ACF Compact actually was signed. It was an**
 17 **agreement by the three states with the federal**
 18 **government -- and there is a term for it, which I**
 19 **cannot remember; but it was Mr. Lindsey**
 20 **represented the federal government in the**
 21 **meetings where the three states decided that it**
 22 **was in their best interests to try and come up**
 23 **with an equitable apportionment of water for the**
 24 **entire system.**

One of the things that -- when we started the
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1 **A. They would have been in -- let's see. The**
 2 **Compact ran, I think, for five years; so that**
 3 **would have been mid-'90's to early 2000,**
 4 **somewhere in that time frame, give or take a**
 5 **couple years.**
 6 **Q.** And you recall that Georgia's upstream
 7 consumption was part of these Compact
 8 negotiations?
 9 **A. Absolutely.**
 10 **Q.** Now, sir, before we leave this topic, I just want
 11 to make sure one thing is clear. Having looked
 12 at the prior declarations you submitted in the
 13 earlier litigations, do you think that any of the
 14 statements you made in those declarations or
 15 otherwise are in any way inconsistent with the
 16 assertion here that Georgia's consumption is
 17 contributing to the persistent and extreme low
 18 flows on the Apalachicola River?
 19 MR. PRIMIS: Your Honor, I just want to
 20 place a leading objection.
 21 SPECIAL MASTER LANCASTER: Sustained.
 22 BY MS. WINE:
 23 **Q.** Sir, having looked at the prior declarations that
 24 you submitted in those earlier litigations, is
 25 there anything that is of concern to you as you

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1 testify here today?

2 **A. What I have testified to in the previous ones,**

3 **the underlying factor in those is it's low flows.**

4 **And when, in the original Alabama case -- and**

5 **this was why I asked counsel to help me remember**

6 **which one this was about -- that was about**

7 **consumptive use -- changes in consumptive use in**

8 **the State of Georgia out of Lake Lanier. So**

9 **anything that I have talked about when I say**

10 **Corps operations, it always included the amount**

11 **of water that was being consumed and was not**

12 **available to the Corps as they were trying to**

13 **deal with their operations coming down the**

14 **system.**

15 **Q.** Now, sir, yesterday you were also asked questions

16 about your definition of harm. Do you recall

17 that?

18 **A. Yes.**

19 **Q.** And, sir, as a biologist for Florida Fish and

20 Wildlife, do you think about harm as impact to a

21 single species?

22 **A. Not at all. The Fish and Wildlife Commission, as**

23 **a constitutional agency in the State of Florida,**

24 **has what is called a State Wildlife Action Plan.**

25 **And one of the tenets of that program is keeping**

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1 **common species common. And as such, it is our**

2 **agency's and my responsibility's goal to work to**

3 **make sure species do not get on the endangered**

4 **species list, both state or federal, and that we**

5 **work to preserve, protect, and do what we can to**

6 **prevent harm from occurring to the full range of**

7 **species.**

8 **Q.** And, sir, yesterday Georgia's counsel directed

9 you to the U.S. Fish and Wildlife Service's 2016

10 biological opinion. Do you recall that?

11 **A. Yes.**

12 **Q.** And what is your understanding of what a

13 biological opinion is?

14 **A. The biological opinion in general is -- a federal**

15 **agency has an action that may affect federally**

16 **listed species. U.S. Fish and Wildlife Service**

17 **will then evaluate that action to determine if it**

18 **is going to cause the extinction or jeopardy of**

19 **those listed species that occur in that action**

20 **area. In this particular case, it's the Gulf**

21 **sturgeon, purple bankclimber, the fat threeridge,**

22 **and the Chipola fatshell. If they do not find**

23 **that it will -- action will cause the extinction**

24 **of the species or jeopardy, then they need to**

25 **make a determination, you know, will it have any**

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1 **significant impact on the species at all, which**

2 **is called a finding of no significant impact. If**

3 **it falls in between, then they have to determine**

4 **how much harm is being done to that species by**

5 **that federal action and then authorize how many**

6 **are allowed to be killed or taken by that federal**

7 **action.**

8 **Q.** And, sir, does the biological opinion address

9 common species in the way that you described

10 common species as something that Florida was

11 concerned with?

12 **A. The only place where they deal with any sort of**

13 **common species are what are called fish hosts for**

14 **the mussels and to some extent some of the**

15 **floodplain in the very lower part of the river,**

16 **but the vast majority of it strictly dealing with**

17 **the four endangered species. None of the other**

18 **species.**

19 **Q.** And, sir, the biological opinion is quite a

20 lengthy document. I'm going to ask you a

21 question that maybe is a memory test. Do you

22 know whether the 2016 biologic opinion addresses

23 the impact of low flows on the species that are

24 the subject of that opinion?

25 **A. Yes, it does.**

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1 **Q.** And do you recall where or in what fashion it

2 references low flows?

3 **A. I would have to -- I would have to look in parts**

4 **of it. But they have various metrics they have**

5 **developed for both the sturgeon and the mussel**

6 **species. And as part of those metrics, they look**

7 **at various flow scenarios. And some of those are**

8 **low flows.**

9 **Q.** And, sir, do you recall whether the 2016

10 biological opinion addresses upstream consumptive

11 uses?

12 **A. Yes, it does. And what it says --**

13 SPECIAL MASTER LANCASTER: Excuse me,

14 Mr. Hoehn.

15 THE WITNESS: Yes?

16 SPECIAL MASTER LANCASTER: The question

17 is do you recall. The answer is yes?

18 THE WITNESS: Yes.

19 BY MS. WINE:

20 **Q.** And, sir, what do you recall about that?

21 **A. The section under -- may I look at it?**

22 **Q.** Sure.

23 **A. I can find it through the introduction.**

24 **Under the conservation recommendations, and**

25 **that will be on pages 203, specifically bullets 8**

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1 **and 9 and 10, it talks about the need to address**
 2 **upstream impacts from both municipal,**
 3 **agricultural, and industrial water users and to**
 4 **reduce those consumptive uses to develop drought**
 5 **response strategies. Further, to minimize water**
 6 **consumption, thus minimizing detrimental effects**
 7 **to the species. And then as the last bullet**
 8 **indicates, to work as part of system operations**
 9 **to include estimates of basin inflow and**
 10 **consumptive demands.**
 11 **Q.** Thank you.
 12 Now, sir, yesterday you were asked a number
 13 of questions regarding the mussel populations
 14 that are addressed in this 2016 biological
 15 opinion. And you stated that Florida is
 16 continuing to investigate and monitor the status
 17 of those mussels. Why is that?
 18 **A. The State of Florida has initiated over the past**
 19 **two years long-term monitoring of all the mussel**
 20 **species in various rivers. It started over in**
 21 **the Suwannee River system to the east of the**
 22 **Apalachicola and has moved into the Apalachicola**
 23 **system over the past two years.**
 24 **And, again, the long-term monitoring program**
 25 **is much like what we do in fisheries research is**
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1 **to see what is happening with the full suite of**
 2 **species that occur within the system and to help**
 3 **identify changes in populations or changes in**
 4 **abundance of a particular species or suite of**
 5 **species, and then, if we do see changes, to then**
 6 **look at, you know, with other people, why this is**
 7 **happening.**
 8 **Q.** And are there still threats to the mussel species
 9 on the Apalachicola River?
 10 **A. Yes.**
 11 **Q.** And what are those due to?
 12 **A. The primary threat right now is low flow. And**
 13 **as part of that low flow that is not just related**
 14 **to the common species, but is identified by the**
 15 **U.S. Fish and Wildlife Service, it is upstream**
 16 **consumptive use.**
 17 **Q.** Now, yesterday you were also talked -- asked
 18 about harm to the Gulf sturgeon. Do you recall
 19 that?
 20 **A. Yes.**
 21 **Q.** And there was a lot of discussion about harm to
 22 their spawning ground area. Correct?
 23 **A. Yes.**
 24 **Q.** Are there other harms to the Gulf sturgeon other
 25 than the harms you discussed yesterday
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1 surrounding their spawning areas?
 2 **A. Yes.**
 3 **Q.** And what are those?
 4 **A. The time between when the eggs hatch and they're**
 5 **barely free-swimming, which is called young of**
 6 **the year, or, you know, during the age one time**
 7 **period, it's somewhat of a black box that no one**
 8 **really knows exactly what's happening with these**
 9 **species. But what we do know is that they will**
 10 **migrate down to the delta and the distributaries**
 11 **down towards Apalachicola Bay.**
 12 **And they are extremely intolerant of higher**
 13 **salinities. So when they are down there feeding,**
 14 **if you have low flows, salinities in those**
 15 **distributaries increase, it can kill those**
 16 **first-year sturgeon.**
 17 **The other aspect that there is potential harm**
 18 **is what is happening after they reach that**
 19 **first-year time period. And what we are finding**
 20 **right now is that they seem to be -- and this is**
 21 **brand new research that is going on -- they seem**
 22 **to be holding in a particular part of the river**
 23 **that is a loop stream, which I described**
 24 **yesterday, that if you don't get enough flow**
 25 **through that loop stream, then, once again, you**
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1 **have changes in the habitat within that area.**
 2 **Q.** Now, sir, you were also asked yesterday about
 3 Swift Slough. Do you recall that?
 4 **A. Yes.**
 5 **Q.** And in particular you were asked about changes in
 6 the controlling sill at Swift Slough?
 7 **A. Correct.**
 8 **Q.** Sir, do you know what a geomorphologist is?
 9 **A. Yes.**
 10 **Q.** And what is it?
 11 **A. That is a person who has expertise in looking at**
 12 **rivers and looking at how the river moves back**
 13 **and forth and what happens with the**
 14 **sedimentation. That's my layman's term.**
 15 **Q.** And just so I make sure I'm on the same page,
 16 would a geomorphologist look at sill levels?
 17 **A. Yes.**
 18 **Q.** And you're not a geomorphologist. Correct?
 19 **A. Absolutely not.**
 20 **Q.** And do you understand that Florida has an expert
 21 in geomorphology testifying in this case?
 22 **A. Yes.**
 23 **Q.** And who is that?
 24 **A. Dr. Mat Kondolf.**
 25 **Q.** All right. Now, you have seen yourself Swift
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1 Slough dry up. Correct?

2 **A. Yes, I have.**

3 **Q.** Or become disconnected?

4 **A. Correct.**

5 **Q.** And under what conditions have you seen that

6 occur?

7 **A. Under low flow conditions.**

8 **Q.** And are there other sloughs along the

9 Apalachicola River other than Swift Slough?

10 **A. There are many sloughs up and down the system,**

11 **yes.**

12 **Q.** And have you observed other sloughs become

13 disconnected or dry up?

14 **A. Yes.**

15 **Q.** And have you seen other sloughs become

16 disconnected or dried up that are not surrounded

17 by the areas of prior dredging in the way that

18 Swift Slough was?

19 **A. Yes.**

20 **Q.** And have you seen other sloughs dry up at levels

21 around 5,000 or 5500 cfs?

22 MR. PRIMIS: Objection, your Honor.

23 Leading.

24 SPECIAL MASTER LANCASTER: Sustained.

25 BY MS. WINE:

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1 **Q.** Sir, do you have examples of other sloughs that

2 have dried up in low flow conditions?

3 **A. Yes, I have.**

4 **Q.** And can you think of some of those examples here?

5 **A. There is a wide range of sloughs that dry up**

6 **depending upon various water levels, which is --**

7 **and you asked specifically about 5,000 or**

8 **thereabouts. You have several unnamed sloughs**

9 **that are north of Wewahitchka -- hopefully, the**

10 **court reporter remembers how to spell that --**

11 **which is right in the middle reach of the river,**

12 **just above the middle reach of the river, that**

13 **flow into what is called Florida River system,**

14 **which is a tributary of the Apalachicola. There**

15 **are sloughs that are down towards where the**

16 **Chipola River comes in several miles south of**

17 **where Sand Mountain is located -- several miles**

18 **south -- that connect the floodplain between the**

19 **Apalachicola and the Chipola.**

20 **But there's, you know, a very long list of**

21 **sloughs where this happens.**

22 **Q.** Sir, you spent 30 years or so working in and

23 around the Apalachicola River; is that correct?

24 **A. That is correct.**

25 **Q.** And why have you dedicated your professional

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1 career to the river?

2 **A. I got lucky, quite frankly. It is one of the**

3 **most unique river systems in the Southeast.**

4 **It -- it's unlike any others that I have visited;**

5 **and the species diversity that is found on the**

6 **system, it's recognized by the United Nations.**

7 **But when you walk it, changing from upper river**

8 **where you see the steep heads and the springs,**

9 **all the way down to, you know, where you have the**

10 **tidal areas where all the massive tupelo trees**

11 **are, it's beautiful.**

12 **Q.** Thank you, sir.

13 MS. WINE: I have no further questions,

14 your Honor.

15 MR. PRIMIS: May I have a very brief

16 recross, your Honor?

17 SPECIAL MASTER LANCASTER: Please.

18 RE-CROSS-EXAMINATION

19 BY MR. PRIMIS:

20 **Q.** Just to -- to facilitate this and make it go

21 quicker, I just have two documents I want to

22 point to. And neither of them are in the binder,

23 but I handed them up yesterday.

24 One is your supplemental declaration dated

25 April 10, 2006, from the Northern District of

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1 Alabama case. Do you have that, sir?

2 **A. Document 437?**

3 **Q.** Yes, sir.

4 **A. Okay. Yes.**

5 MR. PRIMIS: And, your Honor, I can just

6 put these on the screen for you so it's

7 easier -- oh, you have got it. Great.

8 BY MR. PRIMIS:

9 **Q.** And the other -- did I give you your deposition

10 from the 2006 litigation?

11 Do you have that, sir?

12 **A. Yes, I have it right here.**

13 **Q.** Okay. Just keep that handy.

14 **A. Okay.**

15 **Q.** Mr. Hoehn, I want to ask you some very specific

16 and carefully worded questions. In the ACF

17 Basin, you would describe the rivers there in an

18 altered and managed state. Correct?

19 **A. From -- are you referring to something that I**

20 **said back in 2006?**

21 **Q.** I'm asking you; have you ever referred to the

22 Corps -- the river system here as an altered and

23 managed state?

24 **A. I probably did.**

25 **Q.** And you would agree with me, sir, that Corps

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1 operations in this altered and managed state are
 2 the primary factor in flows coming down the
 3 Apalachicola. True?
 4 **A. If it occurred within this 2006 time period, I**
 5 **would probably have said yes.**
 6 **Q.** And one other factor that can affect flows in the
 7 Apalachicola is insufficient rainfall. True?
 8 **A. Rainfall affects the flows, yes.**
 9 **Q.** As well as water being stored in the system; that
 10 can affect the flows, too. Correct?
 11 **A. Yes.**
 12 **Q.** Mr. Hoehn, can you take out your declaration now.
 13 This is dated April 10, 2006, document 437.
 14 And in this declaration Mr. --
 15 **A. Pardon me. Which declaration are we talking**
 16 **about?**
 17 **Q.** The April 2006 one that I asked you to take out,
 18 supplemental declaration.
 19 **A. Okay. Thank you.**
 20 **Q.** Are you there?
 21 **A. Yes.**
 22 **Q.** Excellent. In this April 2006 declaration in
 23 paragraph 10, you told a federal court under oath
 24 that the Corps has been retaining water in the
 25 upstream reservoirs, primarily Lake Lanier, while

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1 reducing releases to the Apalachicola River.
 2 Did you say that, sir?
 3 **A. Yes, I did.**
 4 **Q.** In paragraph 11, you said in the third sentence
 5 that the Corps operations are reducing
 6 appreciably the value of designated Gulf sturgeon
 7 critical habitat.
 8 Did you make that statement under oath, sir?
 9 **A. Can you point me to that section again, please.**
 10 **Q.** Certainly. It's paragraph 11.
 11 **A. Okay.**
 12 **Q.** At the bottom of the page, the sentence starting,
 13 the Corps operations.
 14 **A. Paragraph 11. Okay. Yes, I do see that.**
 15 **Q.** Did you make that statement to a federal court
 16 under oath?
 17 **A. Yes, I did.**
 18 **Q.** And the date on this, if we could put up the
 19 picture from Mr. Hoehn's direct written testimony
 20 of the mussels in Swift Slough.
 21 Okay. Now, this declaration where you were
 22 telling the federal court that the Corps is
 23 retaining water while reducing releases to the
 24 river, that -- this was submitted three months
 25 before you took the picture depicted of the

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1 mussels in Swift Slough that's on the screen
 2 right now. Correct?
 3 **A. Correct.**
 4 MR. PRIMIS: No further questions.
 5 SPECIAL MASTER LANCASTER: Redirect,
 6 counsel?
 7 MS. WINE: No thanks, your Honor.
 8 SPECIAL MASTER LANCASTER: Mr. Hoehn,
 9 you testified that you were involved in some
 10 way with the Compact.
 11 THE WITNESS: Yes, sir.
 12 SPECIAL MASTER LANCASTER: And was the
 13 Compact a good thing in your opinion?
 14 THE WITNESS: It was a hope. And we had
 15 great hopes for it, yes.
 16 SPECIAL MASTER LANCASTER: Why did it
 17 fail?
 18 THE WITNESS: May I use an example?
 19 SPECIAL MASTER LANCASTER: Certainly.
 20 THE WITNESS: At the start of a lot of
 21 the negotiations and a lot of the studies,
 22 there was an effort by the three states and
 23 the federal government to try and work
 24 together. And this may not seem like much,
 25 but in order to try and build trust, we

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1 played volleyball. When Georgia put out its
 2 first straw man which set out its position,
 3 those volleyball games stopped. Trust was
 4 lost. And people in my opinion, the
 5 negotiators, became less trusting of each
 6 other.
 7 And, you know, the staff tried to work
 8 together; but in the end, it came down to
 9 a -- this is -- this is the way it's going to
 10 be. My position. Florida passed, and they
 11 could not come to a agreement.
 12 SPECIAL MASTER LANCASTER: In your
 13 opinion, if the Compact had continued, would
 14 the problems have been solved?
 15 THE WITNESS: I think if -- the biggest
 16 stumbling block on the Compact was the fact
 17 that Florida, from the very beginning,
 18 discussed with the State of Georgia and the
 19 State of Alabama that setting state line
 20 flows, flows at Jim Woodruff Dam coming out
 21 or being targeted at the Chattahoochee Gage,
 22 which is how we measure how much water is
 23 coming down the system, that that wasn't
 24 enough to protect the system, that we were
 25 deeply concerned that those flows would

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1 become actual, this is all you're going to
 2 get and no more, that they would become
 3 targets when what we wanted was variable flow
 4 because that's how the system works.
 5 We also recognized that the only way
 6 that you can ensure that you have got those
 7 variable flows was that there was enough
 8 water in the system that the Corps of
 9 Engineers could operate it. Georgia could
 10 consume some; but there had to be caps on how
 11 much consumption was occurring, whether it be
 12 up in Atlanta or with agriculture.
 13 And agriculture was -- it was a big
 14 unknown during that time. There were a lot
 15 of discussions and lots of modelers going
 16 back and forth.
 17 So -- am I answering your question, sir?
 18 SPECIAL MASTER LANCASTER: No.
 19 THE WITNESS: Okay. How can I -- can
 20 you restate it so I can better answer it?
 21 SPECIAL MASTER LANCASTER: Madam
 22 reporter, would you read the witness the
 23 question.
 24 (The reporter read the requested question.)
 25 THE WITNESS: Part of -- part of the
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1 problems would have been solved.
 2 SPECIAL MASTER LANCASTER: Which part?
 3 THE WITNESS: The day-to-day here is
 4 what would be allowed to come down the river.
 5 What happens during drought? That was
 6 another big sticking point.
 7 SPECIAL MASTER LANCASTER: Thank you.
 8 Mr. Hoehn, are you familiar with the ACF
 9 Stakeholders Sustainable Water Management
 10 Plan?
 11 THE WITNESS: I know of it. I was not
 12 part of it. I have seen it, but I have not
 13 reviewed it.
 14 SPECIAL MASTER LANCASTER: Thank you.
 15 Mr. Primis?
 16 MR. PRIMIS: No more questions, your
 17 Honor.
 18 SPECIAL MASTER LANCASTER: Ms. Wine?
 19 MS. WINE: No more questions, your
 20 Honor.
 21 SPECIAL MASTER LANCASTER: Thank you.
 22 THE WITNESS: Thank you, sir.
 23 MR. PRIMIS: Your Honor, if I might, I
 24 was remiss. I meant to introduce my
 25 colleague Josh Mahoney who has been helping
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1 me with Mr. Hoehn's cross-examination. I
 2 wanted to make sure he was recognized.
 3 SPECIAL MASTER LANCASTER: Good morning.
 4 MR. MAHONEY: Thank you.
 5 MS. WINE: Your Honor, would you like us
 6 to call the next witness or did you want to
 7 take a morning break yet?
 8 SPECIAL MASTER LANCASTER: I think we
 9 should call the next witness.
 10 MS. WINE: Certainly.
 11 And, your Honor, we're calling Mr. David
 12 Struhs to the stand. He was the secretary of
 13 the Florida Department of Environmental
 14 Protection from 1999 to 2004.
 15 THE CLERK: Please raise your right
 16 hand.
 17 Do you solemnly swear that the testimony
 18 you will give in the cause now in hearing
 19 will be the truth, the whole truth, and
 20 nothing but the truth, so help you God?
 21 THE WITNESS: I do.
 22 THE CLERK: If you could please be
 23 seated.
 24 State your full name and spell it for
 25 the record, please.
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1 THE WITNESS: My name is David B.
 2 Struhs. The last name is S T R U H S.
 3 MS. WINE: Your Honor, may I approach to
 4 provide the witness a copy of his prefiled
 5 direct testimony?
 6 SPECIAL MASTER LANCASTER: Yes.
 7 DIRECT EXAMINATION
 8 BY MS. WINE:
 9 Q. Good morning, Mr. Struhs. I have provided you a
 10 copy of the prefiled direct testimony that you
 11 submitted in this case. It is dated October 14,
 12 2016. Do you recognize that testimony?
 13 A. Yes.
 14 Q. And do you adopt everything in that testimony?
 15 A. Yes.
 16 Q. Thank you, sir.
 17 MR. PRIMIS: Your Honor, we have prepared
 18 a binder of the documents for Mr. Struhs's
 19 cross-examination. May I approach?
 20 SPECIAL MASTER LANCASTER: Please.
 21 THE WITNESS: Thank you.
 22 SPECIAL MASTER LANCASTER: Thank you.
 23 CROSS-EXAMINATION
 24 BY MR. PRIMIS:
 25 Q. Good morning, Mr. Struhs. I would like to begin
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1 by pinning down the time frame discussed in your
 2 testimony. Okay?
 3 **A. Yes.**
 4 **Q.** Your written testimony concerns the Comprehensive
 5 Study and the ACF Compact negotiations. Correct?
 6 **A. Correct.**
 7 **Q.** And the Comprehensive Study was a joint effort by
 8 Florida, Alabama, and Georgia. True?
 9 **A. True.**
 10 **Q.** It was intended to assess the existing and future
 11 water resource needs of the states within the ACF
 12 and ACT Basins. Correct?
 13 **A. Yes.**
 14 **Q.** And it was also to look at the extent of water
 15 resources available within each basin. Right?
 16 **A. Yes.**
 17 **Q.** Now, the ACF Compact was enacted by Florida,
 18 Alabama, and Georgia and passed into law by the
 19 United States Congress. Correct?
 20 **A. Yes.**
 21 **Q.** It created a process for the negotiation of an
 22 allocation of the waters of the ACF Basin among
 23 Florida, Alabama, and Georgia. Correct?
 24 **A. Correct.**
 25 **Q.** Now, the Comprehensive Study began after Georgia,

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1 Florida, and Alabama and the Army Corps signed a
 2 Memorandum of Agreement in 1992. Correct?
 3 **A. I believe so, yes.**
 4 **Q.** And that was about 25 years ago. True?
 5 **A. True.**
 6 **Q.** The ACF Compact was passed into law in 1997.
 7 Right?
 8 **A. That's correct.**
 9 **Q.** And that was almost 20 years ago. Right?
 10 **A. Yes.**
 11 **Q.** And the ACF Compact expired in August of 2003.
 12 Right?
 13 **A. That's correct.**
 14 **Q.** And so that expired almost 15 years ago. Right?
 15 **A. Yes.**
 16 **Q.** Now, there was an 11-year window between the
 17 start of the Comprehensive Study in '92 and the
 18 expiration of the Compact in 2003. True?
 19 **A. Yes.**
 20 **Q.** And you began working for the State of Florida in
 21 1999. Right?
 22 **A. Yes.**
 23 **Q.** So you weren't present for any of the
 24 negotiations or discussion between Georgia and
 25 Florida before you came to work for Florida in

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1 1999. Right?
 2 **A. Yes.**
 3 **Q.** You stopped working for the State of Florida in
 4 2004. Correct?
 5 **A. Yes.**
 6 **Q.** And you were not personally involved in any
 7 negotiations or discussions that happened after
 8 you left state government in 2004. True?
 9 **A. Correct.**
 10 **Q.** In paragraph 15 of your direct examination, your
 11 testimony, you described something called a "live
 12 and let live" provision from the Compact. Do you
 13 recall that?
 14 **A. Yes.**
 15 **Q.** And in paragraph 15 you testified that the
 16 Compact included the same "live and let live"
 17 provision contained in the 1992 MOA, which
 18 disallowed any, quote, permanent, vested, or
 19 perpetual rights to the amounts of water used
 20 between January 3, 1992, and the date on which
 21 the Commission adopts an allocation formula.
 22 Do you see that?
 23 **A. I do.**
 24 **Q.** And you signed FX-209, which is the actual
 25 document, the Compact; right?

