

SUPREME COURT OF THE UNITED STATES  
No. 142, Original

STATE OF FLORIDA, )  
Plaintiff, )  
V. ) VOLUME IV  
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 4, 2016, commencing at 8:55 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.  
CHRISTOPHER J. FAWAL, ESQ.  
NATALIE HARDWICK RAO, ESQ.

For the State of Georgia: CRAIG S. PRIMIS, ESQ.  
BARACK S. ECHOLS, ESQ.  
JOSH MAHONEY, ESQ.

Also Present: JOSHUA D. DUNLAP, ESQ.

THE REPORTING GROUP  
Mason & Lockhart

1 PROCEEDINGS  
2 SPECIAL MASTER LANCASTER: Terrific.  
3 Nobody got up.  
4 They're slow learners, but they learn.  
5 Proceed, counsel.  
6 MR. ECHOLS: Good morning, your Honor.  
7 CROSS-EXAMINATION  
8 BY MR. ECHOLS:  
9 Q. Good morning, Mr. Berrigan.  
10 A. **Good morning.**  
11 Q. If we could please pick up where we left off  
12 yesterday. We were looking at JX-77, which was  
13 the Governor's letter to the federal government  
14 in connection with the request for federal  
15 disaster relief. And we were back, I believe, to  
16 the August 2012 oyster resource assessment report  
17 that you had drafted. Do you recall that?  
18 A. **Yes.**  
19 Q. If we could please turn back to that page again.  
20 Let's take a look first, if we could, at the  
21 paragraph underneath the executive summary. And  
22 I would like to read a few lines from this  
23 paragraph and then ask you some questions about  
24 it, if that's all right.  
25 A. **That's good.**

THE REPORTING GROUP  
Mason & Lockhart

INDEX

<u>Witness</u>	<u>Direct</u>	<u>Cross</u>	<u>Redirect</u>	<u>Recross</u>
Mark Berrigan	816	968,	1024	1013

EXHIBITS

<u>Number</u>	<u>Page Referenced</u>
JX-50	846
JX-52	914, 1009
JX-60	922, 993
JX-74	867
JX-75	868, 1006
JX-77	816, 941, 995
JX-78	948, 1017, 1024
JX-150	859, 958, 987
-----	
FX-608	875
FX-875	969
-----	
GX-2	896
GX-498	945
GX-1248	954
GX-1296	931
GX-1297	888
GX-1305	918

THE REPORTING GROUP  
Mason & Lockhart

1 Q. So in the first paragraph here it starts off and  
2 says, observation and sampling of oyster  
3 populations on the primary oyster-producing reefs  
4 in Apalachicola Bay during July 2012 indicated  
5 that oyster populations were depleted over most  
6 of the reef areas sampled and that surviving  
7 oyster populations are severely stressed.  
8 Do you see that?  
9 A. **Yes.**  
10 Q. And could you explain, please, what is meant by  
11 depleted.  
12 A. **Yes. The term that I typically use for the loss**  
13 **or extensive mortality among oysters would be**  
14 **depleted. Depleted means that there has been**  
15 **some impact on the population that is less than**  
16 **the number of oysters.**  
17 Q. And does depleted in reference to a reef, as is  
18 in this particular paragraph, also mean that  
19 there may be fewer oysters present in that  
20 location?  
21 A. **If there's an ongoing depletion event, that would**  
22 **suggest clearly that there were less oysters on**  
23 **the reef.**  
24 Q. If I could ask you to skip one sentence and go  
25 down to where it begins more detailed sampling.

THE REPORTING GROUP  
Mason & Lockhart

818

1 Are you with me?

2 **A. Yes.**

3 **Q.** All right. I would like to read that and ask

4 you, again, a couple of questions. It says, more

5 detailed sampling and analyses confirmed the

6 condition of oyster resources and suggested that

7 the poor condition was the result of a

8 combination of environmental factors and fishery

9 practices.

10 We touched on this briefly yesterday; but in

11 the category of fishery practices -- and correct

12 me if I'm wrong -- I believe you stated that one

13 set of fishery practices might involve the

14 oystermen, when they're harvesting oysters, if

15 they don't cull and take off the smaller oysters

16 and throw them back into the bay. Is that

17 correct; that would be one fishery practice?

18 **A. Culling would be a fisheries practice.**

19 **Q.** And could you -- rather than it be in my words,

20 could you explain to the Court what culling is?

21 **A. Typically oysters are harvested in Apalachicola**

22 **Bay using hand tongs, which are rakes with**

23 **opposable heads. And the action of those rakes**

24 **is scissor-like. And the oystermen hold these**

25 **long-handled tongs; and they work them in such a**

THE REPORTING GROUP  
Mason & Lockhart

819

1 **fashion that they scoop oysters together and then**

2 **pick them out of the water. And they place the**

3 **oysters that come out of the -- out of the tongs**

4 **onto a culling board, as it's called. The rake**

5 **heads are such that they do allow some small**

6 **shell fragments and small oysters to fall**

7 **through; but typically they will include juvenile**

8 **oysters, marketable oysters, and shell. When**

9 **that's placed on the culling board, then either**

10 **the tonger or typically -- or more typically**

11 **there will be another helper on board, another**

12 **crew member that will go through this material**

13 **and take out the legal-size oysters, place them**

14 **into bags or baskets or whatever their container**

15 **unit would be. And the remainder of the material**

16 **is pushed back into the water. So the entire**

17 **practice is considered to be culling, is the**

18 **local term for it.**

19 MR. ECHOLS: And I apologize at the

20 beginning, your Honor. We're in tab 1 of

21 that binder. I didn't know if you have your

22 binder still from yesterday.

23 SPECIAL MASTER LANCASTER: Thank you,

24 counselor.

25 MR. ECHOLS: Okay. And tab 1 will be

THE REPORTING GROUP  
Mason & Lockhart

820

1 the -- after the letter from the Governor;

2 and then the letter from Commissioner Putnam

3 is the August report.

4 SPECIAL MASTER LANCASTER: Thank you.

5 MR. ECHOLS: Okay. And I'm still just

6 reading from the third page there under the

7 executive summary.

8 BY MR. ECHOLS:

9 **Q.** And, Mr. Berrigan, then that was one of the

10 fishery practices that you identified. What else

11 did you intend to have included in this category

12 of fishery practices appear in the second to last

13 sentence of the first paragraph there?

14 **A. I believe that the culling is the primary**

15 **practice that I would have been talking about.**

16 **Q.** And, sir, how would culling cause the poor

17 condition of the oyster resources as set forth in

18 the sentence there?

19 **A. I don't -- in my opinion culling had little to do**

20 **with the condition of the resources in the bay.**

21 **I don't say that anywhere that there's -- that**

22 **culling was a contributing factor.**

23 **Q.** Well, I just want to make sure that we're clear.

24 We just went through that -- the sampling and

25 analyses that you performed confirmed the

THE REPORTING GROUP  
Mason & Lockhart

821

1 condition and suggested that the poor condition

2 was the result of a combination of environmental

3 factors and fishery practices. So the poor

4 condition was the result of, in part, fishery

5 practices, which you defined as culling --

6 improper culling. Correct?