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1 **A. I believe so, yes.**
 2 **Q.** Okay. Now, I'm going to put your description of
 3 the "live and let live" provision up on the
 4 screen.
 5 MR. PRIMIS: Mr. Smith, do you have that
 6 slide?
 7 BY MR. PRIMIS:
 8 **Q.** Okay. Now, your -- in paragraph 15 of your
 9 testimony you said that the Compact disallowed
 10 any permanent, vested, or perpetual rights. Yes?
 11 **A. One moment, please.**
 12 **Q.** Sure.
 13 **A. Yes, sir.**
 14 **Q.** Disallowed is the term you used. Right?
 15 **A. Yes, it is.**
 16 **Q.** Okay. Now, you didn't quote the whole sentence
 17 from which that provision comes. Right?
 18 You started it in the middle after you said
 19 disallowed. Correct?
 20 **A. That's correct.**
 21 **Q.** And we have put up on the other side the actual
 22 Compact text. And that -- would you agree that
 23 that says, this article shall not be construed as
 24 granting any permanent, vested, or perpetual
 25 rights.

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1 Is that what that says?

2 **A. Yes, it is.**

3 **Q.** And the word disallowed doesn't appear in the

4 actual text. True?

5 **A. That is correct.**

6 **Q.** Now, you represented Governor Bush in the Compact

7 negotiations with Georgia and Alabama and the

8 Army Corps from 1992 to 2003. Right?

9 **A. Yes, I did.**

10 **Q.** Fair to say each of the three states involved in

11 those negotiations had strongly-held beliefs

12 about their positions?

13 **A. Yes.**

14 **Q.** And strongly-held beliefs about what was in the

15 best interests of their citizens?

16 **A. I'm sure that's the case for Florida, yes.**

17 **Q.** During the course of the negotiations, Florida

18 and Alabama had areas of disagreement. Right?

19 **A. Yes.**

20 **Q.** And Florida and the Corps had areas of

21 disagreement. True?

22 **A. Yes.**

23 **Q.** And Georgia and Florida had areas of

24 disagreement. Correct?

25 **A. Correct.**

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1 **Q.** And there's nothing out of the ordinary about

2 parties disagreeing with each other during the

3 course of negotiations. Correct?

4 **A. If there was no disagreement, you wouldn't need**

5 **to negotiate.**

6 **Q.** Indeed.

7 Now, your testimony in this case is that

8 Georgia was operating in, quote, bad faith during

9 the negotiations with Florida. Correct?

10 **A. That is correct.**

11 **Q.** Okay. Mr. Struhs, I want to look back at some of

12 the contemporaneous statements that you and

13 Florida made during the Compact negotiations now.

14 Okay?

15 We're going to put up on the screen GX-1267.

16 And it's also in your binder.

17 Okay. We're -- we have GX-1267 on the

18 screen. And would you agree that this is a

19 January 15, 2002, press release from the State of

20 Florida?

21 **A. Well, I see a press release on the following**

22 **page, yes.**

23 **Q.** Correct. Page 2 is the press release. Right?

24 **A. Yes.**

25 **Q.** In fact, it's actually page 3 of this document is

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1 the press release?

2 **A. That's correct.**

3 **Q.** Issued by the Florida Department of Environmental

4 Protection. Correct?

5 **A. Yes.**

6 **Q.** And that's the agency you were heading at the

7 time?

8 **A. Yes.**

9 **Q.** Do you see that in the first paragraph it states

10 that representatives from Florida, Georgia, and

11 Alabama have reached an agreement in principle?

12 Do you see that?

13 **A. Yes, sir.**

14 **Q.** And you go on to -- the agency goes on to state

15 that, if finalized, it would allocate water in

16 the basin for the next 50 years. Right?

17 **A. Yes.**

18 **Q.** Now, would you drop down to the third paragraph

19 with me. Do you see that there is a quotation

20 attributed to you in this document dated

21 January 15, 2002?

22 **A. Yes.**

23 **Q.** And you were quoted as saying, quote, this

24 product represents the good faith efforts of the

25 three states to develop a fair solution that

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1 shares abundance as well as diversity. Correct?

2 **A. Yes.**

3 **Q.** And that was an accurate quote of what you said

4 at the time. True?

5 **A. I'm sure it is, yes.**

6 **Q.** Let's move forward in time to January 6, 2003.

7 We have this in the binder as well.

8 It's the next tab in your book. Are you

9 there?

10 Okay.

11 **A. Is this --**

12 **Q.** We can put it on the screen, too.

13 MR. PRIMIS: This document, for the

14 record, doesn't have an exhibit number yet,

15 but will. And it is Bates number

16 FL-ACF-02428711 to 8712.

17 BY MR. PRIMIS:

18 **Q.** And would you -- would you agree with me that

19 this document is called a Joint Agreement

20 Extending Time to Agree Upon an Equitable

21 Apportionment?

22 **A. Yes.**

23 **Q.** And it relates to the ACF Basin. Right?

24 **A. Yes.**

25 **Q.** And on the second page of this document you see

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1 that there's a signature block?

2 **A. Yes.**

3 **Q.** And it's signed by the Commission member of each

4 of the three states. Right?

5 **A. It appears to be, yes.**

6 **Q.** And do you recognize the Commission member

7 signature for Florida to be that of Douglas Barr?

8 **A. I don't know.**

9 **Q.** You don't know.

10 Okay. And if you go back to the first page,

11 and we'll look at the second Whereas clause. Do

12 you agree that this document states that the

13 States of Alabama, Florida, and Georgia have been

14 negotiating in good faith to arrive at an

15 equitable apportionment of the surface waters of

16 the ACF River Basin?

17 **A. Yes. That's what it says.**

18 **Q.** And the signatures on the second page agree

19 that -- indicate that each state agreed to the

20 terms of this document. Correct?

21 **A. Yes.**

22 **Q.** Moving forward a bit further in time, you are

23 aware that the parties to the Compact reached

24 another Memorandum of Agreement on July 22, 2003.

25 Correct?

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1 **A. Yes, I am.**

2 **Q.** And would you turn in your book, or we can look

3 at it --

4 **A. Actually, can you repeat the question, please.**

5 **Q.** Sure. And if it helps you, you can just look at

6 paragraph 46 of your testimony. I was just

7 reading from that.

8 **A. But what was the question?**

9 **Q.** That the three Governors signed a Memorandum of

10 Understanding regarding the sharing of water in

11 the ACF Basin on July 22, 2003?

12 **A. That's right.**

13 **The reason I asked you to repeat the question**

14 **is I thought you said Memorandum of Agreement.**

15 **Q.** Sorry if I did.

16 **A. In fact it was a Memorandum of Understanding.**

17 **Q.** It was an MOU. That's a good correction. Thank

18 you, sir.

19 If you look at GX-1268 in your book, there's

20 a statement by Governor Bush on the front page.

21 Correct?

22 **A. Yes.**

23 **Q.** And this is concerning the Memorandum of

24 Understanding that you just mentioned. Right?

25 **A. Yes, it is.**

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1 **Q.** And in this announcement on July 22, 2003, in the

2 second sentence you will agree Governor Bush

3 says, I thank Governors Perdue and Riley for

4 their good faith efforts to reach this milestone

5 in resolving a series of complex issues that

6 affect citizens in all three states.

7 Do you see that?

8 **A. Yes, I do.**

9 **Q.** And Governor Bush did issue that press release.

10 Right?

11 **A. Yes.**

12 **Q.** Now, the Compact expired one month after Governor

13 Bush issued that statement. Correct?

14 **A. Yes.**

15 **Q.** I want to shift gears for a minute. If you go to

16 paragraph 17 of your testimony, you say there in

17 the first sentence that Florida's position in the

18 ACF Compact negotiations was that Georgia should

19 agree to caps on its water consumption in the

20 ACF. Do you see that?

21 **A. I do.**

22 **Q.** And two paragraphs later in paragraph 19 you say,

23 we never took caps off the table. Right?

24 **A. Yes.**

25 **Q.** And by we, you mean Florida. Florida never took

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1 caps off the table. Right?

2 **A. That's correct.**

3 **Q.** And then in paragraph 20 in the last sentence you

4 say, Georgia effectively used the Compact process

5 to mislead Florida that consumption caps were on

6 the table.

7 Is that your sworn testimony?

8 **A. It is.**

9 **Q.** Okay. In your binder we have a document marked

10 as FX-199. Do you see that?

11 **A. I do.**

12 **Q.** Okay. Now, FX-199, you cite this in your written

13 direct testimony. Right?

14 **A. I -- I believe so. It certainly references it.**

15 **Q.** And in paragraph 37 of your testimony, halfway

16 down, you say that FX-199 is a true and accurate

17 copy of a transcript of statements made by me and

18 other representatives at an ACF River Basin

19 Commission meeting on March 18, 2002.

20 Do you see that?

21 **A. That's correct. Yes.**

22 **Q.** And that is your sworn testimony?

23 **A. It is.**

24 **Q.** Now, this meeting occurred about three years

25 after you started working for the State of

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1 Florida. Right?

2 **A. That's correct.**

3 **Q.** And about a year before the Compact expired?

4 **A. A little more than that, yes.**

5 **Q.** And representatives of Florida, Alabama, Georgia,

6 and the Army Corps were present at this meeting.

7 Right?

8 **A. Yes.**

9 **Q.** And the transcript begins with a statement by

10 you. Right?

11 **A. It does.**

12 **Q.** And you believe that's an accurate description of

13 your statement?

14 **A. It is.**

15 **Q.** Okay. Now, I want to go to the second page of

16 FX-199; and we're going to focus on the first

17 full paragraph there.

18 **A. Okay.**

19 **Q.** Do you see that?

20 **A. I do.**

21 **Q.** Okay. And at the top, it says, starting in the

22 second sentence, about a week ago, Governor

23 Barnes informed Governor Bush that Georgia would

24 not accept both a set of flow delivery

25 requirements at the state line and a limit on

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1 water consumption within the State of Georgia.

2 Do you see that?

3 **A. I do.**

4 **Q.** And you did say that at this meeting?

5 **A. Yes.**

6 **Q.** And then in the next sentence you say, of course,

7 as I just described, nobody expected to place any

8 limits on water consumption in Georgia.

9 Do you see that?

10 **A. I see it.**

11 **Q.** And you said that at this meeting. True?

12 **A. And I would add, to understand it, you have to**

13 **appreciate the context of the entire document.**

14 **Q.** Now, Mr. Struhs, you testified in paragraph 27 of

15 your written testimony that after the Compact was

16 adopted, Georgia, quote, started walking away

17 from long-established understandings reached in

18 the years of comprehensive study in the basin.

19 Correct?

20 **A. Just one moment.**

21 **Yes.**

22 **Q.** And that's your term, long-established

23 understandings?

24 **A. It is.**

25 **Q.** Okay. And these long-established understandings

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1 that you're referring to, those related to the

2 number of acres that Georgia would be irrigating.

3 Correct?

4 Is that one of your long-established

5 understandings?

6 **A. I'm looking at paragraph 27 in my testimony.**

7 **Q.** Maybe if you look at paragraph 30.

8 **A. Okay. Because 27 does not get to the**

9 **agricultural issue.**

10 **Q.** I know. I was using either -- you're talking --

11 there were long-established understandings that

12 you believed existed throughout these

13 negotiations?

14 **A. That's true, yes.**

15 **Q.** I'm just trying to find out what they concerned.

16 **A. Yes.**

17 **Q.** And my question is in paragraph 30, are you

18 saying that one of those long-established

19 understandings is how many acres would be

20 irrigated?

21 **A. My reference to long-established understandings**

22 **went to the specific inputs that went into**

23 **modeling different water flows under different**

24 **scenarios. You know, the specific issues in**

25 **terms of acres or other issues, those**

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1 **understandings went back to being derivative from**

2 **the Comprehensive Study that preceded the**

3 **Compact.**

4 **But I think there is a slight difference, if**

5 **I might, between the long-held understandings in**

6 **terms of what the variables were in the model**

7 **runs that we did to develop different hydrographs**

8 **and these variables which, you know, admittedly**

9 **would be the point of discussions to run**

10 **different model runs.**

11 **Q.** Okay. So there was no long-established

12 understanding about there being a set number of

13 acres that Georgia would be limited to; is that

14 your testimony?

15 **A. I'm not trying to be difficult, but I'm -- in my**

16 **mind there is a difference. So the long-held**

17 **understanding was that any water allocation**

18 **formula, by definition, had to account for water**

19 **consumption, water returns, the weather, of**

20 **course, which was our historic period record, and**

21 **the resulting flows at the state line. So those**

22 **were the long-held understandings, that those**

23 **were the variables that would determine the water**

24 **allocation.**

25 **The other variables are then the things that**

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1 **you would change to run different scenarios in**
 2 **terms of assumptions about, for example, number**
 3 **of acres irrigated.**
 4 **Q.** Okay. So if I understand your testimony, there
 5 were long-held understandings about the various
 6 types of things that would be input into the
 7 models, but not about the volume or amount of
 8 each of those inputs. Correct?
 9 **A. Right. And, again, not trying to be difficult,**
 10 **sir, but the long-held understanding was that you**
 11 **had to understand what the limits were on water**
 12 **consumption and how much of that water would be**
 13 **returned to the system and how that would affect**
 14 **the state line. So that was the fundamental**
 15 **long-held understanding.**
 16 **There were also understandings about**
 17 **assumptions, if you will, about number of acres**
 18 **irrigated, municipal and industrial water**
 19 **consumption, drought indexes, and that sort of**
 20 **thing.**
 21 **Q.** Okay. Now, these long established
 22 understandings, you weren't around when they were
 23 first discussed. Correct?
 24 **A. When they were first discussed --**
 25 **Q.** They predated you. Right?

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1 **A. Of course.**
 2 **Q.** You came seven years after these discussions
 3 occurred?
 4 **A. Yes.**
 5 **Q.** And you also weren't around when the Compact was
 6 signed. Correct?
 7 **A. That's correct.**
 8 **Q.** So let's actually look at the Compact. It's in
 9 FX-209 in your book. It's the second tab.
 10 **A. Yes.**
 11 **Q.** And I'm going to refer you to the language in
 12 subsection (e) on page 4.
 13 And I will confess this is not the easiest
 14 print to read, so we will blow it up on the
 15 screen.
 16 Are you there?
 17 **A. Well, I am; but -- maybe I'm not. What page are**
 18 **you on, sir?**
 19 **Q.** Page 4. Article VI -- Article -- I'm sorry,
 20 Article VII.
 21 **A. Okay.**
 22 **Q.** Subpart (e). And I just want to -- this is
 23 just --
 24 **A. I'm with you now. My pagination must be**
 25 **different than yours; but I do have it, yes.**

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1 **Q.** I just want to establish quickly that one term of
 2 this Compact that the States had agreed to was
 3 that it shall not commit any state to agree to
 4 any data generated by any study or commit any
 5 state to any allocation formula not acceptable to
 6 such state. Correct?
 7 **A. That's correct.**
 8 **Q.** And that was one of the terms that the parties
 9 agreed to when they entered into this Compact.
 10 True?
 11 **A. Yes, it is.**
 12 **Q.** And that was one of the terms that Florida agreed
 13 to when it entered into this Compact. True?
 14 **A. Yes, sir.**
 15 **Q.** Now, some of your testimony concerns something
 16 called a dry year multiplier. Do you remember
 17 that?
 18 **A. I do.**
 19 **Q.** And you said that shortly after negotiations
 20 began, Georgia proposed a dramatically higher dry
 21 year multiplier than had been contemplated by the
 22 parties to the Comprehensive Study. Right?
 23 **A. Yes.**
 24 **Q.** Can you turn to GX-1266 in your book. It's about
 25 four from the back.

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1 **A. Okay. Thank you. Yes.**
 2 **Q.** Is 1266 a memo that you received in May of 1999
 3 when you were secretary?
 4 **A. It is.**
 5 **Q.** This memorandum provides you with an update on
 6 ACF technical work group meeting that took place
 7 on April 30, 1999. Correct?
 8 **A. It is.**
 9 **Q.** And all three states were in attendance. Right?
 10 **A. I believe so. It appears to be.**
 11 **Q.** Now, you were told that Doug Barr was in
 12 attendance on behalf of Florida. Right?
 13 In that second paragraph.
 14 **A. Yes.**
 15 **Q.** And Doug Barr made a presentation --
 16 **A. Yes.**
 17 **Q.** -- right?
 18 And you know that Doug Barr was the executive
 19 director of the Northwest Florida Water
 20 Management District. Correct?
 21 **A. Yes.**
 22 **Q.** And he served on Florida's technical team for
 23 Compact negotiations?
 24 **A. Yes.**
 25 **Q.** Now, he told you in here in the next -- in the

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1 bottom of that second paragraph that Georgia had
 2 proposed a 2.5 dry year multiplier for water
 3 demands. Correct?
 4 **A. Yes. That's in the memo.**
 5 **Q.** And in that -- in that proposal, it was
 6 estimating that Georgia would use 2-1/2 times
 7 more water in a dry year than in an average year.
 8 Right?
 9 **A. Well, yes. It says right here the use of a 2.5**
 10 **multiplier.**
 11 **Q.** Right. And that means you're going to use two
 12 and a half times more water when it's dry than
 13 when it's normal or wet. Right?
 14 That's what Georgia was proposing?
 15 **A. Yes.**
 16 **Q.** Okay. Now, in this memo you were told that
 17 neither Florida nor Alabama's proposals included
 18 a dry year multiplier. True?
 19 **A. Yes.**
 20 **Q.** And in the next paragraph, Doug Barr says that
 21 Georgia's 2.5 times multiplier is unacceptable to
 22 Florida. Right?
 23 **A. That's right.**
 24 **Q.** And Florida's official position at the time was
 25 that no dry year multiplier was appropriate.

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1 True?
 2 **A. It does not say that.**
 3 **Q.** Well, in the prior paragraph it says, neither the
 4 Florida nor Alabama proposal included a dry year
 5 multiplier. Right?
 6 **A. I think there is a difference between a proposal**
 7 **and an official position.**
 8 **Q.** Oh, there is?
 9 Okay. Let's explore that. At this time
 10 neither Florida nor Alabama proposed a dry year
 11 multiplier. Right?
 12 **A. That's correct.**
 13 **Q.** Now, you were also told by Mr. Barr that
 14 privately, Florida's technical team agreed that a
 15 dry year multiplier was correct -- was required.
 16 Correct?
 17 **A. Yes. It says right here that a multiplier is**
 18 **required for dry years.**
 19 **Q.** In the bottom of the paragraph it says, they
 20 strongly believe -- referring to Georgia -- that
 21 a multiplier is required for dry years.
 22 Right?
 23 **A. That's right.**
 24 **Q.** And then Mr. Barr then says, privately we agree.
 25 **A. Right.**

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1 **Q.** That's exactly right?
 2 **A. Yes.**
 3 **Q.** And you did agree privately. Right?
 4 **A. Well, actually, if I can put this in context, I**
 5 **received a memo from staff getting briefed on the**
 6 **meeting. They relayed to me through this memo,**
 7 **as you can plainly see, that privately they**
 8 **agreed that there should be a dry year**
 9 **multiplier. Subsequent to this, in fact, the**
 10 **State did publicly and, quote-unquote, officially**
 11 **agree that there should be a dry year multiplier.**
 12 **Q.** And at this point in time in May of '99, Florida
 13 had a private belief that it was appropriate; but
 14 it wasn't included in its proposal. And it told
 15 Georgia that it was not appropriate. True?
 16 **A. Just one moment.**
 17 **That's not exactly right. If you actually**
 18 **read the first sentence of the third paragraph,**
 19 **it says, Doug stated that the value of the**
 20 **multiplier and the number of years that it is**
 21 **applied were unacceptable to Florida. It doesn't**
 22 **say that Doug said that a dry year multiplier**
 23 **was, in fact, unacceptable.**
 24 **Q.** He indicates in the last two sentences that
 25 Georgia believes it's required for dry years.

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1 And privately, we agree. True?
 2 Is that what he told you?
 3 **A. Well, first of all, the memo is not from Doug;**
 4 **it's from DEP staff reflecting what Doug said at**
 5 **the meeting. So --**
 6 **Q.** With that clarification, is that what you were
 7 told, that Florida had a private position that
 8 they agreed that a dry year multiplier was
 9 necessary?
 10 In this memorandum that we're looking at.
 11 **A. This memorandum was staff explaining to me that**
 12 **their position or their belief was that we should**
 13 **agree to a dry year multiplier. Based on that**
 14 **recommendation, in fact Florida did agree to**
 15 **include a dry year multiplier in the context of**
 16 **the Compact negotiations, and always did.**
 17 **Q.** Now, Georgia changed its position on the dry year
 18 multiplier, too. Right?
 19 **A. Every party changed all their positions**
 20 **frequently over the course of six years.**
 21 **Q.** Georgia reduced the multiplier that it asked for
 22 from 2.5 to 1.8. Correct?
 23 **A. Are you referring specifically to a reference in**
 24 **the memo?**
 25 **Q.** Well, is it in your testimony that Georgia

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1 reduced its --

2 **A. It's in my testimony, yes.**

3 **Q.** Yes. And you agree; Georgia reduced its proposed

4 dry year multiplier from 2.5 to 1.8. Right?

5 **A. That's correct.**

6 **Q.** And you think that's in your testimony?

7 **A. Well, listen, the -- the fact is the dry year**

8 **multiplier, like many other variables, were**

9 **changed purposefully during the course of**

10 **negotiations because the whole point of the**

11 **negotiations was to test how changing those**

12 **different variables would affect the ultimate**

13 **hydrograph, which was the flow regime to Florida.**

14 **Q.** And that's what the parties were doing as part of

15 these technical negotiations. Correct?

16 **A. The intention was to change the variables**

17 **purposefully and deliberately to see how it would**

18 **affect the net result.**

19 **Q.** Okay. Let's turn to FX-219.

20 And before we do that, I just want to look at

21 paragraph 30 of your direct testimony. And in

22 paragraph 30, you state that on April 21, 2003,

23 Georgia gave a presentation that claimed it

24 needed to ensure its ability to irrigate over

25 900,000 acres. Do you see that?

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1 **A. I do.**

2 **Q.** And in paragraph 31 you said, in response, we

3 asked Georgia where those 300,000 new acres came

4 from and whether they could show them to us on a

5 map.

6 Do you see that?

7 **A. Yes.**

8 **Q.** And you said you were never provided that

9 information?

10 **A. Yes.**

11 **Q.** And you reference a letter from Harold Reheis,

12 which we have marked here as FX-219. Correct?

13 **A. Yes.**

14 **Q.** Okay. And on FX-219, that's an April 29, 2003,

15 letter from Harold Reheis to you attaching a

16 draft status report in connection with the

17 negotiations. Correct?

18 **A. Yes.**

19 **Q.** And Mr. Reheis was the director of Florida's

20 Environmental Protection Division. Correct?

21 **A. Georgia's.**

22 **Q.** Sorry. Georgia, yes.

23 Now, in -- on page 1 of this memo, Mr. Reheis

24 tells you in the second paragraph that Georgia

25 has spent approximately \$4.2 million over the

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1 past four years on comprehensive studies of

2 irrigation, water use, and irrigated agricultural

3 acreage. Do you see that?

4 **A. Are you talking about the second paragraph of the**

5 **memo?**

6 **Q.** Yes. First sentence.

7 **A. Georgia has spent \$4.2 million over the past four**

8 **years?**

9 **Q.** Yes.

10 **A. Yes.**

11 **Q.** You were informed that in 2003. Correct?

12 **A. Yes. I received this letter.**

13 **Q.** And Mr. Reheis told you in the next sentence that

14 the most up-to-date remote sensing, GIS database,

15 and metering technology had been employed in

16 those studies. Correct?

17 **A. Yes.**

18 **Q.** And you understand that all that work was done

19 after the Comprehensive Study had been completed.

20 Right?

21 **A. Yes.**

22 SPECIAL MASTER LANCASTER: Excuse me,

23 counsel. Would this be a convenient time for

24 our mid-morning recess?

25 MR. PRIMIS: Certainly. Yes.

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1 SPECIAL MASTER LANCASTER: Thank you.

2 (Time Noted: 10:33 a.m.)

3 (Recess Called)

4 (Time Noted: 10:50 a.m.)