7 **A. Yes. And I -- and I see the point that you're**

8 **making there. The -- in certain circumstances**

9 **and in -- and this will be important, I think,**

10 **throughout this discussion as to what the context**

11 **of this should be or will be in my words.**

12 **We can look at the depletion event as a**

13 **bay-wide event, in which case the environmental**

14 **conditions affected the oysters bay-wide. If we**

15 **look at the isolated events on Cat Point and East**

16 **Hole exclusively, then we could say that**

17 **harvesting had an impact. That impact, as I have**

18 **mentioned in this report and others, was more**

19 **severe and intense because we were dealing with**

20 **an already stressed resource. Therefore, with**

21 **the stressed resource, culling practices would**

22 **have an impact, certainly, but not at a level**

23 **that affected the depletion event throughout the**

24 **bay.**

25 **So I have to qualify my statements in that**

THE REPORTING GROUP  
Mason & Lockhart

822

1 **fisheries practices affected two of the oyster**  
 2 **bars in Apalachicola Bay primarily. The others**  
 3 **were not affected by harvesting or culling.**  
 4 **Q.** And it is correct, is it not, sir, that Cat Point  
 5 and East Hole were the primary producing reefs in  
 6 Apalachicola Bay?  
 7 **A. They have historically been the primary producing**  
 8 **reefs in Apalachicola Bay.**  
 9 **Q.** Meaning that those are the reefs from which most  
 10 of the oysters that are harvested or a large  
 11 portion of the oysters that are harvested come  
 12 from that the oystermen then bring to the dock  
 13 and sell?  
 14 **A. Under favorable circumstances, that's correct.**  
 15 **Q.** And so your testimony is that with respect to  
 16 those two primary producing reefs, those, as you  
 17 write here in this August 2012 report which went  
 18 to the federal government sent by the Governor --  
 19 those were harmed by poor harvesting practices?  
 20 **A. In 2012.**  
 21 **Q.** Very good.  
 22 If we could turn a couple more pages in,  
 23 please, to page 3 of your August 2012 report.  
 24 And if you wouldn't mind, please, looking at the  
 25 second to the last paragraph, which begins Cat

THE REPORTING GROUP  
Mason & Lockhart

823

1 Point and East Hole Bar.  
 2 **A. I see it.**  
 3 **Q.** All right. And as with the first page, let me  
 4 read you a couple of sentences and ask you a  
 5 couple of questions. It says, starting off here,  
 6 Cat Point and East Hole Bar have been subject to  
 7 a combination of factors that have adversely  
 8 affected oyster populations, oyster reef habitat,  
 9 and the oyster fishery. Oyster populations over  
 10 much of the reef area are depleted and the  
 11 quality of the substrate is degraded to a point  
 12 where spat settlement and recruitment have been  
 13 disrupted.  
 14 Once again, I'm going to ask for your help in  
 15 instructing us and the Court as far as what some  
 16 of these terms are. So in the first instance  
 17 where it states, the quality of the substrate is  
 18 degraded, could you please explain what substrate  
 19 is and what it means for it to be degraded.  
 20 **A. Oyster bars or functional oyster reefs are made**  
 21 **up of living and dead oysters. The dead oysters**  
 22 **over time build up what we typically refer to as**  
 23 **substrate. And that substrate, over another**  
 24 **period of time, a longer period of time, is going**  
 25 **to build up some elevation as a feature that we**

THE REPORTING GROUP  
Mason & Lockhart

824

1 **can identify as a reef.**  
 2 **A functional oyster reef will have, I said,**  
 3 **living oysters of all life stages and dead shell,**  
 4 **and a firmness, a consolidated elevation that all**  
 5 **in all is considered a substrate.**  
 6 **I don't know if that was very clear, but --**  
 7 **Q.** And then, again, to help us out here, where it  
 8 states that -- I lost my place here -- spat  
 9 settlement, where it states that spat settlement  
 10 and recruitment have been disrupted, would you  
 11 please explain that?  
 12 **A. What was the question again? I'm sorry.**  
 13 **Q.** If you wouldn't mind, we're in the same --  
 14 **A. Paragraph?**  
 15 **Q.** -- sentence there where it says -- after the  
 16 quality of substrate is degraded, it says it's  
 17 degraded to a point where spat settlement and  
 18 recruitment have been disrupted. Could you  
 19 explain what that means.  
 20 **A. Yes. For the most part, oyster populations in**  
 21 **Apalachicola Bay are dependent upon substrate**  
 22 **to -- for larval recruitment. In the broadest**  
 23 **and most basic terms that I can use now, oysters,**  
 24 **both males and the females, extrude their gametes**  
 25 **into the water column where the gametes -- the**