5 MR. PRIMIS: Thank you. Thank you, your

6 Honor.

7 BY MR. PRIMIS:

8 **Q.** Mr. Struhs, we were looking at Exhibit FX-219.

9 Do you still have that handy?

10 **A. I do.**

11 **Q.** Can you just go to the first page of that

12 exhibit.

13 **A. Yes.**

14 **Q.** Do you see it was dated April 29, 2003?

15 **A. Yes.**

16 **Q.** And do you see in his letter Mr. Reheis says that

17 at the April 21, 2003, ACF Compact Commission

18 meeting, I committed to providing you with

19 background information relating to the State of

20 Georgia's efforts to quantify agricultural

21 irrigation acreage and water use in the ACF

22 Basin?

23 **A. Yes.**

24 **Q.** And so you would agree that Mr. Reheis sent this

25 to you eight days after he said he would at the

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1 meeting. Correct?

2 **A. Yes. He sent this letter, yes.**

3 **Q.** And it was eight days later. True?

4 **A. Yes. Correct.**

5 **Q.** Okay. Now, I want to talk about your testimony

6 concerning a case filed by Southeastern Federal

7 Power customers against the Army Corps and the

8 District of Columbia. Are you familiar with

9 that?

10 **A. I am.**

11 **Q.** Okay. And you refer to that litigation in

12 paragraph 38 of your testimony. Right?

13 **A. Yes.**

14 **Q.** Okay. I'm going to call that the D.C. case.

15 Okay?

16 **A. That's fine.**

17 **Q.** And in paragraph 38 you say that the D.C. case

18 was filed in December of 2000. Right?

19 **A. Yes.**

20 **Q.** And Georgia and local water supply providers

21 moved to intervene in the D.C. case. Right?

22 **A. Yes.**

23 **Q.** And then the district court in that case referred

24 the parties to mediation. Right?

25 **A. Yes.**

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1 **Q.** Now, Georgia, the Army Corps, which was one of

2 the parties, and Southeastern Federal Power

3 customers and the local water suppliers reached a

4 settlement agreement on January 9, 2003.

5 Correct?

6 It's referenced in paragraph 42 of your

7 testimony.

8 **A. I'm catching up with you. Hold on.**

9 **Yes, that's correct.**

10 **Q.** Okay. Now, Florida was aware that the D.C. case

11 was pending well before the settlement was

12 entered into. Correct?

13 **A. We were aware of the litigation.**

14 **Q.** Right. And Florida did not seek to intervene in

15 the D.C. case until after the settlement was

16 reached. Correct?

17 **A. There would be no reason for Florida to do so**

18 **given the nature of the case.**

19 **Q.** So the answer is, no, you didn't intervene?

20 **A. That is correct.**

21 **Q.** Okay. Now, you reference a decision by Judge

22 Bowdre relating to the settlement of that D.C.

23 case. Right?

24 **A. I do.**

25 **Q.** And Judge Bowdre was presiding over a separate

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1 lawsuit in Alabama. Correct?

2 **A. That's correct.**

3 **Q.** And that was a case that Florida had brought

4 against the Army Corps. Correct?

5 **A. Yes.**

6 **Q.** Now, Judge Bowdre's decision, the one that you

7 reference in your testimony, that was later

8 vacated by the 11th Circuit; wasn't it?

9 **A. Repeat the question, please.**

10 **Q.** Judge Bowdre's decision was later vacated by the

11 11th Circuit Court of Appeals. Are you aware of

12 that?

13 **A. That's correct. Yes, I am.**

14 **Q.** And, in fact, in paragraph 47 you cite to Judge

15 Bowdre's decision at the bottom of your

16 testimony; and you note that it was vacated and

17 remanded on other grounds. Correct?

18 **A. Yes.**

19 **Q.** Okay. Now, I want to talk about a decision that

20 wasn't mentioned in your direct testimony. Can

21 you turn to tab -- the tab of your book where we

22 reference a February 10, 2004, decision. I think

23 it's the last one.

24 **A. February 10, 2004, D.C. case opinion?**

25 **Q.** Yes.

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1 **A. Yes.**

2 **Q.** Now, this opinion is a decision from the judge

3 who actually presided over the D.C. case; and

4 it's dated February 10, 2004. Correct?

5 **A. Yes.**

6 **Q.** And this decision was issued just a few weeks

7 after you stopped working for the State of

8 Florida. Right?

9 **A. Correct.**

10 **Q.** This decision was issued by Judge Jackson. Are

11 you aware of that?

12 **A. I didn't recall the name, but yes.**

13 **Q.** Okay. Let's go to page 28. It's in the upper

14 left corner.

15 Now, Judge Jackson was the judge who was

16 presiding over this litigation. Correct?

17 **A. That's correct.**

18 **Q.** And in this Memorandum and Order, he says in that

19 first paragraph that the case is presently before

20 the Court for the sole purpose of the Court's

21 review of a partial and conditional resolution of

22 certain issues relating to the flow of river

23 waters through the ACF Basin. Do you see that?

24 **A. I do.**

25 **Q.** And you knew Judge Jackson issued this decision.

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1 Correct?

2 **A. Yes.**

3 **Q.** Okay. And he says in the next sentence that the

4 settlement expressed in a 19-page settlement

5 agreement with multiple attachments is the

6 culmination of a protracted mediation ordered by

7 the Court in March 2001 and concluded in January

8 2003. Right?

9 **A. Correct.**

10 **Q.** Now, can you go to page 30. And this is the

11 lawsuit that you are referencing in your

12 testimony. Correct?

13 **A. It is.**

14 **Q.** Okay. At the bottom left on page 30 --

15 MR. PRIMIS: Matt, it looks like it's

16 not up here. We can just go with the paper

17 version.

18 BY MR. PRIMIS:

19 **Q.** On the bottom left, Judge Jackson writes that

20 shortly after this lawsuit was filed, the State

21 of Georgia and the water supply providers moved

22 to intervene, and Southeastern Federal and the

23 Corps were willing to include the aspiring

24 intervenors in the mediation about to commence in

25 March 2001.

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1 Did Judge Jackson say that in his opinion?

2 **A. Obviously, yes.**

3 **Q.** And he's describing events that you talk about in

4 your testimony. Correct?

5 **A. Correct.**

6 **Q.** Okay. Moving on he says, following nearly two

7 years of negotiations, in January 2003 the

8 participants, Southeastern Federal, the Corps,

9 ARC, the water supply providers, and the State of

10 Georgia advised the Court that they had reached

11 an agreement and requested a status conference

12 with the Court to present the settlement

13 agreement for its approval. True?

14 **A. Yes.**

15 **Q.** And then Judge Jackson, who is presiding over

16 this litigation, says, two weeks later, the

17 States of Alabama and Florida, parens, who were

18 aware of the mediation but made no effort to

19 participate, close parens, also moved to

20 intervene in the instant lawsuit to challenge the

21 settlement.

22 Did I read that correctly?

23 **A. You read it correctly, but I'm not sure Judge**

24 **Jackson was correct.**

25 **Q.** So your view is that the judge overseeing the

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1 case was wrong?

2 **A. Well, I can -- I can assure you that we were not**

3 **aware of the mediation or the nature of it.**

4 **Q.** So Judge Jackson was wrong?

5 **A. I believe so.**

6 **Q.** Okay. Now, one last topic. In paragraph 53 --

7 **A. I'm sorry. Which -- back to the testimony now?**

8 **Q.** In paragraph 53 of your testimony.

9 **A. Okay.**

10 **Q.** You say in the second sentence that Florida's

11 hopes to amicably secure the water needed to

12 sustain the Apalachicola River and Bay ecosystems

13 ended on August 31, 2003, when the Compact

14 expired because the parties could not reach

15 agreement.

16 Did I read that correctly?

17 **A. Yes.**

18 **Q.** Now, let's go to Exhibit GX-53 in your book. And

19 do you see this is an Associated Press article

20 titled Deal Goes Down the Drain? Do you see

21 that?

22 **A. I do.**

23 **Q.** It's dated September 2, 2003. Correct?

24 **A. It is.**

25 **Q.** That's a couple of days after the Compact

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1 expired?

2 **A. Yes.**

3 **Q.** There's a quote attributed to an Alabama

4 representative toward the bottom of the page. Do

5 you see that?

6 **A. Yes. There's more than one.**

7 **Q.** Okay. Well, let's focus on this one, the one

8 that says, Florida has been threatening for years

9 now to pull the plug. It seems like their recent

10 proposal and ultimatum was a way to do that.

11 Do you see that?

12 **A. I do.**

13 **Q.** And it also says, it is extremely unreasonable

14 for them to expect Alabama's Governor Bob Riley

15 to sign an agreement that didn't meet the State

16 of Alabama. Is that what's reported here?

17 **A. It is.**

18 **Q.** And there is a quote attributed to a Georgia

19 representative at the bottom of the page.

20 **A. That's correct.**

21 **Q.** And the Georgia representative is reported as

22 saying, Florida has kind of gone their own way.

23 Correct?

24 **A. Yes.**

25 **Q.** Towards the middle of the page there is a quote

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1 from you. Do you see that?

2 **A. I do.**

3 **Q.** And it says, in the end Florida was unable to

4 accept only minimum flows, plus whatever else the

5 upstream states were not able to consume or

6 store. Do you see that?

7 **A. I do.**

8 **Q.** And that's an accurate quote from you. Correct?

9 **A. It is.**

10 **Q.** And right above that there is another quote from

11 you; and it says, I believe that over time with

12 the impartial oversight of our highest court we

13 will be able to better protect our river and bay

14 than to compromise further. Do you see that?

15 **A. I do.**

16 **Q.** And that quote is accurate as well. Right?

17 **A. Very accurate.**

18 **Q.** You mentioned filing suit in the Supreme Court in

19 that quote. Right?

20 **A. Say it again, please.**

21 **Q.** You're talking about filing a lawsuit on behalf

22 of the State of Florida in the highest court,

23 which is the Supreme Court of the United States.

24 Correct?

25 **A. That is correct. Yes.**

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1 **Q.** Okay. Florida did not sue Georgia in the Supreme

2 Court in 2003 when this Compact expired.

3 Correct?

4 **A. That's correct.**

5 **Q.** Florida didn't sue Georgia for the next 10

6 years --

7 **A. That's correct.**

8 **Q.** -- with the United States Supreme Court.

9 Correct?

10 **A. Obviously.**

11 **Q.** Florida did sue the Army Corps of Engineers.

12 Correct?

13 **A. Yes.**

14 **Q.** But it waited a decade before filing this

15 lawsuit. True?

16 **A. That's right.**

17 MR. PRIMIS: No further questions.

18 REDIRECT EXAMINATION

19 BY MS. WINE:

20 **Q.** Good afternoon, Mr. Struhs.

21 **A. Good morning.**

22 **Q.** Oh, it's still morning. Sorry. We had a break.

23 Good morning, Mr. Struhs.

24 **A. Good morning.**

25 **Q.** In 1999 when you took your position, how did you

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1 become familiar with the ACF Compact?

2 **A. I was briefed by staff from the Department of**

3 **Environmental Protection and also from technical**

4 **staff from the Northwest Florida Water Management**

5 **District.**

6 **Q.** And did you do anything to educate yourself in

7 terms of what led up to the formation of the ACF

8 Compact?

9 **A. Yes, I did. I visited the river extensively and**

10 **the communities around it. I read the**

11 **Comprehensive Study that preceded the Compact. I**

12 **read the Compact agreement itself. And I**

13 **received memorandums and verbal briefings**

14 **regarding the status of those negotiations under**

15 **the Compact.**

16 **Q.** And how much time did you personally devote to

17 the Compact negotiations?

18 **A. A significant amount. I would say that looking**

19 **back at my tenure as the Secretary of the Agency,**

20 **this item probably consumed the second greatest**

21 **amount of my time. Everglades restoration was**

22 **probably the first, and this was the second. So**

23 **it captured a lot of my time and attention.**

24 **Q.** And did you want to see the Compact succeed?

25 **A. Yes.**

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1 **Q.** Georgia's counsel just referenced state line

2 minimum flows in his last set of questioning. Do

3 you recall that?

4 He was referring to an article that

5 referenced --

6 **A. Yes.**

7 **Q.** -- state line flows?

8 **A. That's right.**

9 **Q.** And what is your understanding of a state line

10 flow in the context of the Compact negotiations?

11 **A. Right. So it was a measurement of water at the**

12 **gage at the state line, the Chattahoochee Gage,**

13 **which was the confluence of the Flint River and**

14 **the Chattahoochee River to the north and formed**

15 **the Apalachicola. So that was the measuring**

16 **point for determining state line flows.**

17 **Q.** And was Florida prepared to agree to a state line

18 minimum flow as a metric for allocating water use

19 during the Compact negotiations?

20 **A. Absolutely not.**

21 **Q.** And why not?

22 **A. Because the -- the very nature of the healthy**

23 **functioning ecosystem that we were seeking to**

24 **preserve and protect requires a natural flow**

25 **regime, a variable flow regime, both in terms of**

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1 magnitude, frequency, duration that in turn would
 2 affect the temperature, the salinity, the
 3 nutrients, the reach of the water up to different
 4 levels of the bank, and in maintaining as much as
 5 possible that that natural hydrograph that was
 6 essential to maintaining the underlying health
 7 and sustainability of that ecosystem.

8 So we were adamant that a system of minimum
 9 flows would, over the course of time with
 10 increased water consumption likely to occur in
 11 the north, lead to those minimum flows becoming
 12 in effect management targets, which would lead to
 13 the decimation of the ecosystem.

14 Q. And what was your view of what was needed, if not
 15 an agreement on minimum state line flows?

16 A. Well, so if you look at different hydrographs in
 17 terms of what we were trying to approximate in
 18 terms of a natural flow regime, there would be
 19 certain floors in that hydrograph; and those
 20 would be minimum flows. The desire and
 21 insistence of Florida all along was that those
 22 minimum flows would be very, very rare
 23 occurrences. And when they did occur, they would
 24 occur for only a very short duration.

25 Q. And did you communicate this to the State of

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1 Georgia during the Compact negotiations?

2 A. Many times.

3 Q. And did you propose something other than just a
 4 state minimum flow for the parties to consider?

5 A. Absolutely.

6 Q. And what was that?

7 A. Well, we -- again, we -- our technical staff
 8 began with a period of record of 50 years of
 9 weather data so we would know the historical
 10 flows. We would then build into our assumptions
 11 certain caps on consumption of water. We would
 12 build in certain assumptions in terms of some of
 13 that consumed water being returned to the river
 14 system. And we would then determine how that
 15 over time would affect the results at that state
 16 line gage.

17 Q. And if consumption caps were built into these
 18 proposals, in your view why didn't the parties
 19 talk about consumption caps publicly?

20 A. Georgia -- Georgia's representatives made very
 21 clear to us on more than one occasion that the
 22 negotiations would have a greater chance of being
 23 successful if they did not have to publicly talk
 24 about caps on consumption. And if you can -- if
 25 you don't mind, I'll just explain why we were

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1 able to accommodate that even though everybody
 2 knew every step of the way that consumption caps
 3 were built into the model.

4 There's the amount of water that weather
 5 gives us. There's the amount of water that's
 6 consumed from the system. And then there's a
 7 certain portion of that water that is then
 8 returned to the system. Those three things
 9 together then determine what that state line flow
 10 is.

11 So in -- for purposes of political harmony
 12 and trying to increase the chance of a negotiated
 13 settlement, we allowed ourselves to avoid
 14 speaking publicly about consumption caps per se.
 15 But as long as we could talk about the state line
 16 flow and the net consumption or the returns, we
 17 were able to essentially have the same effect.
 18 They were -- there were consumption caps by a
 19 different name for purposes of political
 20 commenting.

21 Q. And if you have the binder still in front of you,
 22 Georgia's counsel directed you to Exhibit FX-199.

23 A. Just one moment.

24 Q. Yes. Those are the statements --

25 A. Yes.

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1 Q. -- from the March 18, 2002, ACF River Basin
 2 Commission meeting. Are you there, sir?

3 A. Yes, I am.

4 Q. And if you turn to the second page and go to the
 5 sentence in the second paragraph that states, of
 6 course, as I just described, nobody expected to
 7 place any limits on water consumption in Georgia.
 8 Do you see that?

9 A. Yes.

10 Q. And can you explain -- well, in your view, is
 11 that testimony -- is that sentence consistent
 12 with your testimony here today?

13 A. It is essential to look at this statement as a
 14 whole document. And I think you get in trouble
 15 if you cherry pick one particular sentence out of
 16 context.

17 Q. And what do you mean by that, sir?

18 A. Well, the fact of the matter is, you know, six
 19 years of negotiations and innumerable model runs
 20 looking at how different variables might affect
 21 the flow regime, every one of those model runs
 22 and every one of our negotiation discussions was
 23 premised on built-in or baked-in assumptions on
 24 Georgia's water consumption, built-in assumptions
 25 on what portion of that consumption would be

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1 returned downstream as effluent, and then using
 2 that 50-year period of record we built in some
 3 assumptions in terms of what reasonable
 4 expectations for the future would be. So with
 5 those variables locked in in terms of
 6 expectations on consumption and returns, we
 7 were able to sort of model different hydrographs.
 8 As I explained earlier, Georgia had an
 9 allergic reaction to speaking publicly about
 10 putting any caps or limitations on consumption
 11 for political reasons; and we were sensitive to
 12 that. And that's why we were able to accommodate
 13 it and talk about it in terms of state line flows
 14 and expected returns. But the underlying numbers
 15 in the hydrograph were all premised on
 16 consumption caps, and all the negotiators knew
 17 that.
 18 Q. And is there any doubt in your mind that Georgia
 19 knew that Florida would not accept just a minimum
 20 state line flow and that it also wanted some cap
 21 on consumption?
 22 A. We were -- we were crystal clear every step of
 23 the way that what we were seeking was a water
 24 allocation, an equitable water apportionment.
 25 You cannot have an allocation without having

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1 limitations. If you are not putting a limitation
 2 on water consumption, you're not allocating the
 3 resource. So by definition, every step of the
 4 way we were talking about limits on consumption,
 5 expectations for returns, and the effects that
 6 would have at the state line.
 7 Q. Now, sir, Georgia's counsel asked you about the
 8 Southeastern Power case. Correct?
 9 A. Yes.
 10 Q. What is your understanding of what that case was
 11 about?
 12 A. There are electric generating companies that
 13 would use the hydropower from the dams to create
 14 relatively low-cost power for local communities
 15 in Georgia. And as the Corps of Engineers was
 16 holding more water back for other purposes, they
 17 were not generating the same amount of
 18 hydropower, which meant they had to buy more
 19 expensive power from other sources to meet their
 20 customers' needs.
 21 So this was a case where the Southeast Power
 22 organization was looking to have economic
 23 compensation for that lost hydropower. And
 24 that's the reason why Florida, while we were
 25 aware of the litigation, did not track it closely

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1 and did not seek to intervene because it was
 2 clear that the original intention of the
 3 litigation was to come up with an economic
 4 compensation for lost hydropower generation.
 5 Q. And at some point did you learn that there was a
 6 settlement agreement reached in that case?
 7 A. We learned that when one of the lawyers
 8 representing Georgia called Florida, and I would
 9 say somewhat sheepishly revealed what they had
 10 done.
 11 Q. So you learned about this settlement agreement
 12 after it was reached?
 13 A. Yes.
 14 Q. Did you know prior to the settlement agreement
 15 being reached that Georgia was negotiating a
 16 water allocation agreement?
 17 A. Absolutely not. We were stunned when we learned
 18 what had happened. There was -- it's hard to
 19 describe the level of surprise. We felt we were
 20 snookered.
 21 Q. And why were you so surprised?
 22 A. Well, because we had ongoing what we thought, and
 23 apparently were not, good faith negotiations with
 24 Georgia in what we thought, under a federal stay,
 25 court order stay, was the sole arena for

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1 allocating those water resources. Our belief --
 2 and I think it was correct -- was that between
 3 the Compact, which had been adopted by three
 4 state legislatures and the U.S. Congress, and a
 5 federal court stay that directed the parties back
 6 to the Compact, that this was the place where
 7 these water resources would ultimately be
 8 allocated if we were successful. So to learn
 9 that the same people we were negotiating with
 10 within days would be in a mediation that we were
 11 not aware of to essentially allocate the same
 12 resource essentially transforming a case that was
 13 supposed to be about reimbursing a power customer
 14 into a water allocation agreement was -- was
 15 completely shocking.
 16 Q. And, sir, at this point how long had the Compact
 17 negotiations been going on at the point that the
 18 settlement in the Southeast Power case was
 19 reached, which I believe counsel stated was in
 20 January of 2003?
 21 A. Right. Well, the Compact negotiations at that
 22 point had been going on for four years, I
 23 believe.
 24 Q. And how frequently were you in touch with
 25 representatives of Georgia during the Compact

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1 negotiations?

2 **A. Routinely. I mean, I think the record shows that**

3 **we had regular meetings of technical staff. We**

4 **had regular meetings of the negotiating teams.**

5 **And we had intermittent conversations and, you**

6 **know, letter and e-mail exchanges on a routine**

7 **basis. And never once did they ever reveal to us**

8 **that they were negotiating a water allocation**

9 **agreement outside of the Compact.**

10 **Q.** And, sir, does that include Mr. Reheis as well?

11 I take it you were in frequent communications

12 with him?

13 **A. Regular communications.**

14 **Q.** And did he or anybody else from the State of

15 Georgia tell you about the settlement

16 negotiations prior to the time that the

17 settlement agreement was reached?

18 **A. Absolutely not.**

19 **Q.** Now, sir, if you could, please, I just want to

20 refer back to a couple documents that Georgia's

21 counsel showed you. So if you could turn to tab

22 1267 in your binder, GA 1267 -- sorry, GX-1267.

23 **A. Yes.**

24 **Q.** And, sir, counsel directed you to the draft --

25 excuse me, to the press release that's attached

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1 after the e-mail. Do you see that?

2 **A. Yes.**

3 **Q.** And he pointed out that Florida commended Georgia

4 on their good faith efforts in the Compact

5 negotiations. Correct?

6 **A. That's correct.**

7 **Q.** And, sir, could you tell me the date of this

8 press release?

9 **A. January 15, 2002.**

10 **Q.** And, sir, is that before or after the settlement

11 agreement was reached in the Southeast Power

12 case?

13 **A. Before.**

14 **Q.** And then, sir, if you could please turn to the

15 tab -- I think it's the very next one that's

16 marked FL-ACF-02428711 to 12.

17 **A. Yes.**

18 **Q.** And counsel also pointed you to this document

19 that recognizes Georgia's good faith efforts.

20 Correct?

21 **A. That's correct.**

22 **Q.** And if you turn, sir, to the back page of this

23 document, do you see the date there?

24 **A. Yes.**

25 **Q.** And the date is January 6, 2003?

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1 **A. Yes.**

2 **Q.** And, sir, do you know if that was before the

3 settlement agreement was reached in the

4 Southeastern Power case?

5 **A. I believe it was, yes.**

6 **Q.** Mr. Struhs, counsel also asked you about the

7 comments you made in your prefiled direct

8 testimony about the change in the number of

9 irrigated acres and the dry year multiplier that

10 Georgia notified you about in April of 2003. Do

11 you recall that questioning?

12 **A. I do.**

13 **Q.** And, sir, could you tell us what was concerning

14 to you about what they were communicating to you

15 regarding irrigation of agricultural acres?

16 **A. Yes, I can. The -- the Compact negotiations**

17 **began in a way that was premised on five years of**

18 **previous research and study by the three states.**

19 **And while it's true that the results of that**

20 **Comprehensive Study were not binding in any way,**

21 **they were the antecedents, if you will. It was**

22 **the starting point for these discussions. And**

23 **the Compact negotiations began with some of these**

24 **assumptions about issues around things like the**

25 **number of agricultural acres in production and**

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1 **the number of acres under irrigation.**

2 **I think what was surprising to me at the time**

3 **was to see in fairly short order Georgia's**

4 **seeking to dramatically increase their variable**

5 **for the drought year multiplier, the extra water**

6 **that would be required in a dry year compared to**

7 **an average year. And it was shortly thereafter**

8 **followed up with a 50 percent roughly increase in**

9 **the number of acres that they estimated either**

10 **were or would be under irrigation. And obviously**

11 **when you put those two things together, the --**

12 **the diversion from the starting point of these**

13 **conversations was dramatic.**

14 **Q.** And what was dramatic about it?

15 **A. Well, it was dramatic in that, you know, to -- to**

16 **increase your estimate in terms of the number of**

17 **acres under irrigation by 50 percent is not a --**

18 **it's not a rounding error. I mean, that's a**

19 **substantial restatement of -- of assumptions.**

20 **Similarly, with dry year multipliers, you**

21 **know, 40 percent more water in a dry year, sure;**

22 **but 140 percent is not a rounding error. It is a**

23 **substantial resetting of the terms of the**

24 **negotiations.**

25 **And, yet, despite -- despite, you know,**

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1 **increasing the dry year multiplier from 40**
 2 **percent to 140 percent and the number of acres**
 3 **from approximately 600,000 acres to 900,000**
 4 **acres, any one of those was startling by itself.**
 5 **The two taken together from our perspective was a**
 6 **clear indication that Georgia was, you know,**
 7 **dramatically looking to dramatically increase the**
 8 **water that they could hold back for purposes of**
 9 **agricultural irrigation.**
 10 **Q.** And at what point in the Compact negotiations did
 11 you learn about this dramatic increase?
 12 **A. I don't have -- I don't have a timeline in my**
 13 **head; but it was fairly early in the process.**
 14 **Q.** And what did you learn early on? Do you recall?
 15 Did you learn early on in the process about
 16 the increase in the acreage?
 17 **A. Yes.**
 18 **Q.** Okay. If I could -- if I could refer you to
 19 document FX-219 in the binder that counsel showed
 20 you.
 21 **A. Yes.**
 22 **Q.** Do you see that's a letter dated April 29, 2003?
 23 **A. I do.**
 24 **Q.** And do you see it's a letter from Mr. Reheis --
 25 counsel showed this to you -- saying that it was
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1 some background information and an effort to
 2 quantify agricultural irrigation usage in the
 3 water in the ACF Basin?
 4 **A. I do.**
 5 **Q.** And does that help refresh when you were having
 6 these discussions with Georgia about the increase
 7 in agricultural acreage?
 8 **A. It does.**
 9 **And pardon me for my confusion, but we were**
 10 **talking about two different things at the same**
 11 **time.**
 12 **Q.** Sure.
 13 **A. And they are related. The dry year multiplier**
 14 **adjustment -- dramatic readjustment by Georgia**
 15 **preceded this. This was earlier in my tenure,**
 16 **earlier in this timeline. And then that was**
 17 **followed, obviously by looking at this letter, in**
 18 **2003 by the substantial increase in the number of**
 19 **acres that they intended to irrigate.**
 20 **Q.** Sir --
 21 **A. The nature of my confusion is dry year**
 22 **multipliers and the number of acres under**
 23 **irrigation, they kind of go together; but the net**
 24 **result is you can determine just how much more**
 25 **water they were looking to hold back for purposes**
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1 **of agriculture.**
 2 **Q.** Sure. Thank you for that clarification.
 3 I think you said, sir, that related to the
 4 number of irrigated acres, you were hoping to get
 5 some additional information from Georgia that you
 6 never received. Is that correct?
 7 **A. Yes.**
 8 **Q.** And in looking at this April 29, 2003, letter
 9 from Mr. Reheis, why is it in your view that this
 10 letter did not provide the information to the
 11 State of Florida that you were looking for?
 12 **A. The dramatic change in projections of the number**
 13 **of acres to be irrigated was startling. And we**
 14 **wanted to see it with our own eyes. And we asked**
 15 **for a map. We figured if we could see a map of**
 16 **what they had projected as acres being under**
 17 **irrigation and a map that showed what additional**
 18 **acres they believed either were or would be**
 19 **irrigated, it would help us understand where they**
 20 **were coming up with essentially 300,000**
 21 **additional acres.**
 22 **And while, you know, the memo certainly**
 23 **speaks to their effort to try to increase the**
 24 **number, it didn't answer our question to point**
 25 **out where those acres actually were.**
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1 **Q.** Sir, were the parties only considering data that
 2 the parties developed in the course of the
 3 Compact negotiations?
 4 **A. No. We relied on data from a number of different**
 5 **sources.**
 6 **Q.** And what are some of those sources?
 7 **A. Well, we had technical input from federal**
 8 **agencies, in particular the U.S. Environmental**
 9 **Protection Agency and the U.S. Fish and Wildlife**
 10 **Service and others as well, probably National**
 11 **Marine Fisheries, NOAA.**
 12 **Q.** And, sir, if you could turn to tab FX-599 in the
 13 binder that counsel gave you.
 14 **A. Yes.**
 15 **Q.** This is a letter dated October 25, 1999, with the
 16 seals of the EPA and the U.S. Fish and Wildlife
 17 Service on it. Do you see that?
 18 **A. I do.**
 19 **Q.** And does this reflect some of the information
 20 that the parties were considering during the
 21 course of the Compact negotiations?
 22 **A. Yes. And this was obviously early on in the**
 23 **negotiations, fairly early on. And it -- it set**
 24 **forth the -- the baseline from the federal**
 25 **resource agencies' perspective in terms of where**
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1 **they would expect to see water flows in order to**
 2 **protect the interests for which they were**
 3 **responsible.**
 4 **Q.** And what do you mean by that? What do you mean
 5 by setting the baseline?
 6 **A. Well, I mean federal agencies obviously have**
 7 **statutory authority and they have got regulatory**
 8 **authority; but they also issue guidelines. And**
 9 **the guidelines are intended to instruct or inform**
 10 **parties in terms of what the agencies'**
 11 **expectations are. So those guidelines served as**
 12 **an important centering, if you will, for our**
 13 **ongoing negotiations.**
 14 **Q.** And, sir, if you look in the second paragraph of
 15 this document, do you see the last sentence
 16 there, we believe that the guidelines may serve
 17 purposes beyond an evaluation of allocation
 18 proposals because they represent a determination
 19 of flow regime features that are necessary for
 20 maintaining the present structure and function of
 21 the riverine ecosystems?
 22 **A. I see it, yes.**
 23 **Q.** And what is your understanding of that sentence
 24 in the context of this document?
 25 **A. Well, I mean, in plain English, it was the agency**

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1 **responsible for water quality and for the other**
 2 **natural resources, Fish and Wildlife, saying from**
 3 **their perspective, from their expert perspective,**
 4 **these are the flows that we believe are necessary**
 5 **to preserve the functioning of the water quality**
 6 **and ecosystem in the Apalachicola River and Bay.**
 7 **And you take guidelines from federal agencies**
 8 **rather seriously. So if you're going to deviate**
 9 **from them, you better have a darned good reason.**
 10 **Q.** And, sir, I believe -- I know you weren't in the
 11 courtroom yesterday, but counsel made the
 12 statement that these guidelines were never
 13 adopted. Is that consistent with your
 14 understanding?
 15 **A. I'm not sure I understand what you mean by**
 16 **adopted. The -- I mean, agencies go through an**
 17 **administrative process to promulgate rules and**
 18 **regulations. But they also go through a process**
 19 **by which they issue guidelines. It's not quite**
 20 **as formal. It's not an administrative process**
 21 **per se. But both of these agencies in a number**
 22 **of contexts, not just this one, routinely issue**
 23 **guidelines. And the regulated community**
 24 **inevitably takes those guidelines very seriously**
 25 **because it's a road map to compliance or to**

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1 **staying, you know, on the right side of the**
 2 **federal interest.**
 3 **Q.** And, sir, were these guidelines final guidelines?
 4 **A. Well, that's -- that certainly is how they were**
 5 **presented to us; and that's certainly how they**
 6 **were treated by the parties at the negotiating**
 7 **table, yes.**
 8 **Q.** And if you look at the first paragraph of this
 9 letter, sir, it says, we are providing the
 10 enclosed final version of the instream flow
 11 guidelines. Do you see that?
 12 **A. I do.**
 13 **Q.** And is that consistent with your understanding
 14 that these guidelines were final?
 15 **A. I don't believe they were ever changed through**
 16 **the life of the Compact. They were issued fairly**
 17 **early on in the Compact. We were all aware of**
 18 **them. We tried to stay true to them.**
 19 **Q.** Sir, Georgia's counsel asked you some questions
 20 at the end of his examination suggesting that
 21 Florida is to blame for the failure of the
 22 Compact negotiations. Is that your view?
 23 **A. No.**
 24 **Q.** And what is your view for why the Compact
 25 negotiations failed?

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1 **A. I think at its very core the reason why the**
 2 **negotiations failed is because achieving a water**
 3 **allocation by definition requires dividing up a**
 4 **resource, which means putting limits on**
 5 **consumption of that resource. And in retrospect,**
 6 **looking at the history of the Compact, my belief**
 7 **is that Georgia never intended or had any**
 8 **interest in actually limiting its water**
 9 **consumption. And without a willingness to accept**
 10 **any limitations on water consumption, in the end**
 11 **you can never really allocate the resource. So**
 12 **while we did our level best to come up with**
 13 **different constructs to talk about it in**
 14 **different nomenclature and language to create a**
 15 **context that would create some hope that we could**
 16 **achieve it, I think in the end the unwillingness**
 17 **to accept any kind of limitations on their water**
 18 **consumption was the ultimate undoing of the**
 19 **Compact.**
 20 **And, you know, the Compact was always**
 21 **designed to expire. It was intended to last for**
 22 **a year. I think it lasted for nearly six. So I**
 23 **think, you know, it's an indication that the**
 24 **parties were doing their level best to try to**
 25 **negotiate something in the context of the**

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1 **Compact; but in the end, the irreconcilable**
 2 **differences comes back to that basic sort of**
 3 **foundational point.**
 4 Q. Thank you, sir. You just reminded me that I
 5 wanted to refer you back to one additional
 6 document that counsel showed you at GX-1268. Do
 7 you see that, sir?
 8 A. Yes.
 9 Q. And it's the only example that counsel showed you
 10 of a reference to Georgia's good faith that
 11 postdates the Southeast Power settlement
 12 agreement. Correct?
 13 A. That's correct.
 14 Q. And why -- I know this isn't your document; but
 15 why do you think there was a reference to good
 16 faith in this document?
 17 A. **I think the reality is that political leaders and**
 18 **governors are hopeful people, and they recognized**
 19 **that this was an historic opportunity to try to**
 20 **resolve an issue amicably and stay out of the**
 21 **federal courts. And they hoped against hope that**
 22 **we might find a pathway to do that. And I think**
 23 **in the spirit of keeping the conversation going**
 24 **and not poisoning the atmosphere with public**
 25 **statements otherwise, the political leadership,**

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1 That's what you just said before --
 2 A. I did.
 3 Q. -- that agencies go through. Correct?
 4 A. **The point I'm trying to make is that regulatory**
 5 **agencies, using their underlying statutory and**
 6 **regulatory authority, issue guidelines. And**
 7 **those guidelines have the effect of guiding**
 8 **behavior of the required parties. It's not an**
 9 **unusual circumstance for regulatory agencies to**
 10 **issue -- EPA does it routinely; and those**
 11 **guidelines are taken very seriously. And you --**
 12 **you ignore them at your own peril.**
 13 Q. You understand the difference between a guideline
 14 and a regulation. Right, sir?
 15 A. I'm trying to explain that to you.
 16 Q. Yes. And if you listen to my question, the EPA
 17 never issued regulations that encompassed these
 18 guidelines. True?
 19 A. **I'm not sure there is a regulatory means by which**
 20 **EPA or the Fish and Wildlife Service could have**
 21 **issued regulations specifically to this point,**
 22 **which is likely why they relied on their**
 23 **authority to issue guidelines.**
 24 Q. And the parties never agreed to these guidelines
 25 as part of the Compact. Right?

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1 **perhaps somewhat inaccurately, but I think for**
 2 **the best of intentions portrayed it as -- as an**
 3 **opportunity for some hope and optimism that we**
 4 **might still find a pathway to an amicable**
 5 **resolution and an allocation agreement.**
 6 **As it turns out, of course, that was not**
 7 **possible.**
 8 Q. Thank you, sir.
 9 MS. WINE: I have no further questions.
 10 MR. PRIMIS: Just a few, your Honor.
 11 SPECIAL MASTER LANCASTER: Please.
 12 RE-CROSS-EXAMINATION
 13 BY MR. PRIMIS:
 14 Q. Mr. Struhs, first, on the EPA guidelines, I think
 15 your testimony was that they were guidelines.
 16 Correct?
 17 A. **That's what they're called, yes.**
 18 Q. And you distinguish them from regulations.
 19 Correct?
 20 A. **The point I was trying to make is that guidelines**
 21 **from federal agencies are serious documents that**
 22 **regulated parties or sub -- political subdivision**
 23 **states must take very seriously.**
 24 Q. You mentioned there's a regulatory process.
 25 Correct?

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1 A. **Well, I wouldn't put it quite like that because,**
 2 **remember, the federal government through a**
 3 **federal commissioner was a party to the**
 4 **negotiations. There were four commissioners,**
 5 **including Mr. Thomas, who represented all the**
 6 **federal interests, all the federal agencies. So**
 7 **the federal agencies were part and parcel of the**
 8 **negotiations and of the Compact.**
 9 Q. Let me just get that straight. The federal
 10 government was part and parcel of the
 11 negotiations of the Compact; is that what you
 12 said, sir?
 13 A. **The federal commissioner -- so, again, if you**
 14 **read the Compact, it's clear that the federal**
 15 **commissioner would have to review any agreement**
 16 **that the States reached under the Compact. And**
 17 **in order to facilitate that -- and, again, the**
 18 **Compact -- I'm paraphrasing but, again, the**
 19 **Compact directs the federal agencies through the**
 20 **federal commissioner to support the efforts of**
 21 **the states to that effort. And I think the**
 22 **guidelines were these two federal agencies doing**
 23 **exactly what the Compact expected of them, which**
 24 **was to provide the guidelines to increase the**
 25 **chance of a successful resolution.**

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1 **Q.** Now, back to Exhibit 1268, which is the press
 2 release from Governor Bush talking about good
 3 faith. Your counsel just pointed out that this
 4 was issued after Florida learned about the D.C.
 5 case settlement. True?
 6 **A. Yes. That's correct.**
 7 **Q.** And after that settlement was known to you,
 8 Governor Bush issued this statement talking about
 9 the good faith efforts of Alabama, Georgia, and
 10 Florida. Right?
 11 **A. Yes.**
 12 **Q.** And you said, well, that's just politics. Hope
 13 springs eternal. Maybe we'll settle later.
 14 Right?
 15 **A. That's not quite how I characterized it, but I**
 16 **take your point.**
 17 **Q.** Okay. But you had concluded at this point it was
 18 bad faith; Georgia had acted in bad faith.
 19 Right?
 20 **A. From my point of view as the person who was**
 21 **leading the federal -- or, I'm sorry, the Florida**
 22 **negotiating team, they were operating in bad**
 23 **faith.**
 24 **I think bad faith is one of those things**
 25 **where it's more apparent retrospectively than in**
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1 **the heat of the moment, that it's not necessarily**
 2 **just one instance; but it is a pattern of**
 3 **behavior over, in this case, many years that led**
 4 **me to the conclusion that in fact Georgia was**
 5 **negotiating in bad faith, yes.**
 6 **Q.** And Florida's solution to that was to turn around
 7 and immediately sue the United States Army Corps
 8 of Engineers. True?
 9 That was your next move in this case. Right?
 10 **A. I -- I believe that was filed after I left the**
 11 **State of Florida.**
 12 **Q.** Okay. So after you left Florida, notwithstanding
 13 all this bad faith by Georgia, Florida went and
 14 sued the Corps?
 15 **A. Yes.**
 16 **Q.** You said in your direct testimony and, again, on
 17 your redirect that you were upset because
 18 Mr. Reheis didn't give you maps. That bothered
 19 you. You just wanted to get the maps to show
 20 where that agricultural irrigation was going to
 21 be?
 22 **A. We wanted to see the basis for a 50 percent**
 23 **increase in the number of acres being irrigated,**
 24 **yes. And we thought that a visual representation**
 25 **of that would be helpful to see if it were true.**
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1 **Q.** Can you go back to FX-319, which is the Reheis
 2 letter.
 3 **A. Yes.**
 4 **Q.** Now, on page 4 of this document Mr. Reheis
 5 provides you with a chart. Correct?
 6 **A. Correct.**
 7 **Q.** It's not a map, but it's a chart. It has all the
 8 counties in Georgia in the ACF Basin. Right?
 9 **A. Yes.**
 10 **Q.** And it shows who is drawing groundwater and who
 11 is drawing surface water by county. Right?
 12 **A. Yes.**
 13 **Q.** And on those maps -- would you turn to page 10 of
 14 this memo.
 15 **A. Yes.**
 16 **Q.** And there are attachments referenced in
 17 Mr. Reheis's letter. Correct?
 18 **A. Yes.**
 19 **Q.** Now, Florida didn't attach those maps when it
 20 produced this document, but you will agree with
 21 me that one of the items that Mr. Reheis attached
 22 was a map of the Chattahoochee and Flint River
 23 Basins showing all mapped and farmer-verified
 24 irrigated land. Correct?
 25 **A. Yes.**
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1 MR. PRIMIS: No further questions.
 2 MS. WINE: Just briefly, your Honor.
 3 REDIRECT EXAMINATION
 4 BY MS. WINE:
 5 **Q.** Sir, do you recall whether you ever reviewed
 6 those maps?
 7 **A. No, I never saw the maps. And I -- and I believe**
 8 **that footnote or the attachment note No. 2 --**
 9 **again, I have not seen the maps. I can't say.**
 10 **But it appears as if it's talking about**
 11 **existing acres. It's talking about all the**
 12 **mapped and farmer-verified irrigated lands. And**
 13 **what Florida was seeking was a map of the**
 14 **additional acres that had not yet been put under**
 15 **irrigation permits.**
 16 **Q.** Thank you, sir.
 17 MR. PRIMIS: Nothing further.
 18 SPECIAL MASTER LANCASTER: Mr. Struhs,
 19 are you familiar with the ACF Sustainable
 20 Water Management Plan?
 21 THE WITNESS: No, I'm not. No, sir.
 22 SPECIAL MASTER LANCASTER: You may step
 23 down.
 24 THE WITNESS: Thank you.
 25 SPECIAL MASTER LANCASTER: Why don't we
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1 take our noon recess at this point and be
 2 back in about an hour.
 3 MS. WINE: That would be terrific.
 4 Thank you, your Honor.
 5 MR. PRIMIS: Thank you, your Honor.
 6 (Time Noted: 11:43 a.m.)
 7 (Recess Called)
 8 (Time Noted: 12:57 p.m.)
 9 MR. PERRY: Good afternoon, your Honor.
 10 SPECIAL MASTER LANCASTER: Good
 11 afternoon, Mr. Perry.
 12 MR. PERRY: Florida is prepared now to
 13 present the deposition designations of a
 14 30(b)(6) witness, the former director of
 15 Georgia's Environmental Protection Division,
 16 Mr. Judson Turner.
 17 And, your Honor, I believe the exhibits
 18 we will be addressing have been put on your
 19 bench there --
 20 SPECIAL MASTER LANCASTER: Yes.
 21 MR. PERRY: -- and handed to Mr. Dunlap.
 22 We have prepared this group of clips in
 23 coordination with Georgia, so they are agreed
 24 deposition designations for both parties,
 25 your Honor.

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1 SPECIAL MASTER LANCASTER: Thank you.
 2 MR. PERRY: The first set of clips are
 3 simply the witness's background.
 4 (Whereupon the video was played.)
 5 MR. PERRY: Your Honor, this is also a
 6 background clip and specifically focuses on
 7 Director Turner's CV.
 8 (Whereupon the video was played.)
 9 MR. PERRY: Your Honor, that CV that was
 10 the subject matter of the clip, is Florida
 11 Exhibit 43.
 12 The next set of clips relates to two
 13 topics that are related to each other, the
 14 2006 Flint River Regional Water Development
 15 and Conservation Plan and a piece of
 16 correspondence from U.S. Fish and Wildlife to
 17 Georgia about that plan. This is what we
 18 referred to before as Joint Exhibit 21.
 19 That's the 2006 Georgia plan.
 20 And then we will also address in these
 21 clips Florida Exhibit 46.
 22 (Whereupon the video was played.)
 23 MR. PERRY: Now, your Honor, this next
 24 set of clips relates to the particular piece
 25 of U.S. Fish and Wildlife correspondence that

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1 I referred to a moment ago.
 2 (Whereupon the video was played.)
 3 MR. PERRY: Again, this is Florida
 4 Exhibit 46, this piece of correspondence.
 5 (Whereupon the video was played.)
 6 MR. PERRY: And here, your Honor, the
 7 clip relates to that same exhibit, Florida
 8 Exhibit 46, and the particular page is GA
 9 537489.
 10 (Whereupon the video was played.)
 11 MR. PERRY: Your Honor, this next clip
 12 is, likewise, about Florida Exhibit 46,
 13 again, the letter from the U.S. Fish and
 14 Wildlife Service to Georgia relating to the
 15 draft 2006 plan. The particular page number
 16 for this clip is GA 537490.
 17 (Whereupon the video was played.)
 18 MR. PERRY: Your Honor, this clip is
 19 still about Florida Exhibit 46, the letter
 20 from U.S. Fish and Wildlife. The particular
 21 page is GA 537491.
 22 (Whereupon the video was played.)
 23 MR. PERRY: Your Honor, the next set of
 24 clips addresses Florida Exhibit 47, which is
 25 another letter from U.S. Fish and Wildlife

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1 from 2008.
 2 (Whereupon the video was played.)
 3 MR. PERRY: Your Honor, we're still here
 4 on Florida Exhibit 47, the 2008 letter from
 5 U.S. Fish and Wildlife to Georgia's
 6 Environmental Protection Division. This
 7 particular clip relates to the page No.
 8 GA 537496.
 9 (Whereupon the video was played.)
 10 MR. PERRY: Your Honor, what follows
 11 relates to Joint Exhibit 9, which director
 12 Turner will now describe.
 13 (Whereupon the video was played.)
 14 MR. PERRY: Now, your Honor, Director
 15 Turner's testimony will relate to funding for
 16 implementation of the Flint River Drought
 17 Protection Act auction to buy irrigation
 18 acres.
 19 (Whereupon the video was played.)
 20 MR. PERRY: The next clip, your Honor,
 21 is similar testimony.
 22 (Whereupon the video was played.)
 23 MR. PERRY: Your Honor, the next clip
 24 relates to Florida Exhibit 9 and discusses
 25 the purposes of the Flint River Drought

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1 Protection Act.
 2 (Whereupon the video was played.)
 3 MR. PERRY: Your Honor, the next clip
 4 relates to the same memorandum, Florida
 5 Exhibit 9. And the text that it addresses is
 6 on the page here.
 7 (Whereupon the video was played.)
 8 MR. PERRY: Your Honor, what follows in
 9 the next clip, likewise, relates to the same
 10 memorandum that's at F -- Florida Exhibit 9.
 11 (Whereupon the video was played.)
 12 MR. PERRY: Your Honor, the next set of
 13 clips relate to which years are severe
 14 drought years under the Flint River Drought
 15 Protection Act.
 16 (Whereupon the video was played.)
 17 MR. PERRY: Same topic, your Honor.
 18 (Whereupon the video was played.)
 19 MR. PERRY: Your Honor, the next clip,
 20 likewise, addresses the same topic.
 21 (Whereupon the video was played.)
 22 MR. PERRY: This clip similarly
 23 addresses the same topic, your Honor.
 24 (Whereupon the video was played.)
 25 MR. PERRY: Your Honor, the next set of

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1 clips relate to Florida Exhibit 78 and a
 2 particular 2011 memorandum internally within
 3 Georgia's Environmental Protection Division.
 4 (Whereupon the video was played.)
 5 MR. PERRY: Your Honor, the next set of
 6 clips addresses Florida Exhibit 82. And that
 7 in particular is a September 2011 memorandum
 8 from Mr. Zeng internally within the
 9 Environmental Protection Division of Georgia.
 10 And here, your Honor, the first clip
 11 relates very specifically to page GA 1614062.
 12 (Whereupon the video was played.)
 13 MR. PERRY: Your Honor, the next clip
 14 relates to the same document and the same
 15 paragraph, again, GA 1614062.
 16 (Whereupon the video was played.)
 17 MR. PERRY: Your Honor, the next clip
 18 relates to Florida Exhibit 82, and it's a
 19 different page. It's GA 1614063.
 20 (Whereupon the video was played.)
 21 MR. PERRY: Your Honor, the next set of
 22 clips relate to Florida Exhibit 89, Florida
 23 Exhibit 88, and Joint Exhibit 69. All of
 24 them relate to the year 2012 and the Flint
 25 River Drought Protection Act drought

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1 declaration process.
 2 (Whereupon the video was played.)
 3 MR. PERRY: Your Honor, the next clip is
 4 on the same general topic, but it's Florida
 5 exhibit 88. In particular the number is
 6 GA 375.
 7 (Whereupon the video was played.)
 8 MR. PERRY: Your Honor, the next clip
 9 relates to the same exhibit, later in the
 10 same paragraph. It's Florida Exhibit 88.
 11 And, again, the number is GA 375.
 12 (Whereupon the video was played.)
 13 MR. PERRY: Your Honor, the next exhibit
 14 is a March 2012 press release. And it's
 15 Joint Exhibit 69. The testimony addresses
 16 the first page in this clip, your Honor.
 17 (Whereupon the video was played.)
 18 MR. PERRY: Your Honor, the next set of
 19 clips is a slightly different topic. It
 20 relates to a possible revision to the Flint
 21 River Drought Protection Act and also to 2011
 22 correspondence from the U.S. Fish and
 23 Wildlife Service. The exhibits in particular
 24 are Florida Exhibit 54 and Florida Exhibit
 25 48.