THE REPORTING GROUP  
Mason & Lockhart

825

1 **male and female gametes are fertilized. And**  
 2 **larvae -- the fertilized egg develops through**  
 3 **various stages that we'll just call larval stages**  
 4 **until they get to the stage where they're ready**  
 5 **to settle out. Typically these larval stages**  
 6 **will settle on almost any suitable surface, but**  
 7 **the most suitable surface is typically the shell**  
 8 **of living or dead oysters.**  
 9 **The settling of this -- of these larvae into**  
 10 **a sessile stage is called spat. And the typical**  
 11 **reference there is spat fall. When the larvae**  
 12 **set on the existing shell or substrate, the**  
 13 **terminology is spat fall.**  
 14 **So we speak of successful spat fall, we're**  
 15 **talking about successful reproduction and**  
 16 **setting. When we talk about recruitment -- when**  
 17 **I talk about recruitment, I'm generally talking**  
 18 **about the spat that has grown to, let's say, from**  
 19 **the size of a microscopic size practically to the**  
 20 **size of a fingernail or something like that.**  
 21 **That would become a spat that we could recognize**  
 22 **and count.**  
 23 **So when we see high numbers of spat, then**  
 24 **we're talking about successful recruitment. If**  
 25 **we don't see spat on these reefs or on these**

THE REPORTING GROUP  
Mason & Lockhart

826

1 **shells, then we talk about recruitment failure.**  
 2 **Q.** So in a layman's terms, is spat a baby oyster?  
 3 **A. Yes. We can call them a baby oyster.**  
 4 **Q.** Okay. You mentioned sessile. Just so we're all  
 5 understanding the term, when they become  
 6 sessile -- S E S S I L E?  
 7 **A. Yes.**  
 8 **Q.** -- what does that mean, please?  
 9 **A. The -- throughout the early life stages or the**  
 10 **larval stages, the larvae are free swimming. So**  
 11 **they're moving in the water column in and out of**  
 12 **areas. They're primarily guided by salinity**  
 13 **gradients, wind and wave action, and prevailing**  
 14 **water currents. When they set, the trochophore**  
 15 **larvae will bounce around the bottom trying to**  
 16 **find a suitable habitat.**  
 17 **Their success rate is probably not that good.**  
 18 **It's a big bay, and there's not a whole lot of**  
 19 **places they're going to find that are really**  
 20 **favorable to survival. But once they attach,**  
 21 **they cement themselves to that substrate. And**  
 22 **from that point on, they're sessile. So they can**  
 23 **no longer move away or -- or seek a more**  
 24 **favorable place to live. They're there for the**  
 25 **duration of their life.**

THE REPORTING GROUP  
Mason & Lockhart

827

1 **Q.** If we could do down to the next sentence in that  
 2 same paragraph, there is one other thing that I  
 3 wanted to ask your help to understand. The  
 4 sentence says, stress associated with prolonged  
 5 high salinity, high natural mortality and  
 6 predation, and intensive fishing effort have  
 7 markedly reduced standing stocks of juvenile,  
 8 sub-adult, and adult oysters.  
 9 Do you see that?  
 10 **A. Yes.**  
 11 **Q.** And we have already talked about that there was  
 12 high salinity, predation, and you defined  
 13 intensive fishing effort; but I don't think we  
 14 discussed what are standing stocks?  
 15 **A. Standing stock is a term that's used in almost**  
 16 **all population studies. And that is the -- the**  
 17 **living stocks that are there. It could be**  
 18 **standing stocks of fish or shrimp or whatever.**  
 19 **But in this case, it's the living oysters that**  
 20 **are on the reefs.**  
 21 **Q.** And is it -- when here you refer to them as being  
 22 markedly reduced, one way that they could be  
 23 markedly reduced would be if they are not there,  
 24 if they have been removed; correct -- the living  
 25 oyster? That would be low standing stocks?