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1 (Whereupon the video was played.)
 2 MR. PERRY: Your Honor, the next clip
 3 relates to Florida Exhibit 48, which is
 4 another letter from the U.S. Fish and
 5 Wildlife Service to Georgia Environmental
 6 Protection Division.
 7 (Whereupon the video was played.)
 8 MR. PERRY: Your Honor, the next clip
 9 continues on the same topic.
 10 (Whereupon the video was played.)
 11 MR. PERRY: Your Honor, the next clip
 12 similarly is on the same topic.
 13 (Whereupon the video was played.)
 14 MR. PERRY: The next clip is more
 15 testimony on a similar topic.
 16 (Whereupon the video was played.)
 17 MR. PERRY: Your Honor, the next set of
 18 clips is on a different topic. The exhibits
 19 at issue in this next set of clips are Joint
 20 Exhibit 154 and Florida Exhibit 59b. All of
 21 these clips relate to a meeting where
 22 Director Turner attended with other members
 23 of Georgia's Environmental Protection
 24 Division and members of the Georgia
 25 community.

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1 (Whereupon the video was played.)
 2 MR. PERRY: Similar topic, your Honor,
 3 in this next clip.
 4 (Whereupon the video was played.)
 5 MR. PERRY: Your Honor, the next clip
 6 relates to FX-49b. And it's on the same
 7 topic, the 2014 meeting.
 8 (Whereupon the video was played.)
 9 MR. PERRY: Your Honor, the next slide
 10 relates to Florida Exhibit 49b. And in
 11 particular, page GA 278823. It's a page in
 12 the presentation that was just addressed in
 13 the last clip.
 14 (Whereupon the video was played.)
 15 MR. PERRY: The next clip, your Honor,
 16 is, again, from Florida Exhibit 49b. This
 17 page -- the subject matter of this clip is
 18 GA 278830.
 19 (Whereupon the video was played.)
 20 MR. PERRY: Your Honor, the next clip
 21 relates to Florida Exhibit 49b. And in
 22 particular the page numbered GA 278831. It's
 23 the same PowerPoint presentation from the
 24 November 2014 meeting.
 25 (Whereupon the video was played.)

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1 MR. PERRY: Likewise, the next clip is
 2 the same exhibit; and it's page GA 278832,
 3 Flow Changes in the Lower Flint.
 4 (Whereupon the video was played.)
 5 MR. PERRY: Your Honor, the next
 6 particular clip relates to the same exhibit;
 7 but it's towards the end of the exhibit.
 8 It's the PowerPoint presentation from the
 9 2014 meeting, GA 278840.
 10 (Whereupon the video was played.)
 11 MR. PERRY: Sorry. Your Honor, the next
 12 clip is a similar topic.
 13 (Whereupon the video was played.)
 14 MR. PERRY: And, your Honor, this
 15 particular clip, which I think is the last
 16 for this 30(b)(6) deposition today, likewise
 17 relates to the same PowerPoint, Florida
 18 Exhibit 49b at GA 278839. And this is -- I
 19 believe it will be Georgia's questioning.
 20 (Whereupon the video was played.)
 21 MR. PERRY: Your Honor, that was the
 22 last of our clips for the 30(b)(6) deposition
 23 of Director Turner. I believe we will
 24 shortly be ready to call an expert witness
 25 regarding the Apalachicola River, Dr. Allan,

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1 but if I might have a minute just to confirm.
 2 SPECIAL MASTER LANCASTER: Take your
 3 time.
 4 MR. PERRY: Thank you.
 5 MR. PRIMIS: Your Honor, we're prepared
 6 for -- we are prepared for cross-examination.
 7 I'm going to ask my colleague, Mr. Avallone,
 8 who I would like to introduce to the Court,
 9 to pass out the books that we plan to use to
 10 cross Mr. Allan.
 11 And while he does that, I'm going to
 12 step back to grab one thing; and I'll be
 13 right back, if that's okay.
 14 SPECIAL MASTER LANCASTER: That's fine.
 15 MR. PRIMIS: Thank you, your Honor.
 16 THE CLERK: Please raise your right
 17 hand.
 18 Do you solemnly swear that the testimony
 19 you shall give in the cause now in hearing
 20 shall be the truth, the whole truth, and
 21 nothing but the truth, so help you God?
 22 THE WITNESS: I do.
 23 THE CLERK: Please be seated.
 24 State your full name and spell your
 25 name, please.

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1 THE WITNESS: My full name is John David
 2 Allan, spelled A L L A N.
 3 MR. QURESHI: Good afternoon, your
 4 Honor. We're going wait for a moment for
 5 Mr. Primis to return. He asked me to do that
 6 before getting started.
 7 Your Honor, I would like to introduce
 8 Dr. J. David Allan, who is a professor
 9 emeritus at the University of Michigan School
 10 of Natural Resources and Environment.
 11 And with your permission, I would like
 12 to approach and provide him his prefiled
 13 direct.
 14 DIRECT EXAMINATION
 15 BY MR. QURESHI:
 16 Q. Dr. Allan, do you recognize the document I
 17 provided to you?
 18 A. I do.
 19 Q. What is it?
 20 A. This is my prefiled testimony.
 21 Q. And, sir, do you adopt the sum and substance of
 22 that testimony today?
 23 A. I do.
 24 Q. Okay. Thank you.
 25 MR. PRIMIS: Your Honor, may I approach

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1 Dr. Allan?
 2 SPECIAL MASTER LANCASTER: Please.
 3 MR. PRIMIS: Thank you.
 4 CROSS-EXAMINATION
 5 BY MR. PRIMIS:
 6 **Q.** Good afternoon. Nice to see you again.
 7 These will be the exhibits that we use so
 8 that we can more efficiently go through them.
 9 **A. Thank you.**
 10 MR. PRIMIS: Your Honor, I should just
 11 say in advance that I promise the Court I do
 12 not intend to try this case by myself. I
 13 think Florida scheduled the first few
 14 witnesses to give me an endurance test
 15 because these are my folks. But soon enough,
 16 other members of my team will be here.
 17 BY MR. PRIMIS:
 18 **Q.** Dr. Allan, good afternoon.
 19 **A. Good afternoon.**
 20 **Q.** Your direct testimony references four metrics
 21 that you used to assess harm to species.
 22 Correct?
 23 **A. It does.**
 24 MR. PRIMIS: And if I could put it on
 25 the screen, Mr. Smith.

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1 BY MR. PRIMIS:
 2 **Q.** You looked at metrics for mussels. Right?
 3 **A. Correct.**
 4 **Q.** Floodplain fish?
 5 **A. Yes.**
 6 **Q.** Gulf sturgeon?
 7 **A. Yes.**
 8 **Q.** And the tupelo trees; correct?
 9 **A. Correct.**
 10 **Q.** Okay. So I have just put them up there on the
 11 screen as a reminder for us.
 12 I'm going to ask you a few initial questions
 13 about each of these, and then we'll come back and
 14 explore your methodology in more detail. Okay,
 15 sir?
 16 **A. Okay.**
 17 **Q.** Thank you. There are three mussels that are
 18 listed as threatened or endangered that live in
 19 the Apalachicola River Basin. Correct?
 20 **A. Correct.**
 21 **Q.** That's the Chipola slabshell, the purple
 22 bankclimber, and the fat threeridge. Right?
 23 **A. Correct.**
 24 **Q.** Now, you would agree with me that you didn't do
 25 any study to determine whether these three

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1 species of mussels are increasing, decreasing, or
 2 stable. Correct?
 3 **A. Correct.**
 4 MR. PRIMIS: And, Matt, you can leave
 5 that up.
 6 BY MR. PRIMIS:
 7 **Q.** And you don't know if there's been a decline in
 8 populations of the fat threeridge, the purple
 9 bankclimber, or the Chipola slabshell since
 10 they became listed as threatened or endangered.
 11 True?
 12 **A. So my studies did not track populations and did
 13 not involve population studies.**
 14 **Q.** Okay. So to answer my question specifically, you
 15 don't know if there's been a decline in any of
 16 the three endangered species since they became
 17 listed. Correct?
 18 **A. Correct.**
 19 **Q.** Okay. You base your mussel metric specifically
 20 on the fat threeridge. Correct?
 21 **A. Correct.**
 22 **Q.** Because you consider the fat threeridge as a
 23 reasonable representative for the entire mussel
 24 assemblage. Correct?
 25 **A. Correct in part. I also rely on the fat**

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1 **threeridge because it's extensively studied, so
 2 there is an adequate data set for metric
 3 development.**
 4 **Q.** Okay. Dr. Allan, you don't have any idea how
 5 many fat threeridge mussels currently reside in
 6 the Apalachicola River Basin; do you?
 7 **A. Well, yes, I do have an idea because I have seen
 8 estimates. I don't have -- I don't have a high
 9 degree of confidence in those estimates; so I
 10 can't tell you with any precision what I think
 11 the true number is.**
 12 **Q.** Dr. Allan, you gave a deposition in this case.
 13 Correct?
 14 **A. Yes, I did.**
 15 **Q.** You were under oath when you gave that
 16 deposition?
 17 **A. Yes.**
 18 MR. PRIMIS: May I please have a copy of
 19 Dr. Allan's deposition.
 20 May I approach, your Honor?
 21 BY MR. PRIMIS:
 22 **Q.** Dr. Allan, can I refer you to page 444, line 12
 23 of your deposition.
 24 **A. Yes. I'm looking for it.**
 25 **Q.** Okay. Dr. Allan, I'm going to play a video of

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1 the question and answer at line 12 through 15.
 2 I'm going to ask you if you were asked that
 3 question.
 4 (Whereupon the video was played.)
 5 BY MR. PRIMIS:
 6 Q. Dr. Allan, were you asked that question; and did
 7 you give that answer?
 8 A. I did.
 9 Q. Dr. Allan, there are other mussels that aren't
 10 threatened or endangered in the Apalachicola
 11 River Basin. Correct?
 12 A. Correct.
 13 Q. And you don't have any population level
 14 information about those species as to whether
 15 they are increasing or decreasing over any period
 16 of time. True?
 17 A. I do not.
 18 Q. Let's turn to the floodplain fish. Your
 19 floodplain fish metrics are based on three
 20 species of fish. Correct?
 21 A. I would like to think about the best answer, most
 22 correct answer to that. The specific metrics
 23 developed for use with Dr. Hornberger's
 24 hydrologic analysis are based on those three
 25 species of fish. Correct.

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1 Q. The three species you looked at were the spotted
 2 sucker, the redear sunfish, and the large-mouthed
 3 bass. Correct?
 4 A. Correct.
 5 Q. You don't have data that would tell us what
 6 population levels of the spotted sucker are over
 7 any period of time. Correct?
 8 A. I disagree with that characterization. The data
 9 that are presented in my report collected by the
 10 Florida Department of Environmental Protection is
 11 an annual census running some 14 or 15 years of
 12 recruitment into the population of newborn fish.
 13 That's classic fish population data.
 14 And we see that that recruitment number is
 15 much higher in some years and much lower in other
 16 years, and that variation is statistically
 17 correlated with flow.
 18 Q. Dr. Allan, could you refer to page 255, line 9 of
 19 your deposition.
 20 MR. PRIMIS: And for the record, I'm
 21 going to play the video of 255, lines 9
 22 through 15.
 23 BY MR. PRIMIS:
 24 Q. And I'm going to ask if you were asked those
 25 questions and gave those answers.

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1 (Whereupon the video was played.)
 2 BY MR. PRIMIS:
 3 Q. Dr. Allan, were you asked those questions; and
 4 did you give those answers?
 5 A. I gave those answers.
 6 And the distinction is between the overall
 7 total population and the numbers, which is
 8 population of young fish. So I don't believe
 9 there is any inconsistency between my statement
 10 that we don't have a total population census, but
 11 we do have population data on recruitment to the
 12 population.
 13 Q. Doctor, I asked a straightforward question. I
 14 said were you asked those questions, and did you
 15 give those answers under oath?
 16 A. Yes.
 17 Q. Dr. Allan, for the redear sunfish, you cannot
 18 tell me what the overall population numbers are
 19 for the redear sunfish over any period of time.
 20 Correct?
 21 A. Correct.
 22 Q. With regard to the large-mouthed bass, you have
 23 no data that would tell us what the overall
 24 population has been over any period of time for
 25 the large-mouthed bass. True?

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1 A. Correct.
 2 Q. You say in your direct testimony that there are
 3 142 freshwater and estuarine fish species in the
 4 Apalachicola River. Right?
 5 A. Yes.
 6 Q. And you don't have any population level data that
 7 would indicate whether any fish species in the
 8 Apalachicola River is increasing or decreasing.
 9 Correct?
 10 A. Correct.
 11 Q. You have no evidence that the fish populations in
 12 the Apalachicola River are currently not
 13 sustainable; correct?
 14 A. I don't -- I don't believe I ever commented on
 15 whether those fish populations were sustainable
 16 or not sustainable; and so I don't really feel I
 17 can answer yes or no to that question.
 18 Q. Can you turn to page 477, lines 15 through 22 of
 19 your deposition, sir.
 20 MR. PRIMIS: And I would ask Mr. Smith
 21 to queue up the video for those pages, those
 22 lines.
 23 (Whereupon the video was played.)
 24 BY MR. PRIMIS:
 25 Q. Dr. Allan, were you asked that question; and did

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1 you give that answer?

2 **A. I did give that answer.**

3 **Q.** And, Dr. Allan, you did not conduct any

4 population viability analysis for the fish

5 species in the fish assemblage in the river.

6 Correct?

7 **A. Correct.**

8 **Q.** Okay. The next one is the Gulf sturgeon. True?

9 Are you with me?

10 **A. It's the next one on the list, yes.**

11 **Q.** Okay. You don't have any information about

12 changes in Gulf sturgeon population over any

13 period of time. Correct?

14 **A. Correct.**

15 **Q.** You haven't seen any reports or studies

16 indicating that the sturgeon population has

17 decreased in the last 10 years. True?

18 **A. That it has decreased?**

19 **Q.** Correct.

20 **A. True.**

21 **Q.** You have not seen any reports indicating that the

22 sturgeon population has decreased over the last

23 16 years in the Apalachicola River. True?

24 **A. I don't believe I have seen any reports on**

25 **population over the last 16 years.**

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1 **Q.** For the sturgeon; right?

2 **A. For the sturgeon.**

3 **Q.** Let's talk about the floodplain forest for a

4 moment. Your testimony is that the composition

5 of the floodplain forest trees has undergone a

6 long-term shift. Correct?

7 **A. Correct.**

8 **Q.** And your testimony is that the decline in flow is

9 causing the forest to lose its swamp trees and is

10 shifting the forest composition to different tree

11 species. Correct?

12 **A. Correct.**

13 **Q.** And you rely on the work of a USGS official named

14 Helen Light to support your conclusions about

15 forest composition. Right?

16 **A. Correct.**

17 **Q.** And we discussed Ms. Light in some testimony

18 yesterday with Mr. Hoehn. Are you aware of that?

19 **A. I am now.**

20 **Q.** Okay. You know that the Helen Light studies that

21 found changes in the swamp forest in those

22 studies, she attributed those changes to channel

23 erosion. Correct?

24 **A. That's partly correct based on my reading of**

25 **those papers. She indicated that there was also**

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1 **a role for reduced flows that had been**

2 **understudied.**

3 **Q.** Dr. Allan, can you refer to page 533, lines 2

4 through 10 of your deposition, please.

5 MR. PRIMIS: And, Mr. Smith, can you

6 queue that.

7 (Whereupon the video was played.)

8 BY MR. PRIMIS:

9 **Q.** Dr. Allan, were you asked those questions; and

10 did you give those answers?

11 **A. Yes, I did.**

12 **Q.** Before we take a deeper dive into your metrics, I

13 want to talk about the chart you have on page 4

14 of your testimony. It's called figure 2.

15 And we'll put it on the screen so everyone

16 can see that.

17 **A. I see it.**

18 **Q.** It says on the left-hand side -- it's sideways,

19 so you have to tilt your head; but it says that

20 these bars represent duration of harm in days.

21 Correct?

22 **A. Correct.**

23 **Q.** And this particular chart relates to mussels.

24 True?

25 **A. Yes, it does.**

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1 **Q.** Now, these bars, these blue bars that you have

2 here, they represent the number of days that

3 didn't hit flows that are measured by your

4 metrics for mussels. Correct?

5 **A. Correct.**

6 **Q.** This chart doesn't tell you how many mussels died

7 in each year. Right?

8 **A. Correct.**

9 **Q.** These bars don't quantify dead mussels; that's

10 not their purpose. True?

11 **A. True.**

12 **Q.** And the bars do not describe changes in mussel

13 populations. Right?

14 **A. That is correct.**

15 **Q.** In fact, your metrics are not designed to

16 estimate population size at all. Correct?

17 **A. Correct.**

18 **Q.** Your metrics are also not designed to estimate

19 population mortality. Correct?

20 **A. Correct.**

21 **Q.** Dr. Allan, let's take a step back now and talk a

22 little more broadly about your methodology.

23 Other than mussels, fish, Gulf sturgeon, and the

24 trees, you didn't develop harm metrics for any

25 other plant or animal species. Correct?

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1 **A. Those are the only groups of which I developed**
 2 **harm metrics; correct. I developed extensive**
 3 **arguments to extend beyond those metrics to the**
 4 **entire ecosystem.**
 5 **Q.** But in terms of actual measurements metrics, we
 6 have got the four. Right?
 7 **A. Four. Four groups. There's about 15 metrics in**
 8 **total because the metrics span different**
 9 **conditions.**
 10 **Q.** Right. Four groups, four different types of
 11 animals?
 12 **A. Yes.**
 13 **Q.** Your methodology was to identify a specific flow
 14 for a particular duration and at a particular
 15 time of year at which a species would experience
 16 what you call harm. Right?
 17 **A. Correct.**
 18 **Q.** And then you gave those metrics with those flow
 19 amounts, the duration, and the timing to
 20 Dr. Hornberger. Right?
 21 **A. Correct.**
 22 **Q.** And Dr. Hornberger, just to remind everyone, is
 23 the hydrology expert for Florida. Right?
 24 **A. Right.**
 25 **Q.** And then Dr. Hornberger took those, and he ran
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1 them through his model and gave you information
 2 about the number of days when your metrics were
 3 triggered under various hydrological assumptions?
 4 Right?
 5 **A. Number of days and also number of year or**
 6 **events.**
 7 **Q.** Right. And by that you mean it gave you the
 8 total number of days, and then it would tell you
 9 how many separate years those days occurred in.
 10 Right?
 11 **A. I would just phrase it as he gave me the years in**
 12 **which the metric values were not met. And the**
 13 **number -- it could be more than one event in a**
 14 **year. And then it would be the total number of**
 15 **days that was the duration of an event.**
 16 **Q.** Okay. And so if Dr. Hornberger said, for
 17 instance, that flows fell below your harm metric
 18 for 50 days, then you counted 50 days of harm to
 19 that species for that metric. Right?
 20 **A. Yes.**
 21 **Q.** I want to put up a chart from your expert report
 22 because you didn't include these in your direct
 23 testimony; and they have a lot more information.
 24 MR. PRIMIS: So can we put up Dr. Allan's
 25 chart from his expert report on page 63.
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1 BY MR. PRIMIS:
 2 **Q.** And this is your harm chart for the floodplain
 3 fish. Correct?
 4 **A. Correct.**
 5 MR. PRIMIS: And, Mr. Smith, do you have
 6 a color version of this chart?
 7 We don't, okay. I'm sure Dr. Allan will
 8 remember.
 9 BY MR. PRIMIS:
 10 **Q.** As you note in the bottom of this chart, that
 11 numbers in red font are in the opposite direction
 12 from expected. Correct?
 13 **A. Correct.**
 14 **Q.** And that meant that in those instances, harm
 15 increased by five days under the remedy scenario.
 16 Right?
 17 That's what you said?
 18 **A. That's correct.**
 19 **Q.** Okay. Now, we don't have a color version on the
 20 screen. Why don't I give you the report so we
 21 can make the record real clear.
 22 MR. PRIMIS: May I approach?
 23 BY MR. PRIMIS:
 24 **Q.** Dr. Allan, you -- are you on page 68?
 25 **A. I thought we were --**
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1 **Q.** Page 63. Sorry.
 2 **A. 63, right.**
 3 **Q.** Yes, sir. So this chart relates to the
 4 floodplain fish metrics. Correct?
 5 **A. Correct.**
 6 **Q.** And the first column shows your metric, the
 7 column on the left-hand side. Right?
 8 **A. Yes.**
 9 **May I have a moment to review?**
 10 **Q.** Sure.
 11 **A. Thank you. Thank you. I'm ready.**
 12 **Q.** Okay. The first column shows the five different
 13 measurements that you took for the floodplain
 14 fish. Right?
 15 **A. Yes, it does.**
 16 **Q.** And they're a little cryptic, but the first one
 17 would stand for fish inundated for 60 days.
 18 Right?
 19 **A. Inundated forest for 60 days, yes.**
 20 **Q.** And the next one would be inundated for 120 days?
 21 **A. Fish in the forest, yes.**
 22 **Q.** Yes. And then the next three were fish in
 23 different types of sloughs. Right?
 24 **A. Right.**
 25 **Q.** And you had different days and lengths for the
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1 fish depending on the type of slough they were
 2 living in. Correct?
 3 **A. Correct.**
 4 **Q.** Okay. And, now, in your direct testimony, you
 5 only reported one of these fish metrics.
 6 Correct?
 7 **A. That's correct.**
 8 **Q.** You used the bottom one for the fish in the small
 9 slough. And that's -- SWS stands for Swift
 10 Slough. Right?
 11 **A. That's correct.**
 12 **Q.** And that's the one you chose and put in your
 13 report?
 14 **A. That's correct.**
 15 **Q.** Okay. Let's focus for a bit on the ones that
 16 didn't make it into your report.
 17 But before I do, I want to just talk about
 18 some of these columns and explain what
 19 Dr. Hornberger did.
 20 In column 3, that's the recent 16 years
 21 column. Do you see that?
 22 And that is the amount of harm, using your
 23 metrics, that Dr. Hornberger reported across each
 24 of those different types of fish in the river or
 25 fish in the slough. Right?

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1 **A. Correct.**
 2 **Q.** So this would tell me that for the recent 16
 3 years for fish inundated for 60, the top row,
 4 that there were 13 different years that had harm
 5 and 1148 days in the recent 16-year period.
 6 Right?
 7 **A. Correct.**
 8 **Q.** And that recent 16-year period is 1998 to 2013.
 9 Right?
 10 **A. I believe so, yes.**
 11 **Q.** That's the period of study?
 12 **A. Yes.**
 13 **Q.** Okay. So your period that you looked to
 14 calculate harm in this case included all of the
 15 last 16 years from 2013 backward. Right?
 16 **A. Yes.**
 17 **Q.** So the year 2000, that's included in your harm
 18 metrics. Right?
 19 **A. Yes.**
 20 **Q.** And the year 2006, that would be included in your
 21 harm metrics. Right?
 22 **A. That's right.**
 23 **Q.** Okay. Now -- and 2012 as well. Correct?
 24 **A. Correct.**
 25 **Q.** Okay. Dr. Hornberger, when he ran your metrics

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1 to see how many days of low flow there were, he
 2 used the Chattahoochee Gage. Correct?
 3 **A. Correct.**
 4 **Q.** And that sits just beneath the Jim Woodruff Dam
 5 on the Apalachicola River. Correct?
 6 **A. Correct.**
 7 **Q.** Now, you also have something on your chart called
 8 the remedy comparison?
 9 **A. I do.**
 10 **Q.** And those are the two columns on the right-hand
 11 side?
 12 **A. That's correct.**
 13 **Q.** Okay. The last column or the next to last column
 14 is called recent 16 years with remedy. Correct?
 15 **A. Yes, it is.**
 16 **Q.** And so what you did there was you took the recent
 17 16-year period as it existed at that gage in the
 18 real world, and you applied a remedy scenario to
 19 it to see did it change? Did we get any better
 20 in terms of low flow days for these species?
 21 Right?
 22 **A. Correct.**
 23 **Q.** And then the last column, decrease in harm, that
 24 is a comparison between recent 16 years and
 25 recent 16 years with remedy?

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1 **A. Yes.**
 2 **Q.** So when you do all that and you look at the fish
 3 inundated for 60 days, the decrease in harm is
 4 zero in terms of years; and then the number in
 5 parentheses is the number of days fewer harm.
 6 Correct?
 7 **A. Correct.**
 8 **Q.** And so for that particular fish metric, there
 9 were no fewer years; and there were 39 fewer days
 10 of harm. Correct?
 11 **A. Correct.**
 12 **Q.** And that 39 days, that's over a 16-year period.
 13 True?
 14 **A. True.**
 15 **Q.** And if we just take a straight average, we're
 16 talking about two days fewer harm per year.
 17 Right?
 18 **A. I would not subscribe to a straight average, but
 19 that's what the calculation comes out to.**
 20 **Q.** No matter which way you slice it, 39 days over 16
 21 years is a small number. Right?
 22 **A. It's a small number.**
 23 **Q.** Now, in the next row, fish inundated for 120,
 24 which I have highlighted on the ELMO and on the
 25 screen -- you can see it in your version, the

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1 paper version, is a red number in the
 2 parentheses. Right?
 3 **A. That's correct.**
 4 **Q.** And what that means is that for this metric, when
 5 you ran the remedy, there were actually seven
 6 more days of harm than if you just left the fish
 7 alone. Right?
 8 **A. Correct.**
 9 **Q.** And that was not what you expected to see.
 10 Right?
 11 **A. Actually, I'm not surprised by that result. And**
 12 **the reason I'm not surprised by that result is**
 13 **that the remedy is a relatively small number; and**
 14 **so when the flow magnitude at which harm occurs**
 15 **is large, the remedy is a small percentage. When**
 16 **the flow magnitude at which harm occurs is**
 17 **smaller, as it is in Swift Slough, then you see a**
 18 **dramatic improvement.**
 19 **So it basically shows that the remedy will be**
 20 **most effective at the more -- at the low end of**
 21 **the flow, six, seven, 8,000 cfs; and the remedy**
 22 **doesn't do much at 12,000, 14,000 cfs.**
 23 **Q.** Dr. Allan, you have an asterisk next to your red
 24 seven, which represents more harm days. True?
 25 **A. I do.**

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1 **Q.** And in your report, you put the asterisk as a
 2 footnote to say that the numbers in red font are
 3 in the opposite direction from expected. Isn't
 4 that what you wrote?
 5 **A. I wanted to be honest about it. Yes, they are.**
 6 **Q.** Okay. Now, for the fish in the large slough
 7 that -- is that the Kentucky Slough?
 8 **A. Kennedy.**
 9 **Q.** Kennedy Slough. Thank you.
 10 That showed zero years in which there were --
 11 zero years that were taken out or not harmed and
 12 102 days over the 16-year record of improvement.
 13 Right?
 14 **A. That's correct. That's the 12,000 cfs threshold.**
 15 **And the remedy had statistically basically no**
 16 **impact whatsoever.**
 17 **Q.** And the same is true for the fish in Mary Slough,
 18 the small slough. Right?
 19 **A. Yes. Mary Slough has a higher harm threshold**
 20 **than Swift Slough. And that, again, explains the**
 21 **difference.**
 22 **Q.** Okay. So I think you said there was not
 23 statistically significant difference for the ones
 24 that have the very small change. Right?
 25 Was that just your testimony a minute ago?

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1 **A. I would say that the change is very small. It's**
 2 **probably not biologically significant, I think is**
 3 **a better phrasing.**
 4 **Q.** And the one that did have some -- showed some
 5 change that was biologically significant in your
 6 mind was the fish in the Swift Slough?
 7 **A. Yes.**
 8 **Q.** Okay. We're going to come back to Swift Slough
 9 in a bit. But before we do that, I just want to
 10 ask you about this remedy scenario. You describe
 11 in your report a, quote, very conservative remedy
 12 scenario; is that right?
 13 **A. That's correct.**
 14 **Q.** And you say it's one, quote, in which Georgia
 15 reduces its water use relative to the present-day
 16 conditions, close quote. That's your testimony.
 17 Right?
 18 Paragraph 73 if you need to refresh.
 19 **A. Sorry. Where -- if you want to ask me exact**
 20 **wording, I want to see where my exact wording is.**
 21 **Where is it, please?**
 22 **Q.** Your written direct testimony submitted in the
 23 U.S. Supreme Court. It's paragraph 73.
 24 **A. I would like to ask you to repeat the question,**
 25 **please.**

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1 **Q.** Yes. I'm just simply trying to level-set.
 2 Your testimony is that this is a very
 3 conservative remedy scenario in which Georgia
 4 reduces its water use relative to present-day
 5 conditions. Is that your testimony?
 6 **A. I see that, yes.**
 7 **Q.** Okay. Your testimony does not say how much
 8 Georgia reduces its water use by in that -- in
 9 that document. Correct?
 10 **A. It does not. Correct.**
 11 **Q.** Now, in your expert report you didn't call it
 12 very conservative. Right?
 13 That's new for trial?
 14 **A. I believe you're correct in that.**
 15 **Q.** And in the remedy -- in the expert report you
 16 called it, quote, 50 percent reduction scenario.
 17 Right?
 18 **A. I called it a --**
 19 **Q.** 50 percent reduction scenario.
 20 **A. I believe I did, yes.**
 21 **Q.** And that remedy scenario, that 50 percent
 22 reduction, it came from Dr. Flewelling's report.
 23 Right?
 24 **A. So I -- I can't confirm or deny that. I take**
 25 **my -- my values from Dr. Hornberger's report. If**

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1 **he gets them from other people's reports, that's**
 2 **not my expert testimony. That's not my**
 3 **expertise.**
 4 **I'm given a scenario by Dr. Hornberger, whose**
 5 **work I respect; and I take that scenario as being**
 6 **one that is, in his judgment, realistic and**
 7 **reasonable for the question asked. And that's**
 8 **where my role ends at that point because my role**
 9 **is to develop the metrics and not to evaluate the**
 10 **scenarios that Dr. Hornberger develops or gets**
 11 **from someone else.**
 12 Q. Okay. Just I want to make sure I understand. We
 13 know Dr. Hornberger ran your metrics?
 14 A. Right.
 15 Q. Through his model. Correct?
 16 A. Yeah.
 17 Q. As between Hornberger or Flewelling or some other
 18 expert, you don't know exactly where the very
 19 conservative remedy scenario came from. Right?
 20 A. That's correct.
 21 Q. Now, this very conservative remedy, it involves
 22 the elimination of 50 percent of all agricultural
 23 irrigation in Georgia every year. Correct?
 24 A. That's my understanding.
 25 Q. But there is more. Right? That's not all they

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1 cut?
 2 A. That's my understanding.
 3 Q. In addition, the very conservative remedy
 4 scenario cuts 50 percent of all small
 5 impoundments in southwest Georgia. True?
 6 A. We -- it cuts the evaporation from those
 7 impoundments. Correct.
 8 Q. And in addition, the 50 percent very conservative
 9 remedy scenario eliminates all interbasin
 10 transfers out of the ACF Basin in Georgia. True?
 11 A. Correct.
 12 Q. Now, you don't know what it would take to cut 50
 13 percent of agricultural irrigation in Georgia
 14 every year. Do you?
 15 A. So you're asking me now to comment on the -- on
 16 the underpinnings of Dr. Hornberger's work; and
 17 that's outside my area of expertise.
 18 Q. You applied a remedy scenario and are reporting
 19 to the Supreme Court of the United States. True?
 20 A. I took the estimate of a highly, highly respected
 21 hydrologist who developed these scenarios. And
 22 he is open to your cross-examination, but it's
 23 not for me to comment on anything in terms of how
 24 he developed his analysis.
 25 Q. Okay. Apart from whether you're going to comment

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1 on not, Dr. Allan, I would like an answer to this
 2 question. Do you know what it would take to
 3 reduce agricultural water usage in Georgia by 50
 4 percent?
 5 A. If you're asking for a precise number, no; I do
 6 not know.
 7 Q. And you have no opinion on whether a 50 percent
 8 reduction in agricultural water use is
 9 reasonable. Correct?
 10 A. I'm here to comment on the impacts -- to report
 11 on the impacts of low flows on the ecological
 12 health of the Apalachicola River; and that's what
 13 I'm here to testify on.
 14 Q. Okay. I just want an answer to this question so
 15 we have it clear for the record. You have no
 16 opinion on whether a 50 percent reduction in
 17 agricultural water use is reasonable. Correct?
 18 A. I offer no expert opinion on that topic.
 19 Q. Do you know if a 50 percent reduction in
 20 agricultural water use would put thousands of
 21 farmers in Georgia out of business?
 22 A. I do not know.
 23 Q. You consider that question completely irrelevant
 24 to your analysis. True?
 25 A. I consider that question an important one to be

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1 resolved in this case, but not for -- not to be
 2 resolved by me.
 3 Q. At the time of your deposition, you didn't know
 4 whether the remedy scenario that you utilized
 5 involved reducing evaporation from small
 6 impoundments. Right?
 7 A. At the time of my deposition, I had -- I did not
 8 have clearly in my mind the details of the
 9 scenario when you asked me questions about it;
 10 that's correct.
 11 Q. And at the time that you submitted your expert
 12 report and reported your results, you also didn't
 13 know if the remedy scenario included the
 14 elimination of interbasin transfers. Right?
 15 A. Actually, I don't clearly remember one way or the
 16 other on that. Again, I was -- I have a high
 17 degree of confidence in Dr. Hornberger; and I
 18 took his scenario analysis and didn't try to
 19 dissect it.
 20 Q. You don't know what it would take physically to
 21 eliminate all interbasin transfers out of the
 22 Georgia portion of the ACF Basin; do you?
 23 A. I do not have an expert opinion on that.
 24 Q. And you don't have any idea how much that part of
 25 your remedy scenario would cost. True?

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1 **A. I do not.**
 2 **Q.** And you don't know what it would do to the
 3 delivery of drinking water in the City of Atlanta
 4 if they were ordered to eliminate all interbasin
 5 transfers; do you?
 6 **A. I do not.**
 7 **Q.** You don't even know if it's possible to eliminate
 8 all interbasin transfers. Correct?
 9 **A. Correct.**
 10 **Q.** In paragraph 73 of your testimony -- could you
 11 turn there if you're not there already.
 12 **A. Okay.**
 13 **Q.** And the line I want to draw your attention to
 14 says that using a less conservative remedy
 15 scenario that results in greater flows would
 16 provide an even greater positive impact on the
 17 riverine ecosystem. Isn't that right?
 18 **A. Yes. That's correct.**
 19 **Q.** Okay. Now, in your work in this case, you never
 20 received, whether from Dr. Hornberger or
 21 Dr. Flewelling or anyone else, any remedy
 22 scenario other than the one that you present in
 23 your report. Correct?
 24 **A. Correct.**
 25 **Q.** And, in fact, you have never evaluated any other

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1 remedy scenario that doesn't have a 50 percent
 2 cut in Georgia's agricultural irrigation every
 3 year. Right?
 4 **A. That's correct.**
 5 **Q.** And so you're just speculating when you say in
 6 your testimony here that if you have more flow of
 7 water over a greater period of time, that means
 8 there's less harm under your model. Right?
 9 **A. I think it's a logical speculation, but I agree**
 10 **that it needs to be run through the metrics to be**
 11 **confirmed -- through the scenarios to be**
 12 **confirmed.**
 13 **Q.** Let me take that in pieces. You say it would be
 14 logical speculation?
 15 **A. I think that a less -- as I read this sentence,**
 16 **it appears to me to be inconsistent. And --**
 17 **Q.** Inconsistent with what, sir?
 18 **A. With itself.**
 19 **Q.** Okay.
 20 **A. I'm trying to remember and understand the exact**
 21 **idea here. So a less conservative remedy**
 22 **scenario -- so -- I apologize for what's overly**
 23 **complicated language.**
 24 **So I think -- I'm trying to unpack this**
 25 **myself. I think the meaning of this sentence is**

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1 **that a less conservative remedy scenario, meaning**
 2 **a -- a remedy scenario that was, shall we say,**
 3 **more demanding or stronger, would result in**
 4 **greater flows. And, yes, that would be expected**
 5 **to provide an even greater positive impact on the**
 6 **riverine ecosystem. But that should be confirmed**
 7 **by using -- actually, looking at the scenario**
 8 **combined with the metrics to -- to see what the**
 9 **numbers say.**
 10 **Q.** Dr. Allan, it's your testimony that it would be
 11 speculation to say that more flow would equal
 12 less harm; isn't it?
 13 **A. I think it's a -- I think it is, indeed,**
 14 **speculation, yes. I'll agree with that.**
 15 **Q.** Now, let's go back to the floodplain fish,
 16 please, sir. Now, your -- can you turn to
 17 paragraph 47 of your testimony.
 18 **A. Paragraph 47.**
 19 **Q.** And this is where you say, reductions in
 20 connectivity reduce the size of fish year
 21 classes. Right?
 22 **A. That's correct.**
 23 **Q.** And the year class means the total amount of
 24 young fish that are produced by adults spawning.
 25 Right?

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1 **A. That's correct.**
 2 **Q.** And fish populations naturally have strong year
 3 classes and weak year classes. Right?
 4 **A. I say so in my report, yes.**
 5 **Q.** And occasional years of poor recruitment do not
 6 affect the viability of those populations. True?
 7 **A. That's true.**
 8 **Q.** Now, you say in your testimony in paragraph 47
 9 that reductions in size of fish year classes in
 10 successive years due to low flows can seriously
 11 impair fish populations as a whole. Do you see
 12 that?
 13 **A. I see that.**
 14 **Q.** Now, you don't have any evidence that reductions
 15 in size of fish year classes in successive years
 16 due to low flows has actually impaired in the
 17 real world any fish population in the
 18 Apalachicola River. Right?
 19 **A. So that's a general statement of fundamental fish**
 20 **biology, and it is not based on evidence of**
 21 **successive years in the Apalachicola. Right.**
 22 **Q.** When you did your study and found or projected
 23 low flow harm days, you didn't go back to see if
 24 there were large numbers of dead fish in the 13
 25 years in which your study identified harm.

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1 Right?

2 **A. That would be impossible to do.**

3 **Q.** Well, you didn't go back and look for any reports

4 that said we had a massive fish die-off in a

5 particular year where your study showed that

6 there would have been harm; did you?

7 **A. We used all available evidence. I used all**

8 **available evidence in developing these metrics;**

9 **and so there -- there is no way to go back in**

10 **time and sample 2006 today. And any evidence**

11 **from 2006 is built into the statistics we used.**

12 **I will say, however, with those -- with those**

13 **fish metrics that we developed -- that I used**

14 **that were actually developed as part of a**

15 **Master's thesis by a Florida biologist, that**

16 **those data were initially available through about**

17 **2010 or 2012. And they gave me -- they gave**

18 **people working with these data a pretty good idea**

19 **of what their relationship was. And then we got**

20 **new data to 2011, 2012, 2013, 2014, 2015; and the**

21 **points just kept accumulating along the graph.**

22 **So there we have a kind of corroboration that**

23 **comes from repeated sampling.**

24 **Q.** Dr. Allan, I'm just going to ask you if you're

25 going to go on an explanation like that, just

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1 please slow down for the court reporter. Very

2 difficult to follow.

3 **A. Thank you. I apologize.**

4 **Q.** I want to talk about your mussel metrics now.

5 Okay, sir?

6 **A. Okay.**

7 **Q.** You have two mussel metrics in your direct

8 testimony. Right?

9 **A. Right.**

10 **Q.** One for Swift Slough and one for the main

11 channel. Right?

12 **A. I believe that's right.**

13 **Q.** Now, I want focus on Swift Slough. Okay?

14 **A. Okay.**

15 **Q.** You had five mussel metrics, and two of them were

16 based on Swift Slough as of your expert report.

17 Right?

18 **A. I --**

19 **Q.** I'm sorry. Let me rephrase that.

20 **A. I don't think that's correct.**

21 **Q.** Let me rephrase that. I got that wrong.

22 In -- with regard to the species you looked

23 at, two different species were evaluated in Swift

24 Slough. Right?

25 **A. That's right. I think you're saying we have a**

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1 **fish metric for Swift Slough and a mussel metric**

2 **for Swift Slough. Is that --**

3 **Q.** That's exactly right.

4 **A. Yes. I agree.**

5 **Q.** And thank you for clarifying that.

6 Now, in paragraph 45 of your direct

7 testimony --

8 **A. Yes?**

9 **Q.** -- you describe -- you describe your Swift Slough

10 metric for the mussels. Right?

11 **A. Yes.**

12 **Q.** And you say that Swift Slough becomes

13 disconnected from the river at 5700 cfs. Right?

14 **A. Correct.**

15 **Q.** And that's your understanding of what happens at

16 Swift Slough. True?

17 **A. That number comes from a report in -- written by**

18 **Helen Light that establishes that as being the**

19 **level of disconnect. I am aware that there are**

20 **additional studies that have described some**

21 **variability in that disconnect level.**

22 **Q.** When --

23 **A. But that's the number -- that's the number I'm**

24 **going with.**

25 **Q.** When did you become aware of those other studies?

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1 **A. Oh, so I would say that prior to submitting my**

2 **report on February 29, I was involved in**

3 **discussions with individuals with expertise in**

4 **doing field studies in this particular location.**

5 **And I was aware that there was discussion about**

6 **the exact value. And I'm -- I have generally**

7 **been aware that there's been discussion about**

8 **sediment deposition upstream of Swift Slough.**

9 **And I -- because of my general knowledge of the**

10 **variability of rivers and river channels, I would**

11 **expect that that number, if you measured it every**

12 **year for 50 years, would give you a range of**

13 **values. It would be interesting to know what the**

14 **average of those 50 different values are.**

15 **So I take that as a number that's been**

16 **established by experts. And I am aware that**

17 **there is variability around a number like that.**

18 **Q.** Now, in your metric you said that harm occurs at

19 Swift Slough to the mussels when flows are at or

20 below 5700 cfs for 30 continuous days during the

21 warm period between June 1 and September 30.

22 Correct?

23 **A. I say that, yes.**

24 **Q.** And your metrics looked at a 16-year period.

25 Right?

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1 **A. That's correct.**

2 **Q.** And so if we go and look at your mussel metrics

3 in 2000, if it didn't hit 5700 cfs, you found

4 harm. True?

5 **A. So my report is very clear that harm occurs over**

6 **a range, that harm occurs above a metric like**

7 **6,000 for the main channel margins and below that**

8 **value. I point out, when I talk about the main**

9 **channel metric for mussels where we use the 6,000**

10 **value, that in the 2012 BiOp, they talk about**

11 **some harm occurring at 10,000, some harm --**

12 **greater harm occurred at 8,000. They talk about**

13 **harm becoming more severe as you get down to**

14 **6,000, and obviously it continues below that.**

15 **There is no -- there's no possibility of that**

16 **number being a simple switch where no harm occurs**

17 **above it and all harm occurs below it because the**

18 **environment and the habitat is more variable.**

19 **Individuals are physiologically variable in their**

20 **vulnerability to desiccation and low oxygen**

21 **conditions.**

22 **So I just want to make very clear to the**

23 **Court that a number like that is very useful for**

24 **being able to work with Dr. Hornberger's metrics**

25 **and ask, you know, what does harm look like over**

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1 **a long period of record; but it is inconsistent,**

2 **I believe, with the caution -- cautious language**

3 **of my report to view that as an absolute**

4 **threshold. No harm above, all harm below is**

5 **simply a -- an evidence-based delineation where**

6 **we -- you know, the photos that accompany this**

7 **particular document on the previous page to what**

8 **you referred to show what the slough looked like**

9 **at 6000, 6400 cfs and what it looked like at 5300**

10 **cfs. So it's representing some range in which**

11 **harm becomes apparent.**

12 **Q.** Dr. Allan, again, I would ask you to please slow

13 down for the court reporter.

14 **And also, if you can, just please try and**

15 **listen to my question and focus on what I'm**

16 **asking. Okay?**

17 **Now, in your metric for Swift Slough that you**

18 **gave to Dr. Hornberger, you told him to run it at**

19 **5700 cfs for 30 days in the summer. True?**

20 **A. True.**

21 **Q.** And so in the year 2000, when he ran that, he ran

22 it against 5700 cfs for 30 days in the summer.

23 Correct?

24 **A. I assume that's what he did, yes.**

25 **Q.** You didn't -- you don't know?

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1 That's what he did. Right?

2 **A. I didn't ask him what did you do in 2000? What**

3 **did you do in 2001? What did you do in 2002?**

4 **I'm quite confident that that's what he did.**

5 **Q.** But you --

6 **A. But I can't testify that I asked him that**

7 **question.**

8 **Q.** And in 2006 when he checked, he ran 5700.

9 Correct?

10 **A. He would have run 5700.**

11 **Q.** And when he ran in 2012, he would have run 5700.

12 Right?

13 **A. Again.**

14 **Q.** And so in 2000, if the connection rate was

15 substantially below 5700, you would show days --

16 he would show days of harm under your analysis

17 that really shouldn't have been counted as harm.

18 True?

19 **A. Would you repeat that question, please.**

20 **Q.** I'm going to come back to that.

21 **Now, if Swift Slough becomes disconnected**

22 **from the main channel and there was a mortality**

23 **event there, that doesn't say what happens in all**

24 **the other sloughs throughout the area. Correct?**

25 **A. Not entirely correct, no. It's probably a good**

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1 **indication of what happened in other sloughs that**

2 **have a disconnect in the 5,000 to 6,000 range.**

3 **Q.** Dr. Allan, do you have your transcript with you?

4 **Do you have your deposition transcript?**

5 **A. Yes.**

6 **Q.** Can you refer to page 419, line 20, through page

7 420, line 2. Do you have that?

8 **A. 419.**

9 **Q.** 419, 20.

10 **A. Where are we again, please?**

11 **(Whereupon the video was played.)**

12 **BY MR. PRIMIS:**

13 **Q.** Dr. Allan, were you asked that question; and did

14 you give that answer?

15 **A. I did.**

16 **Q.** Now, if you had a die-off in Swift Slough, that

17 doesn't necessarily tell you anything about the

18 long-term viability of the population of the

19 species as a whole in the River Basin. Correct?

20 **A. Correct.**

21 **Q.** And that's because your metrics were not designed

22 to estimate population size and mortality.

23 Right?

24 **A. That's correct.**

25 **Q.** Now, I asked you this question about the fish;

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1 and I want to ask you about the mussels. You
 2 didn't do a population viability analysis for the
 3 mussels living in sloughs in the Apalachicola
 4 River Basin. Correct?
 5 **A. Correct.**
 6 **Q.** You haven't looked to see whether mussels are
 7 rebounding in Swift Slough. Correct?
 8 **A. Correct.**
 9 **Q.** And you don't know whether the population of
 10 mussels in Swift Slough is greater or less today
 11 than it was in 2006. Right?
 12 **A. That's correct.**
 13 **Q.** Now, you chose Swift Slough as one of your
 14 metrics because you thought it was representative
 15 of other small sloughs. Right?
 16 **A. Partially right. Swift Slough has received a**
 17 **considerable amount of study, and so there is**
 18 **data available. There's photographic evidence**
 19 **that shows how Swift Slough's habitat changes**
 20 **across a range of flows. There's repeated**
 21 **censuses of Swift Slough that show mussel**
 22 **mortality. And so it was chosen for those**
 23 **reasons.**
 24 **Q.** Now, you understand there's been dredging in the
 25 Apalachicola River. Correct?

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1 **A. Correct.**
 2 **Q.** And you understand that the dredging done was
 3 done by the Army Corps of Engineers. Right?
 4 **A. Correct.**
 5 **Q.** And you did nothing to evaluate the effects of
 6 dredging in the Apalachicola River in this case.
 7 Right?
 8 **A. Well, it depends on how you interpret that**
 9 **question. If the question is did I go out and**
 10 **study dredging or study channel erosion, correct;**
 11 **I did not do so. However, in working with**
 12 **Dr. Hornberger, I did evaluate the effects of --**
 13 **separate the effects of channel erosion from the**
 14 **effects of flow reduction in my metrics.**
 15 **So the question is ambiguous to me.**
 16 **Q.** Dr. Allan, can you refer to page 116, line 4 of
 17 your deposition.
 18 MR. PRIMIS: Mr. Smith, do you have that
 19 one?
 20 **A. 116, line 4?**
 21 **Q.** Correct.
 22 I'm sorry, line 9.
 23 **A. Line 9.**
 24 **Q.** Dr. Allan --
 25 **A. That's a different question. That's a different**

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1 **question.**
 2 **Q.** Here we go. Let me just ask if you were asked
 3 these questions and gave this answer.
 4 Did you do anything to measure the effects of
 5 dredging in the Apalachicola River?
 6 Answer. In that question are you
 7 distinguishing between dredging and erosion?
 8 Let's go to the next question. My question
 9 is only about dredging.
 10 Answer. Only about dredging? No, I do
 11 not do anything to evaluate the effects of
 12 dredging in the Apalachicola.
 13 Were you asked those questions, and did
 14 you give those answers.
 15 **A. I did. And the original question you asked was**
 16 **did I measure, which I took to mean did I go out**
 17 **and physically measure channel change. And I**
 18 **correctly answered, no, I did not do so.**
 19 **And the question you asked today, I clearly**
 20 **distinguished between the difference of measuring**
 21 **channel change and looking at the effects of --**
 22 **of channel change through my metrics.**
 23 **Q.** Dr. Allan, I don't want to quibble with you. You
 24 didn't do anything to evaluate the effects of
 25 dredging in the Apalachicola. True?