THE REPORTING GROUP  
Mason & Lockhart

828

1 **A. If they are removed, it would lower the standing**  
 2 **stock, yes.**  
 3 **Q.** I want to turn back a few more pages to page 7 of  
 4 the August 2012 report, please. And in  
 5 particular, in the middle of the page there's a  
 6 heading that says Harvesting Pressure.  
 7 **A. Yes.**  
 8 **Q.** And if we look here -- let me start at the first  
 9 sentence. It says, declining oyster population  
 10 parameters can be associated with harvesting, as  
 11 well as environmental influences and natural  
 12 mortality.  
 13 And then it goes on, reported oyster landings  
 14 for Franklin County in 2011 increased marginally  
 15 over 2010 in both production and bags per trip;  
 16 but harvesting pressure, as measured in reported  
 17 trips, increased by about 20 percent.  
 18 We talked about the environmental influences  
 19 and the natural mortality; but is it true, as you  
 20 state here in this report, that one potential  
 21 cause of declining oyster population parameters  
 22 can be harvesting?  
 23 **A. Yes.**  
 24 **Q.** And I think we touched on yesterday that there  
 25 was an increase in reported trips -- I believe we

THE REPORTING GROUP  
Mason & Lockhart

829

1 touched on it; maybe we didn't -- by about 20  
 2 percent, meaning that there are more oystermen in  
 3 boats going out into the bay to harvest during  
 4 this period of time?  
 5 **A. That's correct.**  
 6 **Q.** Let me continue to the next sentence there. It  
 7 says, oyster population parameters for Cat Point  
 8 Bar and East Hole Bar suggest that oyster  
 9 abundances and potential production is markedly  
 10 depressed, possibly reflecting the effects of  
 11 continuous harvesting, poor harvesting practices,  
 12 as well as less than optimal environmental  
 13 conditions in 2010 and 2011.  
 14 We talked about already the poor harvesting  
 15 practices. Now, what, sir, is continuous  
 16 harvesting? What do you mean there?  
 17 **A. In the case of Cat Point and East Hole Bar, there**  
 18 **had been certain accommodations made, I would**  
 19 **say. The term probably might not be correct**  
 20 **there, but there were circumstances where**  
 21 **harvesting on those bars was extended beyond the**  
 22 **normal winter harvesting season for those areas.**  
 23 **Q.** And does this go back to what we touched on  
 24 yesterday that with the BP oil spill, the Florida  
 25 Fish and Wildlife Commission extended the

THE REPORTING GROUP  
Mason & Lockhart

830

1 harvesting days that were available on some of  
 2 the bars -- the seasons for harvesting for some  
 3 of the bars?  
 4 **A. Yes. It would include that -- that type of**  
 5 **activity that we discussed.**  
 6 **Q.** And this was a change post to 2010 from the way  
 7 Fish and Wildlife had managed the fishery  
 8 previously?  
 9 **A. Yes. There was an extension of harvesting days.**  
 10 **Q.** In the next -- the last sentence of that  
 11 paragraph, please, sir, it states, overharvesting  
 12 is most damaging when environmental conditions  
 13 are less than optimal, recruitment is low, and  
 14 natural mortality is high.  
 15 Now, you would agree with me that here we are  
 16 in a drought; so environmental conditions are  
 17 obviously less than optimal. Correct?  
 18 **A. That's correct.**  
 19 **Q.** And here we have talked about some of the  
 20 increase in mortality. Now, what did you mean  
 21 here when you said overharvesting is most  
 22 damaging when you have these circumstances of  
 23 poor environmental conditions and the like?  
 24 **A. The impacts on standing stocks is going to be**  
 25 **greater when harvesting is occurring and there is**  

THE REPORTING GROUP  
Mason & Lockhart

831

1 **no renewing of that population. When I'm talking**  
 2 **about a population that is stressed, if you look**  
 3 **at these numbers that are in these tables and you**  
 4 **look at various parameters, those parameters**  
 5 **indicate that there is no recruitment, no growth**  
 6 **in survival of babies, juvenile, and sub-legal**  
 7 **oysters. So there is going to be an impact on**  
 8 **those standing stock numbers. You are going to**  
 9 **reduce the number of standing stocks. That is**  
 10 **obvious and inevitable.**  
 11 **Q.** So because the population is not being  
 12 replenished at the rate it normally would be, the  
 13 removal of these oysters to a degree higher than  
 14 is beneficial is why the overharvesting is most  
 15 damaging. Would that be accurate?  
 16 **A. No, it would not be. I wouldn't agree with that**  
 17 **statement.**  
 18 **Q.** Would you agree with the statement that  
 19 overharvesting is most damaging when  
 20 environmental conditions are less than optimal,  
 21 recruitment is low, and natural mortality is  
 22 high?  
 23 **A. Yes, I will agree with that.**  
 24 **Q.** Okay. If we could continue down that section to  
 25 the next paragraph, please. Let's just go down  