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1 It's -- we just read it. Do you agree?
 2 **A. Okay. I'll say true.**
 3 **Q.** Now, when the Army Corps dredges, the material
 4 that's lifted out of the river is called spoils.
 5 Correct?
 6 **A. Correct.**
 7 **Q.** And you're aware that dredging spoils from the
 8 Apalachicola River have been placed on the banks
 9 of the river. Right?
 10 **A. Correct.**
 11 **Q.** You also know that they can end up in the mouth
 12 of a slough inlet. Correct?
 13 **A. Correct.**
 14 **Q.** And as a general matter, you would agree that
 15 sediment deposition in the mouth of a slough
 16 inlet affects the water level necessary to
 17 inundate that slough. Right?
 18 **A. It certainly could.**
 19 **Q.** Now, focusing specifically on dredging in the
 20 Apalachicola, you don't know whether sediment
 21 deposition has occurred in the Apalachicola so as
 22 to cut off sloughs. Correct?
 23 **A. Correct.**
 24 **Q.** And am I correct that you never studied whether
 25 sediment has been deposited in the Apalachicola

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1 that resulted in sloughs being cut off?

2 **A. I relied on the expert work of Dr. Kondolf for**

3 **channel morphology, and I evaluated the influence**

4 **of low flows on the biology of the system. So**

5 **you're asking me questions about things I didn't**

6 **do. Correct; I didn't do them.**

7 **Q.** That's exactly right. I want to establish what

8 you did and what you didn't do.

9 Now, you don't know whether Swift Slough has

10 been affected by U.S. Army Corps dredging.

11 Correct?

12 **A. Correct.**

13 **Q.** You don't know whether dredge spoils have been

14 deposited at the head of Swift Slough at any

15 point by the Army Corps. Right?

16 **A. I have no firsthand knowledge of that. Correct.**

17 **Q.** You have also never studied whether spoils from

18 Army Corps dredging have affected flows into

19 Swift Slough. Right?

20 **A. Correct.**

21 **Q.** In fact, you're not aware of any evidence that

22 spoils from Army Corps dredging have affected

23 flows into Swift Slough at all. Right?

24 **A. Correct. I have not studied that issue.**

25 **Q.** Can I refer you to --

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1 MR. PRIMIS: Well, maybe I should ask

2 your Honor, does -- would the court reporter

3 like a break for the afternoon?

4 She's indicating with her head nod yes.

5 May we have a break for the afternoon,

6 your Honor?

7 SPECIAL MASTER LANCASTER: Certainly.

8 MR. PRIMIS: Thank you.

9 (Time Noted: 3:03 p.m.)

10 (Recess Called)

11 (Time Noted: 3:15 p.m.)

12 SPECIAL MASTER LANCASTER: Suppose I

13 just stood here?

14 MR. PRIMIS: Maybe if the Court entered

15 an Order requiring us to sit upon entering.

16 May we proceed?

17 SPECIAL MASTER LANCASTER: Please.

18 BY MR. PRIMIS:

19 **Q.** Dr. Allan, I would now like to turn your

20 attention to tab 2 of the binder that we gave

21 you.

22 **A. I see it.**

23 MR. PRIMIS: And I'm going to state this

24 for the record, because this document has not

25 yet received an exhibit number; but we used

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1 it yesterday with Mr. Hoehn, and it will

2 hopefully have one by tomorrow.

3 The first page is FL-ACF-03671820. And

4 we did use this document yesterday with

5 Mr. Hoehn.

6 BY MR. PRIMIS:

7 **Q.** And you see in the e-mail that it's an e-mail

8 message from Helen Light. Correct?

9 **A. Correct.**

10 **Q.** And you know Ms. Light. Right?

11 **A. I do.**

12 **Q.** And then Mr. Hoehn received this letter and then

13 forwarded it along. Correct?

14 **A. I don't know that to be a fact, but --**

15 **Q.** Okay.

16 **A. -- if you say so.**

17 **Q.** Let's just look at the attachment to the

18 letter -- to the e-mail.

19 **A. Okay.**

20 **Q.** Do you see this letter dated July 13, 2006?

21 **A. Yes.**

22 **Q.** And it's from Marian Berndt of the USGS to Jerry

23 Ziewitz from the U.S. Fish and Wildlife Service.

24 Correct?

25 **A. I see that.**

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1 **Q.** Have you ever seen this letter before?

2 **A. I think I have seen it within the last day or so,**

3 **but not previous to that.**

4 **Q.** So maybe sometime between the time Mr. Hoehn saw

5 it and now you got a copy of it?

6 **A. Might be.**

7 **Q.** Okay. You didn't consider this letter in writing

8 your expert report. Correct?

9 **A. No.**

10 **Q.** And it -- you didn't consider it in setting your

11 harm metric for Swift Slough. Correct?

12 **A. No.**

13 **Q.** Now, the first sentence of the letter says that

14 in response to a request from you and Ted Hoehn,

15 Helen Light of our staff surveyed the controlling

16 sill elevation of Swift Slough.

17 Do you see that?

18 **A. I see that.**

19 **Q.** And Ms. Light attaches her study to this letter

20 that went to Fish and Wildlife. Correct?

21 **A. I see that.**

22 **Q.** And could you turn to the chart on page 1828.

23 **A. Labeled table 1?**

24 **Q.** Correct. Do you see that?

25 **A. I see that.**

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1 **Q.** And do you see it's called Disconnection Flows
 2 for Swift Slough?
 3 **A. I see that.**
 4 **Q.** And then it talks about measurements in '93,
 5 2000, and 2006. Right?
 6 **A. Yes.**
 7 **Q.** The language underneath the title says that the
 8 2006 measurement was made by Helen Light, Ted
 9 Hoehn, and Rick Long. Correct?
 10 **A. I see that.**
 11 **Q.** And you yourself visited Swift Slough with Helen
 12 Light and Ted Hoehn in your work in this case.
 13 Right?
 14 **A. In about 2012, yes.**
 15 **Q.** And neither of them told you about this study
 16 when they were there with you?
 17 **A. Oh, I don't recall.**
 18 **Q.** Now, if you look at step 7 --
 19 **A. Yes.**
 20 **Q.** -- there are estimated disconnection flows for
 21 Swift Slough. Right?
 22 **A. I see that.**
 23 **Q.** And those are measured at the Chattahoochee Gage.
 24 Right?
 25 **A. They are connected to a flow of the Chattahoochee**
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1 **Gage.**
 2 **Q.** Right. And that's the same gage that you and
 3 Dr. Hornberger used for running your metrics?
 4 **A. That's correct.**
 5 **Q.** Now, in 1993 the estimated disconnection flow for
 6 Swift Slough was 5100 cfs. True?
 7 **A. That's what it says here in this table.**
 8 **Q.** And you have no reason to disagree with that.
 9 Right?
 10 **A. I have only moderate confidence in the accuracy**
 11 **of any of these numbers. And for my purposes,**
 12 **the difference in these numbers is irrelevant.**
 13 **Q.** And in 2000 the estimated disconnection slough by
 14 Helen Light of the United States Geological
 15 Survey was 4500 cfs. Right?
 16 **A. That's what's in the table.**
 17 **Q.** And that was irrelevant to your analysis as well.
 18 Correct?
 19 **A. And I would be happy to explain why.**
 20 **Q.** You can when your counsel is asking questions.
 21 Is the answer, yes; it is irrelevant?
 22 And just to be super precise, is it
 23 irrelevant to your analysis that the U.S.
 24 Geological Survey determined in August of 2000
 25 that Swift Slough became disconnected at 4500
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1 cfs?
 2 **A. So to be precise, what is relevant to my analysis**
 3 **is the -- is whether the exact value at which**
 4 **Swift Slough becomes disconnected is any of these**
 5 **three numbers or something that's -- that's in**
 6 **between, because for my analysis, I have evidence**
 7 **that in the 5,000 to 6,000 range, harm occurs in**
 8 **Swift Slough. And we can then use that with**
 9 **Dr. Hornberger's analysis to -- as a -- as a**
 10 **useful threshold to make inquiries about how that**
 11 **harm might change under different flow scenarios.**
 12 **So it's not critical to know the -- to know**
 13 **whether the number is 5100 or 5600.**
 14 **Q.** The -- what about if it's 4500?
 15 **A. That's different enough that it would certainly**
 16 **make me wonder how much geomorphological change**
 17 **is occurring in the channel that enters Swift**
 18 **Slough. But since Swift Slough is intended to be**
 19 **representative of the many sloughs that have**
 20 **disconnect in the 5,000 to 6,000 range, we could**
 21 **have asked Dr. Hornberger to use 5700 or 5200;**
 22 **and I think the values that we would have**
 23 **provided would have been about the same.**
 24 **So in that specific sense, no, it's not**
 25 **relevant to my analysis to know the exact number.**
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1 **Q.** You know there was a mussel mortality event in
 2 Swift Slough in 2006. Right?
 3 **A. Yes.**
 4 **Q.** And you know there was no mortality event in
 5 Swift Slough in the 2000 to 2002 drought. Right?
 6 **A. My memory is fuzzy on that, so I can't confirm**
 7 **that.**
 8 **Q.** You don't know?
 9 **A. I don't remember.**
 10 **Q.** Okay. Let's turn to tab 3. Do you recognize
 11 this to be the biological opinion of the U.S.
 12 Fish and Wildlife Service dated September 5,
 13 2006?
 14 **A. I do.**
 15 **Q.** Are you familiar with this document?
 16 **A. Well, I have read the 2008, the 2012, and the**
 17 **2016. I'm not -- I don't have specific**
 18 **recollection of reading the 2006 document.**
 19 **Q.** Can you turn to page 62, please.
 20 **A. 52?**
 21 **Q.** 62.
 22 **A. 62.**
 23 **Q.** Can I draw your attention to the third paragraph.
 24 And do you see that there the Fish and Wildlife
 25 Service reports that most of the mussel mortality
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1 due to low flow we observed was in the river mile
 2 50 to river mile 40 reach of the river.
 3 Do you see that?
 4 **A. I see that.**
 5 **Q.** And they go on to say, it was either in elevated
 6 side channels along the main channel of the river
 7 and Chipola cutoff, or in Swift Slough.
 8 Do you see that?
 9 **A. I see that.**
 10 **Q.** And then the service goes on to say, we
 11 considered several possibilities to explain why
 12 we observed so many fat threeridge and other
 13 species exposed or stranded in these areas during
 14 2006.
 15 Do you see that?
 16 **A. Yes.**
 17 **Q.** And then if you jump down a second -- a sentence,
 18 it says, flows during the summer of 2006 were no
 19 lower than occurred only a few years ago from
 20 1998 through 2002, at which time we did not
 21 observe a mussel die-off.
 22 Do you see that?
 23 **A. I see that.**
 24 **Q.** And, Dr. Allan, you have no basis to dispute Fish
 25 and Wildlife's assessment that they did not

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1 observe a mussel die-off in Swift Slough at that
 2 point in time in '98 to 2002. Correct?
 3 **A. Correct.**
 4 **Q.** Now, I would like to put your harm chart up for
 5 the mussels at Swift Slough.
 6 MR. PRIMIS: And, Mr. Smith, this is on
 7 page 46 of my outline.
 8 BY MR. PRIMIS:
 9 **Q.** Dr. Allan, do you recognize this as your chart
 10 reporting harm under your metrics to mussels in
 11 Swift Slough?
 12 **A. I do.**
 13 **Q.** And do you see that there are two harm events in
 14 the 2000 time frame?
 15 **A. I see that.**
 16 **Q.** And it looks like one is in around 2000, and the
 17 other is around 2002; is that right?
 18 **A. That's correct.**
 19 **Q.** Now, you're showing harm under your analysis at a
 20 time when the Fish and Wildlife service says they
 21 did not observe a muscle die-off; is that
 22 correct?
 23 **A. That's correct.**
 24 **Q.** And for these years the reason it's showing harm
 25 is that your flow metrics were set at 5700 cfs.

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1 Right?
 2 **A. That's correct.**
 3 **Q.** Now, let's go back -- let's go back to the BiOp,
 4 the biological opinion, for a minute. Are you on
 5 page 63?
 6 **A. Page 63, yes.**
 7 **Q.** On page 63 in the fourth bullet it says, Swift
 8 Slough and nearly all of the other locations on
 9 the margin of the main channel where mussels were
 10 exposed in the reach appear to have substantially
 11 aggraded, parens, filled, with sediment in the
 12 period since flows were last as low as 6,000 cfs
 13 in 2002.
 14 Do you see that?
 15 **A. I see that.**
 16 **Q.** You have no basis to disagree with the Fish and
 17 Wildlife Service's conclusion that there was
 18 substantial filling with sediment of the entry to
 19 Swift Slough between 2002 and 2006. Correct?
 20 **A. So I haven't seen any of the evidence on which**
 21 **they base this. It is correct that I have -- I**
 22 **have no basis for disagreeing. I simply have**
 23 **never seen any of the evidence or had a chance to**
 24 **evaluate how extensive it is for the statements**
 25 **that are made here.**

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1 **Q.** So in picking Swift Slough, you didn't look at
 2 any of the evidence about how or why the levels
 3 were set for connection on that slough. Correct?
 4 **A. I don't think I even understand that statement.**
 5 **Q.** Okay. Now, Dr. Allan, are you aware that Florida
 6 sued the U.S. Fish and Wildlife Service the day
 7 after that 2006 BiOp was released?
 8 **A. I don't believe I am.**
 9 **Q.** You don't know that?
 10 **A. I don't know that.**
 11 **Q.** Can you turn to tab 4.
 12 **A. I'm at tab 4.**
 13 **Q.** This is a Complaint For Declaratory and
 14 Injunctive Relief. Do you see that?
 15 **A. I see that.**
 16 **Q.** And it's dated, filed 9/6/06? Do you see that at
 17 the top?
 18 **A. Yes, I see that.**
 19 **Q.** So, if you would, sir, can you turn to page 22,
 20 paragraph 65.
 21 **A. Yes.**
 22 **Q.** In paragraph 65 Florida told a federal court,
 23 halfway down that paragraph, that today, more
 24 water is required to inundate the same habitats
 25 that previously were inundated at lower flows.

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1 Do you see that?

2 **A. I see that.**

3 **Q.** Did you know Florida made that allegation in

4 federal court?

5 **A. I did not know that.**

6 **Q.** Do you see that Florida alleged further that more

7 water is required to protect the Apalachicola

8 River species and their habitats than was

9 required, for example, in 2000? Did you see

10 that?

11 **A. I see that.**

12 **Q.** Did you know Florida made that allegation in a

13 U.S. Federal Court?

14 **A. I don't recall being aware of that.**

15 **Q.** And they noted that in 2000, releases of 5,000

16 cfs from Jim Woodruff Lock and Dam maintained a

17 connection between Swift Slough and the

18 Apalachicola River?

19 **A. I see that.**

20 **Q.** Do you see -- and you were unaware that Florida

21 had made that allegation?

22 **A. I am not -- I don't believe I have seen this**

23 **document previously.**

24 **Q.** Now, Dr. Allan, I know before you said you hadn't

25 seen all the studies; and you hadn't looked. But

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1 I take it you're not going to disagree with the

2 State of Florida's allegation in a federal court

3 complaint that Swift Slough was connected at

4 5,000 cfs in 2000?

5 **A. I see the statement here. It is what it is. I**

6 **do not have any basis for evaluating it.**

7 **They made that allegation. I see that.**

8 **Q.** Now, can you turn to the signature page of this

9 document.

10 **A. I beg your pardon?**

11 **Q.** Can you turn to the signature page of the

12 complaint.

13 **A. I see that, yes.**

14 **Q.** Do you recognize any of the names on the

15 signature block?

16 **A. I recognize Chris Kise; and I recognize the**

17 **Blankenau, Wilmoth, yes.**

18 **Q.** And you recognize Mr. Blankenau because he

19 defended part of your deposition; isn't that

20 true?

21 **A. Yes.**

22 **Q.** And he sat there when you testified about Swift

23 Slough. True?

24 **A. He was there when I testified about Swift Slough.**

25 **Q.** And he never mentioned to you that Florida had

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1 alleged in federal court that Swift Slough's

2 connection had gone higher between 2000 and 2006?

3 **A. I don't recall.**

4 MR. QURESHI: Objection, your Honor.

5 I don't think that they intend to invade

6 the attorney-client privilege. He's asking

7 about a discussion between a lawyer and an

8 individual in connection with preparing an

9 expert report. That's privileged under the

10 rule.

11 MR. PRIMIS: I'll withdraw the question.

12 SPECIAL MASTER LANCASTER: Thank you.

13 BY MR. PRIMIS:

14 **Q.** Now, you also said that you relied on

15 Dr. Kondolf. Correct?

16 **A. I said that I rely on Dr. Kondolf for the general**

17 **evaluation of channel erosion and channel change.**

18 **Q.** He's the guy you rely on for geomorphology.

19 Right?

20 **A. That's right.**

21 **Q.** And you know Dr. Kondolf personally. Right?

22 **A. That's correct.**

23 **Q.** You have worked with Dr. Kondolf previously.

24 Correct?

25 **A. That's correct.**

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1 **Q.** And you have done research with Dr. Kondolf?

2 **A. That's correct.**

3 **Q.** So let's go to tab 5 of your binder.

4 **A. I see it.**

5 **Q.** This is a document called Restoration Prospects

6 for the Apalachicola River identified as GX-248.

7 Do you see that?

8 **A. I see that.**

9 **Q.** And on the front you can see this was prepared by

10 Dr. Kondolf. Right?

11 **A. I see that.**

12 **Q.** And have you read this document before?

13 **A. I have seen it earlier today or yesterday; but,**

14 **no, I have not read it before that.**

15 **Q.** Okay. And did you read it, or were you just

16 shown it?

17 **A. I was just shown it.**

18 **Q.** Okay. So in preparing your expert report, you

19 were unaware of the research that Dr. Kondolf has

20 in this paper. Correct?

21 **A. I remember from verbal discussion that he had**

22 **done work for American Rivers on this river**

23 **previously. So I was aware of it, but I was not**

24 **aware of any of the specifics.**

25 **Q.** You didn't know the contents of the paper.

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1 Right?

2 **A. That's correct.**

3 **Q.** Can you turn to page 18.

4 **A. I'm there.**

5 **Q.** On page 18 Dr. Kondolf has a section of this

6 paper called Cutting Off and Filling Sloughs. Do

7 you see that?

8 **A. I see that.**

9 **Q.** In the middle of the first paragraph he has a

10 statement that says, to discourage flow in the

11 sloughs, the Corps actively pumped dredged sand

12 into some sloughs. In other cases, dredged sand

13 was placed just upstream of the inlets of

14 sloughs, such that the sand was carried into the

15 sloughs by inflowing water.

16 Do you see that?

17 **A. I see that.**

18 **Q.** And I think you testified earlier that you're

19 aware that that is what happened in Swift Slough.

20 Correct -- the second one?

21 **A. I have some general understanding of -- that**

22 **there had been sediments that were either**

23 **deposited by Army Corps activities or mobilized**

24 **by Army Corps activities that may have impacted**

25 **the entrance to Swift Slough. But I would not**

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1 **A. I am wondering if -- since the sentence above**

2 **refers to vegetated sand plugs, whether the next**

3 **sentence, even though it doesn't say vegetated,**

4 **it has that same reference because it's hugely**

5 **important whether vegetation invades these sand**

6 **plugs and stabilizes it as to whether they will**

7 **stay in place. Without that vegetation, they're**

8 **very probably going to be displaced in the next**

9 **high flow event.**

10 **So in general sand plugs, particularly if**

11 **they become vegetated, can have that effect. I**

12 **see that.**

13 **Q.** The next sentence says that the sand in these

14 plugs likely had its origins in the Corps

15 navigational dredging program, which mobilized

16 sand into suspension and resulted in its wide

17 distribution.

18 Do you see that?

19 **A. I see that. It's possible.**

20 **Q.** And you know that happened in the Apalachicola

21 River near Swift Slough. Right?

22 **A. I don't feel I -- I can't agree that I know that.**

23 **Q.** Okay. And you didn't take the information in

24 this paragraph into account in setting your flow

25 metric for Swift Slough. Right?

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1 **have been in a position to make a definitive**

2 **statement about the effect of it.**

3 **Q.** If Kondolf says it, you would trust it. Right?

4 **A. If Kondolf said it in his expert report for this**

5 **trial, I would definitely trust it.**

6 **Q.** Do you know whether Dr. Kondolf commented on the

7 reason that Swift Slough connection elevations

8 went up in his direct testimony in this case?

9 **A. I don't recall whether he commented on that.**

10 **Q.** Have you read his direct testimony?

11 **A. I have.**

12 **Q.** And so if it's in there, you would -- you would

13 credit it. Right?

14 **A. Maybe not.**

15 **Q.** Let's go down to the next paragraph, Dr. Allan.

16 **A. Okay.**

17 **Q.** In the third line down Dr. Kondolf writes, the

18 sand plugs would prevent or at least inhibit flow

19 into these sloughs, even when water levels in the

20 main river would otherwise be high enough to

21 drive flow into the sloughs.

22 Do you see that?

23 **A. I see that.**

24 **Q.** And you have no reason to dispute that statement

25 by Dr. Kondolf. Right?

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1 **A. I did not.**

2 **Q.** Can you turn to page 4 of this.

3 **A. Page 4?**

4 **Q.** Yes. And I want to refer your attention to

5 paragraph B.

6 **A. I see it.**

7 **Q.** The paragraph B is called Manually Remove

8 Sediment Plugs From Outflowing Sloughs. Do you

9 see that?

10 **A. I see that.**

11 **Q.** And Dr. Kondolf reports here that restoration on

12 the Apalachicola River should prioritize the

13 removal of sediment plugs that cut off flow into

14 sloughs that convey water away from the mainstem

15 river.

16 Do you see that?

17 **A. I see that.**

18 **Q.** And he says, manual removal of these small

19 sediment plugs would minimize adverse impacts.

20 Correct?

21 **A. I see that.**

22 **Q.** And you have no information one way or the other

23 whether Florida ever did that in Swift Slough.

24 Correct?

25 **A. I don't recall.**

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1 **Q.** Can you go to page 42.
 2 **A.** **42.**
 3 **Q.** And I'm looking now at the third paragraph down.
 4 **A.** **I see it. I see it.**
 5 **Q.** And this is where Dr. Kondolf says, among the
 6 sloughs for which such low impact plug removal
 7 could potentially yield significant benefits in
 8 rewatering the slough network are the spider cuts
 9 on the Chipola River, Swift Slough, Douglas
 10 Slough, Piney Slough, and Shepard's Lake Slough.
 11 Do you see that?
 12 **A.** **I see that.**
 13 **Q.** And you have no basis to disagree with
 14 Dr. Kondolf when he wrote in 2009 that Swift
 15 Slough was a good candidate for low impact plug
 16 removal. Right?
 17 **A.** **Well, I would want to ask Dr. Kondolf, who is the**
 18 **expert and wrote this, to testify on this**
 19 **document, not ask me to testify on it.**
 20 **But I see, you know, could potentially yield**
 21 **significant benefits. Here is a list.**
 22 **I see a document that -- by a person I**
 23 **certainly respect, but which has no survey data**
 24 **in it, no quantitative information in it, where**
 25 **it appears that he has looked carefully at the**

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1 **Q.** You went with Ted Hoehn, who testified yesterday
 2 and earlier today. Correct?
 3 **A.** **Yes.**
 4 **Q.** And Helen Light went out with you on the river.
 5 Right?
 6 **A.** **Right.**
 7 **Q.** And we talked yesterday about an environmental
 8 consulting group called EnviroScience. And you
 9 know Greg Zimmerman from that outfit?
 10 **A.** **I do.**
 11 **Q.** And he helped you work on this case, too. Right?
 12 **A.** **That's correct.**
 13 **Q.** And in the course of your work, you visited Swift
 14 Slough? You were there?
 15 **A.** **I was there.**
 16 **Q.** And in all your discussions with Mr. Hoehn and
 17 Ms. Light while you were there, nobody mentioned
 18 to you that sediment had aggraded in the inlet to
 19 Swift Slough and increased the connection level
 20 by 25 percent between 2000 and 2006. Right?
 21 **A.** **Again, I -- I can't say with confidence recalling**
 22 **conversations that would have taken place in --**
 23 **sometime in the spring of 2012.**
 24 **I did hear discussion about possible sediment**
 25 **accumulation in -- near the mouth of Swift**

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1 **system and with his expert judgment said here are**
 2 **some things that could help.**
 3 **And I trust his expert judgment is well worth**
 4 **following up. But that's quite different from**
 5 **saying here is hard evidence that we got to get a**
 6 **sand plug out of Swift Slough to make a**
 7 **difference.**
 8 **Q.** And everything you just said, you didn't consider
 9 any of that in issuing your expert opinions in
 10 this case about Swift Slough. True?
 11 **A.** **True.**
 12 **Q.** Now, you visited the Apalachicola River on two
 13 occasions. Right?
 14 **A.** **Two occasions where I was with Florida DEP; and I**
 15 **did a personal road trip where I drove along**
 16 **the -- the Apalachicola Highway.**
 17 **Q.** On the road trip, you testified you hadn't seen
 18 too much because you were on the road?
 19 **A.** **I saw what the landscape looked like around it;**
 20 **but, yeah, I didn't go to the river.**
 21 **Q.** Okay.
 22 **A.** **I got to the bay instead.**
 23 **Q.** Let's focus on when you actually went to the
 24 river.
 25 **A.** **Okay.**

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1 **Slough. I did not take away from that the**
 2 **impression that it was a -- an important factor**
 3 **causing change. And that was my very first**
 4 **introduction to the system, and I was still**
 5 **learning about it.**
 6 **So put all that together, I can't give you a**
 7 **strong yes or no answer to what I knew at that**
 8 **time.**
 9 **Q.** Okay. And whatever they told you, you chose one
 10 metric for the entire 16-year period of Swift
 11 Slough, 5700 cfs. Right?
 12 **A.** **So I actually considered metrics above and below**
 13 **that based on some of the photographic evidence**
 14 **that's in my testimony -- my prefiled testimony**
 15 **and in my report. And in the discussion with Ted**
 16 **Hoehn and Helen Light, realizing that picking a**
 17 **hard number is open to the kind of criticism that**
 18 **I'm receiving right now, we could have picked**
 19 **6100. We could have picked 5700. We could have**
 20 **picked 5300. But 5700 corresponds to a published**
 21 **number in the Helen Light document for the**
 22 **sill height. And in my personal judgment, I**
 23 **selected that number as a reasonable intermediate**
 24 **value for Dr. Hornberger to tell us what would**
 25 **happen if the flows were lower or the flows were**

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1 **higher.**

2 **Q.** Now, Dr. Allan, I want to put back up your Swift

3 Slough metric chart.

4 MR. PRIMIS: Mr. Smith, if you could put

5 that back up.