THE REPORTING GROUP  
Mason & Lockhart

832

1 to the last sentence of that paragraph beginning  
 2 another. And it states there, sir, another  
 3 contributing factor was the management decision  
 4 to allow harvesting from these reefs during the  
 5 summer of 2010 in response to the oil spill  
 6 event, April 2010. This resulted in an intense  
 7 harvesting effort which precluded any recovery  
 8 time for the resource.  
 9 Are you with me, sir?  
 10 **A. I'm trying to find where you are.**  
 11 **Q.** Oh, I'm sorry. It's the last --  
 12 **A. Okay. I'm -- okay. Okay.**  
 13 **Q.** Do you see it there?  
 14 **A. I have got it now.**  
 15 **Q.** That paragraph that begins vessel counts, and  
 16 it's the very last two sentences of that  
 17 paragraph.  
 18 **A. Okay. What was your question?**  
 19 **Q.** Yes. So the question is to confirm for me,  
 20 first, if you would, please, the management  
 21 decision to allow harvesting from these reefs  
 22 during the summer of 2010 in response to the oil  
 23 spill event, that's what we talked about a couple  
 24 of times that given the BP oil spill, that  
 25 Florida Fish and Wildlife opened up the bay for  

THE REPORTING GROUP  
Mason & Lockhart

833

1 additional harvesting days and additional seasons  
 2 for a couple of bars?  
 3 **A. Yes.**  
 4 **Q.** And then the next sentence that you have is  
 5 reference to the intense harvesting effort, in  
 6 which you discussed before; but you mentioned  
 7 here further, this precluded any recovery time  
 8 for the resource. Could you please explain that.  
 9 **A. Yes, I could. The normal situation that is part**  
 10 **of establishing the seasons in Apalachicola Bay**  
 11 **are such that the winter harvesting bars are**  
 12 **closed for three months during the summertime.**  
 13 **This three months allows recovery during the**  
 14 **period when they're not harvested. The other**  
 15 **side of that story is the summer harvesting**  
 16 **season is closed for nine months, so that has**  
 17 **nine months to recover. If the area is fished**  
 18 **continuously over that period of time, that**  
 19 **recovery time is not there.**  
 20 **Q.** And that's what happened in this instance, given  
 21 the expansion of the harvesting days and bars,  
 22 that this precluded the time for these bars to  
 23 recover?  
 24 **A. It precluded the time, but it didn't preclude**  
 25 **recovery. Some reefs recovered. Some reefs were**  

THE REPORTING GROUP  
Mason & Lockhart

834

1 **never fished.**

2 **Q.** Is it -- is that the case that some oyster reefs

3 were doing well, whereas, these others were the

4 ones that were most affected?

5 **A. They were. They were doing well in late 2010.**

6 **They were not doing well in 2012.**

7 **Q.** Is that accurate; in 2012 your testimony is there

8 are no reefs that were doing well?

9 **A. That's correct. I mean, that's a broad brush;**

10 **but I will accept that.**

11 **Q.** Can we turn to the next page please, page 8. And

12 if I could direct you, please, sir, to the

13 paragraph beginning some of the decline.

14 **A. Okay.**

15 **Q.** Now, there, sir, you write in this official

16 report, some of the decline of legal-size oysters

17 can be attributed to the excessive harvesting of

18 sub-legal oysters. Since 2010 there have been

19 numerous reports of oystermen harvesting oysters

20 below the legal size limits, and observations in

21 the marketplace confirmed that the harvest of

22 small oysters was very common during the DWH oil

23 spill event and has persisted to the present.

24 Are you with me there?

25 **A. Yes.**

THE REPORTING GROUP  
Mason & Lockhart

835

1 **Q.** And, again here, there's a 3-inch size limit for

2 oysters with some tolerance; is that correct?