6 BY MR. PRIMIS:

7 **Q.** Now, Dr. Allan, we talked about your harm in 2000

8 and 2002 when the Fish and Wildlife didn't see a

9 die-off. Do you remember that?

10 **A. I remember that.**

11 **Q.** Okay. So now, let's focus on the harm that you

12 report in 2006.

13 MR. PRIMIS: And, your Honor, let me get

14 you a page cite for that. That's page 46 of

15 Dr. Allan's testimony.

16 SPECIAL MASTER LANCASTER: Thank you.

17 MR. PRIMIS: And we have it on the

18 screen as well; but I'm starting to gather

19 that you prefer the documents, your Honor.

20 So I will slow down.

21 BY MR. PRIMIS:

22 **Q.** Okay. Dr. Allan, you also report a blue bar

23 showing low flow harm days in Swift Slough in

24 2006. Correct?

25 **A. I'm just taking a moment to make sure I -- I'm on**

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1 **the same page in every regard.**

2 **That's what it seems to show, yes.**

3 **Q.** Okay. Now, when you ran your metrics

4 through Dr. Hornberger's machine and determined

5 that there was harm in 2006 that you're

6 attributing to Georgia, did you know that Florida

7 had told a federal court that with the U.S. Fish

8 and Wildlife Service's approval, the Corps

9 reduced flows in the river to 5,000 cfs for 2006

10 and 2007 and killed essentially all the mussels

11 in Swift Slough? Did you know that?

12 **A. I certainly didn't know that.**

13 **Q.** And at a time when Florida is telling the federal

14 courts the Army Corps killed the mussels, you

15 have a bar in your chart saying Georgia caused

16 serious harm to the mussels. True?

17 **A. Actually, no, not true. What that chart shows is**

18 **that's the historical harm comparison between the**

19 **recent period and the historical period is it**

20 **shows that the metric developed in the way that I**

21 **described is representative of sloughs that**

22 **disconnect in the five to 6,000 range. So all**

23 **this boring down on Swift Slough misses the point**

24 **that this is a value in which many of the smaller**

25 **sloughs become disconnected.**

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1 **Using that metric there is more harm in the**

2 **present than there is in the past. This graph**

3 **does not say anything about causation. Other**

4 **graphs do.**

5 **Q.** And in your other graphs, Dr. Allan, you

6 attribute causation to Georgia and say that

7 Georgia harmed mussels in Swift Slough in 2006.

8 Don't you?

9 **A. So, again, we have a pattern of harm that is**

10 **clearly greater in this -- now, we're looking at**

11 **a different graph than the one that we should be**

12 **looking at for this discussion.**

13 **Q.** We'll put on -- slow down. We'll put up the one

14 you want to put up.

15 **A. Okay.**

16 **Q.** You're not talking about the charts from your --

17 are you talking about the charts from your -- the

18 red and green charts from your testimony?

19 Tell you what --

20 **A. I need some time to --**

21 **Q.** It's okay, doctor. I want to stick with this

22 chart.

23 **A. But I do want to make the comment that what we're**

24 **looking at here is a pattern of harm and greater**

25 **frequency of harm under one set of conditions**

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1 **than another.**

2 **We have metrics that are developed from**

3 **evidence, but are -- are a representation of the**

4 **probability of harm under certain conditions. We**

5 **have a hydrologic analysis. And you combine**

6 **them, and you simply look at the pattern. Is**

7 **there more harm now than there was in the past?**

8 **Is there more harm if Georgia's consumption is**

9 **removed than if Georgia's consumption is present.**

10 **And it's the pattern rather than a particular**

11 **year that tells the story.**

12 **Q.** Dr. Allan, I'm just going to cut through all

13 this. Your analysis finds that Georgia harmed

14 mussels in 2006. True?

15 **A. I never say that directly in my report; so**

16 **you're -- you are taking out of context the**

17 **statements that I make in my report. And so**

18 **that's -- I don't think -- can you point where**

19 **that sentence occurs in my report?**

20 **Q.** No. I'm just asking you straight up right here

21 in the United States Supreme Court. Do you

22 contend that Georgia harmed mussels in Swift

23 Slough in 2006?

24 **A. I contend that harm is greater under the scenario**

25 **in which Georgia's consumption is present than**

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1 under the scenario where Georgia's consumption is
 2 less.
 3 **And this is a model. And you're essentially**
 4 **looking at one point on the graph and asking**
 5 **whether I'm making a claim about that one point**
 6 **on the graph. And I'm making a claim based on**
 7 **the totality of the data.**
 8 **Q.** Dr. Allan, I'm not trying to be difficult.
 9 Mr. Hoehn submitted in the United States Supreme
 10 Court this picture of dead mussels in Swift
 11 Slough in 2006. You're the expert on this issue.
 12 Is it your contention that Georgia killed those
 13 mussels that are in the picture on the screen
 14 from Mr. Hoehn's testimony?
 15 **A. It is my contention that Georgia's consumption**
 16 **makes it more likely that such mortality events**
 17 **will occur as a result of Georgia's consumption**
 18 **than in the absence of Georgia's consumption. So**
 19 **it is a probabilistic statement that under low**
 20 **flow conditions of low flow years which include**
 21 **natural variability in their onset, the**
 22 **additional impact of Georgia's consumption make**
 23 **mortality events such as this more probable.**
 24 **Q.** Dr. Allan, can you answer this question yes or
 25 no. Do you contend that Georgia killed the

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1 mussels pictured in Mr. Hoehn's picture?
 2 **A. I don't think it's a yes or no answer. I think I**
 3 **gave you my answer.**
 4 **Q.** Thank you.
 5 Now, you -- when you visited the -- the river
 6 in 2012, it was springtime. Correct?
 7 **A. I believe that's correct.**
 8 **Q.** And you saw adequate water in the river at that
 9 time. Right?
 10 **A. We walked -- I don't have a clear recollection of**
 11 **exactly what conditions were like. I do know**
 12 **that we were -- we entered some of the sloughs --**
 13 **some of the smaller sloughs. I remember that we**
 14 **couldn't take a boat into them because there was**
 15 **too little water. So we got out of the boats and**
 16 **we walked. So it would have been a low water**
 17 **period from the standpoint of at least some of**
 18 **the sloughs. That's my best recollection.**
 19 **Q.** It was May 2012 when you went?
 20 **A. I think that's right, yes.**
 21 **Q.** And it was a drought, correct, in May of 2012?
 22 **A. It was a relatively low flow period. It was my**
 23 **first visit to the river; and I did not have any**
 24 **historical background on when -- on hydrology at**
 25 **that time from others to help me know anything**

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1 **other than it was a period when we could get on**
 2 **the water in a boat on the river, but for most of**
 3 **the smaller sloughs, we couldn't enter them.**
 4 **Q.** Dr. Allan, just to -- please focus on my
 5 question. Was there adequate water in the river
 6 in May of 2012 when you visited the river with
 7 Mr. Hoehn?
 8 **A. Please tell me; adequate in what sense?**
 9 MR. PRIMIS: Mr. Smith, can you queue it
 10 up?
 11 BY MR. PRIMIS:
 12 **Q.** We're on page 190 -- can you refer to page 197,
 13 line 6 of your deposition?
 14 **A. 197, line 6 of deposition.**
 15 **197, line 6.**
 16 **Q.** Yes. We'll play it on the video.
 17 (Whereupon the video was played.)
 18 BY MR. PRIMIS:
 19 **Q.** Dr. Allan, were you asked those questions; and
 20 did you give those answers?
 21 **A. I did. I think they're about the same answers I**
 22 **just gave you. My memory is about the same on**
 23 **that.**
 24 **Q.** Now, when you visited, you said you went to Swift
 25 Slough and some other sloughs. Correct?

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1 **A. Correct.**
 2 **Q.** And at that time the water was not at an extreme
 3 low. Right?
 4 **A. I can't answer.**
 5 **Q.** Would it refresh your recollection to look at
 6 page 225 of your deposition, line 16?
 7 **A. I see that.**
 8 **Q.** And does that refresh your recollection that
 9 flows were not in an extreme low condition when
 10 you visited there in May of 2012?
 11 **A. It refreshes my recollection that I was vague on**
 12 **what flows were like when I visited when you**
 13 **asked me these questions in my deposition, and my**
 14 **answers are no better right now.**
 15 **Q.** Dr. Allan, when you visited, you saw situations
 16 where you thought that further decreases in water
 17 could cause harm. Correct?
 18 **A. I think so.**
 19 **Q.** But on that trip, you didn't visually see harm
 20 yourself. Correct?
 21 **A. So on that trip, I saw locations along the stream**
 22 **bank margins, the riverbank margins, where there**
 23 **were mussels that were in low -- topographically**
 24 **low locations next to the river where any further**
 25 **drop in river level would likely leave them**

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1 **stranded. I walked into sloughs where there was**
 2 **some water present and further drops in water**
 3 **could leave them stranded.**
 4 **But, again, I was forming my first**
 5 **impressions of the river. And it's four years**
 6 **ago, and I do not have clear memory of exactly**
 7 **what I saw then.**
 8 **Q.** Dr. Allan, I'm going to play a passage from your
 9 deposition; and I'm going to ask if you were
 10 asked those questions and gave those answers.
 11 (Whereupon the video was played.)
 12 BY MR. PRIMIS:
 13 **Q.** Dr. Allan, were you asked those questions; and
 14 did you give those answers?
 15 **A. I did.**
 16 **Q.** Now, can you turn to tab 11 of the book I have
 17 given you. And for the record, this is GX-407.
 18 Dr. Allan, you have seen this chart before.
 19 Correct?
 20 **A. Yes.**
 21 **Q.** This is a hydrograph of the month when you were
 22 visiting the river with Ted Hoehn. Correct?
 23 **A. I believe that's correct.**
 24 **Q.** And at no point on this hydrograph does the daily
 25 flow go above 5800 cfs. Correct?

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1 **A. That's correct.**
 2 **Q.** And almost every day is below 5700 cfs. Correct?
 3 **A. That's correct.**
 4 **Q.** And flows below 5700 cfs trigger one of the harm
 5 metrics for mussels. True?
 6 **A. That is correct.**
 7 **Q.** Now, I would like to go back again -- well, you
 8 found harm to the mussels in Swift Slough in 2011
 9 and 2012 under your analysis. Correct?
 10 **A. Yes.**
 11 **Q.** And that's the same time period that you were
 12 visiting the river. Correct?
 13 **A. Well, I think my visit was earlier than the harm**
 14 **window. And I think we're establishing that the**
 15 **first time I went to the river and well before --**
 16 **you know, three years before we had these kinds**
 17 **of analyses. I really have an imperfect**
 18 **recollection of what the conditions were and what**
 19 **I was observing.**
 20 **Q.** Now, Dr. Allan, over the period of time that you
 21 have been working on the case --
 22 **A. Yes.**
 23 **Q.** -- four years, you never went out to the river to
 24 see if there were actually mussels being harmed
 25 when your metrics predicted harm. Correct?

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1 **A. That's correct.**
 2 **Q.** And you didn't go out and look to see if there
 3 were actually mussels being harmed in any year
 4 for which you show harm. Correct?
 5 **A. That's correct.**
 6 **Q.** Now, focusing on the endangered mussels for a
 7 moment, your harm metrics for mussels does not
 8 address the Chipola slabshell specifically.
 9 Right?
 10 **A. It does not.**
 11 **Q.** And that mussel is not vulnerable to water level
 12 changes. True?
 13 **A. Generally considered less vulnerable, yes.**
 14 **Q.** And that's a finding of the U.S. Fish and
 15 Wildlife Service, too?
 16 **A. That's my understanding.**
 17 **Q.** And, in fact, you're not claiming that Georgia
 18 did anything to harm that Chipola slabshell.
 19 Right?
 20 **A. No. I'm not.**
 21 **Q.** Now, the other endangered one, other than the fat
 22 threeridge, is the purple bankclimber. Right?
 23 **A. That's correct.**
 24 **Q.** And the purple bankclimber lives up around the
 25 Woodruff Dam. Correct?

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1 **A. Correct.**
 2 **Q.** Your report does not present or does not claim
 3 that Georgia caused harm upstream of mile 80,
 4 which is the final 20 miles up near the dam.
 5 Correct?
 6 **A. Say that again, please.**
 7 **Q.** Your harm does not -- your report, your
 8 testimony, does not present evidence of harm
 9 upstream of mile 80. Correct?
 10 **A. My report does not present any metrics to say**
 11 **there is harm upstream of the mile 80.**
 12 **Q.** And that's the area beneath Jim Woodruff Dam?
 13 **A. That's correct.**
 14 **Q.** And the reason you didn't attribute harm there
 15 was that it was simply too difficult to separate
 16 out channel erosion issues from flow issues in
 17 that stretch of the river. Correct?
 18 **A. That's correct.**
 19 **Q.** And because that's where the purple bankclimber
 20 lives, your analysis does not pursue the issue of
 21 harm to the purple bankclimber. Right?
 22 **A. So my analysis does in general talk about harm to**
 23 **the mussel assemblage; but it does not do a**
 24 **species by species evaluation of harm, including**
 25 **for the purple bankclimber.**

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1 Q. Again, can you answer this specific question.
 2 Your analysis does not pursue the issue of harm
 3 to the purple bankclimber given where it lives in
 4 the river. Correct?
 5 A. Correct.
 6 Q. Now, your mussel metric for harm is based on the
 7 fat threeridge. Right?
 8 A. Yes.
 9 Q. And that's because you think it's a
 10 representative species of mussels in that river.
 11 True?
 12 A. **Partially true. I think it's a representative**
 13 **species; and there is -- because of the interest**
 14 **in the fat threeridge, there is sufficient data**
 15 **to be able to establish the magnitude, timing,**
 16 **and duration of flow conditions where harm has**
 17 **been observed.**
 18 Q. Now, you know that the Fish and Wildlife Service
 19 studied the fat threeridge in 2012 and found its
 20 population to be stable and potentially
 21 increasing. Correct?
 22 A. **I want to look at the exact wording because**
 23 **what's in my memory is qualifier words such as**
 24 **appears to be stable. And I would see to that.**
 25 Q. Can I refer you to page 433, lines 1 through 6 of
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1 your deposition, sir.
 2 A. **433?**
 3 Q. Yes. Lines 1 through 6.
 4 (Whereupon the video was played.)
 5 BY MR. PRIMIS:
 6 Q. Dr. Allan, did you -- were you asked that
 7 question; and did you give that answer?
 8 A. **Yes, I did.**
 9 Q. Okay. And you don't know of any specific studies
 10 or data or evidence to contradict -- to
 11 contradict the conclusion in 2012 that the fat
 12 threeridge population appears to be stable.
 13 Correct?
 14 A. **To contradict it, correct.**
 15 Q. Now, you're aware that the Fish and Wildlife
 16 Service came out with another biological opinion
 17 about a month ago?
 18 A. **I am aware.**
 19 Q. And have you read that?
 20 A. **I have.**
 21 Q. And you're aware that the Service, again, found
 22 that the fat threeridge population in the action
 23 area appears stable and may be increasing in
 24 size. Correct?
 25 A. **Yes.**
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1 Q. Now, let's turn to tab 9.
 2 A. **Okay.**
 3 Q. Do you recognize this as the Service's 2016
 4 biological opinion?
 5 A. **I do.**
 6 MR. PRIMIS: JX-168 for the record.
 7 BY MR. PRIMIS:
 8 Q. It's dated September 14, 2016. Right?
 9 A. **Right.**
 10 Q. But it came out a few weeks after that. It was
 11 in October. Right?
 12 Let's turn to page 133. Do you see the
 13 section called Water Quantity?
 14 A. **Page 133?**
 15 Q. Water quality.
 16 A. **Water quality, yes. I see that section.**
 17 Q. Just give me a moment. I'm trying to find my
 18 place.
 19 And just above that, there is a paragraph
 20 that says the following: Although the low flows
 21 in 2006 and 2008 and 2010 to 2011 have resulted
 22 in areas without permanently flowing water that
 23 exhibited mussel mortality, we do not believe
 24 that the low flows have permanently limited the
 25 designated critical habitat to function for the
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1 conservation of the species in unit 8 or unit 2.
 2 Our data illustrate that mussels recolonize these
 3 areas, including Swift Slough, and the habitat is
 4 not permanently lost.
 5 Do you see that?
 6 A. **I see that.**
 7 Q. And you agree with that statement. Right?
 8 A. **Well, what I -- what I see is a statement that**
 9 **is, I think, good science -- good science**
 10 **reporting because it's appropriately qualified**
 11 **with the we do not believe permanently limited.**
 12 **The habitat is not permanently lost.**
 13 **So here we have language that says, we do not**
 14 **believe that those low flows have permanently**
 15 **eliminated the designated critical habitat in an**
 16 **analysis that's focused on the issue of jeopardy**
 17 **rather than the issue of harm. So it's really**
 18 **exploring a different question; and it's giving a**
 19 **reasonable, but I think tentative statement that**
 20 **they don't think that the critical habitat is**
 21 **being lost and the species is in jeopardy.**
 22 **And I never claimed that these species are in**
 23 **jeopardy. I claim that they are harmed.**
 24 Q. And you claim they were harmed in '02, '06, and
 25 2012. Right?
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1 **A. I claim that they were harmed during episodes of**
 2 **low flow, and that we can use Dr. Hornberger's**
 3 **scenarios to approximate how the frequency of**
 4 **those harmful events have changed under different**
 5 **scenarios.**
 6 **Q.** Dr. Allan, can you go to page 124 of the BiOp.
 7 **A. I'm there.**
 8 **Q.** And we covered this with Mr. Hoehn, but I think
 9 it pertains to your analysis as well. Do you see
 10 midway down the second paragraph it states that
 11 based on these densities and the area of habitat
 12 mapped in each river reach, current estimates of
 13 the population size of fat threeridge range from
 14 6 million to 18.6 million individuals with a mean
 15 of approximately 12,167,000.
 16 Do you see that?
 17 **A. I do; but I would like to look at it for just a**
 18 **moment longer, please.**
 19 **Q.** Sure.
 20 **A. I -- thank you for letting me refresh my memory**
 21 **on this. Please continue.**
 22 **Q.** And you understand these are the estimates of the
 23 U. S. Fish and Wildlife Service as of a month ago
 24 for fat threeridge population. Correct?
 25 **A. Actually, I understand that these are estimates**

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1 **from -- from the studies of Smit and Kaeser that**
 2 **the U. S. Fish and Wildlife Service has adopted.**
 3 **That's my understanding.**
 4 **Q.** I'll rephrase my question. Do you understand
 5 that the U.S. Fish and Wildlife Service has
 6 adopted these estimates of millions and millions
 7 of fat threeridge mussels?
 8 **A. Yes, I do.**
 9 **Q.** Now, the next sentence talks about what's called
 10 a take. You know what take is, right?
 11 **A. Generally, yes.**
 12 **Q.** And take in this context means a dead mussel
 13 caused by flow conditions. Right?
 14 **A. That's right.**
 15 **Q.** Now, the biological opinion has a take estimate
 16 of 8,374 fat threeridge. Do you see that, the
 17 next sentence, page 124?
 18 **A. Yes. Thank you.**
 19 **I see it.**
 20 **Q.** And that is over the period of time in which the
 21 Army Corps has been operating under the Revised
 22 Interim Operating Plan. Right?
 23 **A. Right.**
 24 **Q.** And you understand that that calls for 5,000 cfs
 25 in low flow conditions --

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1 **A. Yeah.**
 2 **Q.** -- and drought conditions. Right?
 3 **A. Yeah.**
 4 **Q.** And Fish and Wildlife Service estimates that over
 5 that period of time that the Army Corps has been
 6 operating under the RIOP, that the total take of
 7 the fat threeridge population is .07 percent of
 8 the population. Do you see that?
 9 **A. I see that number; I don't know if I agree with it.**
 10 **Q.** But you do understand that that's what the Fish
 11 and Wildlife Service reported weeks before this
 12 trial began. Right?
 13 **A. When I look at this report, I see that a**
 14 **scientific study collected 4,000 mussels and**
 15 **predicted that there were 12 million, that the**
 16 **number of mussels they collected to generate that**
 17 **number is actually smaller than the number that**
 18 **is considered to be an allowable take. So the**
 19 **degree of extrapolation, the methodological**
 20 **issues leaves me, like I think Mr. Hoehn, with**
 21 **considerable uneasiness about taking these**
 22 **numbers verbatim.**
 23 **Q.** Oh, Mr. Hoehn disagreed with it explicitly. Do
 24 you understand that?
 25 **A. I understand that, yes.**

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1 **Q.** And you have doubts about them. Right?
 2 **A. I have strong doubts about both the survey**
 3 **methodology, the extrapolation, and the**
 4 **subsequent sampling that did not fully**
 5 **corroborate the original estimates on what --**
 6 **the original samples that went into the estimate.**
 7 **So there's just a lot of -- a lot of**
 8 **interesting information here that really calls**
 9 **out for more study but does not, in my view, call**
 10 **out for a conclusion.**
 11 **Q.** Dr. Allan, it would be a good thing if there's
 12 more mussels. You would agree with that?
 13 **A. It would be a good thing if there were more**
 14 **mussels.**
 15 **Q.** Thank you. Now, you know that the Army Corps is
 16 currently updating its Water Control Manual.
 17 Right? Do you understand that?
 18 **A. I understand that.**
 19 **Q.** And you understand that the Fish and Wildlife
 20 Service evaluated the impacts of the new Water
 21 Control Manual on endangered species. Correct?
 22 **A. It's my understanding that's the purpose of this**
 23 **document is to evaluate the change in water**
 24 **control operating procedures for threatened and**
 25 **listed species.**

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- 1 **Q.** That's exactly what the Service is doing here in
2 this document. Correct?
- 3 **A. Yes. And it's not what I'm doing.**
- 4 **Q.** And you understand that the Service approved the
5 new Water Control Manual. Correct?
- 6 **A. Actually, I -- I'm not sure I was aware of that.**
- 7 MR. PRIMIS: Your Honor, might this be a
8 good breaking time for the day; or do you
9 want to go to the distance?
- 10 SPECIAL MASTER LANCASTER: It's up to
11 counsel.
- 12 MR. QURESHI: Your Honor, I know
13 Dr. Allan is suffering from a head cold; so I
14 think a break now would be fine.
- 15 SPECIAL MASTER LANCASTER: That's fine.
16 You remember that tomorrow is Bankruptcy
17 Court. We will -- unless you want to sit in
18 in the Bankruptcy Court, we will resume on
19 Thursday at 9 o'clock.
- 20 MR. QURESHI: Understood.
- 21 MR. PRIMIS: Thank you, your Honor.
22 (Time Noted: 4:11 p.m.)
23 (Proceeding adjourned to Thursday,
24 November 3, 2016, at 9:00 a.m.)
25 (End of day)

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- 1 CERTIFICATE
- 2 I, Claudette G. Mason, a Notary Public
3 in and for the State of Maine, hereby certify
4 that the foregoing pages are a correct
5 transcript of my stenographic notes of the
6 Proceedings.
- 7 I further certify that I am a
8 disinterested person in the event or outcome
9 of the above-named cause of action.
- 10 IN WITNESS WHEREOF, I subscribe my hand
11 this 25th day of November, 2016.

12
13
14
15 /s/ Claudette G. Mason
16 Claudette G. Mason, RMR, CRR
Court Reporter

- 17 My Commission Expires
18 June 9, 2019.
19
20
21
22
23
24
25

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