3 **A. That's correct.**

4 **Q.** And so when we talk about sub-legal oysters,

5 we're talking about oysters that are smaller than

6 that?

7 **A. Less than 3 inches.**

8 **Q.** Less than 3 inches. And that might include --

9 sub-legal might include juvenile oysters?

10 Would you call some of them juvenile as well?

11 **A. I use those two terms somewhat interchangeable.**

12 **Sub-legal is really referring to those that are**

13 **going to be legal in a matter of months.**

14 **Juveniles would be a wider range, I think. But I**

15 **would not say that I haven't used those terms**

16 **interchangeably in this report.**

17 **Q.** And you note here that observations in the

18 marketplace confirmed that the harvest of small

19 oysters was very common during the oil spill

20 event. That's a true statement; correct?

21 **A. Yes, that is.**

22 **Q.** And then here we're in 2012 when you have written

23 and submitted this official report in August of

24 2012. And you state that that observation --

25 those types of observations have persisted to the

THE REPORTING GROUP  
Mason & Lockhart

836

1 present. Correct?

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

3 **Q.** And so for two years -- I guess it's over --

4 April 2011 to 2012, for over two years there have

5 been continued observations that there's

6 harvesting of small oysters taking place?

7 **A. I would say that that was correct over that time**

8 **period.**

9 **Q.** And if we could go to the next sentence, please,

10 it says, excessive harvesting of sub-legal

11 oysters from 2010 through 2012, which you just

12 explained, that this reduced recruitment among

13 sub-legal size classes to legal size,

14 contributing to declining trends in estimated

15 production in 2012/2013. This situation results

16 from harvesting and culling practices of the

17 fishermen when sub-legal oysters are not culled

18 and returned to the reef to grow to marketable

19 size.

20 You just explained a moment ago to the Court

21 what recruitment meant. And here you say that

22 this excessive harvesting of the small oysters

23 that's been taking place for two years reduced

24 recruitment. Does that mean then that because

25 small oysters were taken out of the water, they

THE REPORTING GROUP  
Mason & Lockhart

837

1 were not able to grow up to become big

2 market-size oysters?

3 **A. Yes. That's -- that's -- recruitment in this**

4 **case means being -- growing into market size.**

5 **Q.** And as you also explained to the Special Master a

6 moment ago, after oysters are pulled up with the

7 hand tongs, what the fishermen are supposed to do

8 is cull off the smaller ones and put them back.

9 But what you were reporting here is that that was

10 not taking place as it should have been?

11 **A. No. There -- it -- it is a common practice; and**

12 **it was taking place during this period of time.**

13 **Q.** But that's -- and that's not the way it's

14 supposed to be?

15 **A. According to the regulation, that's not the way**

16 **it's supposed to be.**

17 **Q.** And for the health of the oyster resource and the

18 reefs?

19 **A. No. It really doesn't have a lot to do with the**

20 **health of the oyster reefs. What this is saying**

21 **is that it reduces the number of oysters that are**

22 **recruited into that size.**

23 **So if you look at the production parameter of**

24 **harvestable oysters per acre, that's going to be**

25 **reduced by taking out those smaller oysters that**

THE REPORTING GROUP  
Mason & Lockhart

838

1 **would have eventually moved into that size class**  
 2 **and raise that number.**  
 3 **Q.** And is it not correct that the reason there was a  
 4 fishery collapse is that there were not  
 5 sufficient legal-size, market-size oysters to be  
 6 harvested?  
 7 **A.** **That is not the biological case. You -- the case**  
 8 **that could be made from a fisheries perspective**  
 9 **is that if there are not enough harvestable**  
 10 **oysters remaining, then there would be a collapse**  
 11 **in the fishery. What I'm talking about for the**  
 12 **most part in this report is that there was a**  
 13 **major depletion event that occurred because of**  
 14 **poor environmental quality. And it had very**  
 15 **little to do with harvesting or taking of legal**  
 16 **or sub-legal oysters, because that was the end**  
 17 **play. The damage and stress was done and was --**  
 18 **had progressed to a very dire situation prior to**  
 19 **the harvesting of adult oysters.**  
 20 **Q.** It's your testimony, sir, then that it makes no  
 21 difference for the health of the oyster resource  
 22 if the small juvenile oysters are taken off the  
 23 reef and not returned, that that has no effect on  
 24 the health of the oyster reef and the oyster  
 25 resource?

THE REPORTING GROUP  
Mason & Lockhart

839

1 **A.** **In my opinion it does not. Natural mortality is**  
 2 **so high and so high even among that class that it**  
 3 **has little to do with the vitality and**  
 4 **functionality of an oyster population. These**  
 5 **oysters, for the most part, live for**  
 6 **approximately 18 to 24 months. If they are**  
 7 **removed when they're 15 months old or removed**  
 8 **when they're 24 months old, it really does not**  
 9 **have an impact on the functionality of the reef.**  
 10 **What does have a very great impact on the**  
 11 **functionality of the reef is the recruitment of**  
 12 **spat and small oysters. And they should be the**  
 13 **driving factor for the population, not the end of**  
 14 **the life of these oysters. It's the beginning**  
 15 **that's important.**  
 16 **Q.** How about if they're all removed, sir? All the  
 17 juvenile oysters, sub-legal oysters are removed  
 18 from the reef?  
 19 **A.** **If all of the sub-legal oysters that were going**  
 20 **to move into the adult-size classes were removed,**  
 21 **there would be a -- the number that we look at**  
 22 **for harvestable oysters per meter, per acre,**  
 23 **would, of course, drop to a very low level. The**  
 24 **value of the crop might drop if the oysters were**  
 25 **too small. So there would be some value there;**

THE REPORTING GROUP  
Mason & Lockhart

840

1 **but the -- the overall vitality would not be**  
 2 **affected.**  
 3 **We can -- we can put this in terms of**  
 4 **allocation, I guess. If you -- if you have a**  
 5 **standing stock and you know that that standing**  
 6 **stock is going to grow to some size, and you want**  
 7 **to harvest it at that size, but you take it**  
 8 **before it gets to that size, there's really no**  
 9 **difference except that you have taken that same**  
 10 **oyster earlier.**  
 11 **Q.** How about if we have a situation where, as here,  
 12 there are very few market-size oysters. Let's  
 13 say they have all been harvested, and now all the  
 14 juvenile oysters have been harvested. Does that  
 15 cause an effect on the health of the reef, or is  
 16 the reef still healthy in your opinion?  
 17 **A.** **The reef is definitely not healthy. If you can**  
 18 **harvest all of that product, it's not healthy.**  
 19 **This is a renewable situation that is dynamic.**  
 20 **And in Apalachicola Bay, you have to**  
 21 **understand that spawning is taking place almost**  
 22 **every month of the year. There's recruitment**  
 23 **almost every month of the year. There are**  
 24 **spawning peaks that we can watch and follow and**  
 25 **make -- be able to develop relationships about**

THE REPORTING GROUP  
Mason & Lockhart

841

1 **what's going to happen on that reef. And by**  
 2 **looking at those -- that population as a whole,**  
 3 **you're able to establish whether that population**  
 4 **is healthy and whether that reef is healthy.**  
 5 **Again, taking the top of that or the end of**  
 6 **those oysters is not critical. It's -- those**  
 7 **oysters are -- can I elaborate on something?**  
 8 **Q.** Well, why don't we -- we can continue on. I'm  
 9 sure your counsel will have time --  
 10 **A.** **Okay.**  
 11 **Q.** -- to have you elaborate on some of these.  
 12 **A.** **Okay.**  
 13 **Q.** Let's try to get through at least this first  
 14 section before we get to the morning break.  
 15 **A.** **Okay.**  
 16 **Q.** It is your testimony, sir, that if all the  
 17 juvenile oysters and all the market-size oysters  
 18 have been removed, then that would be an  
 19 unhealthy reef?  
 20 **A.** **It's -- that is a very hypothetical situation. I**  
 21 **mean, that occurs in massive mortalities, massive**  
 22 **depletion events, and what I would call an**  
 23 **extension event, which I have seen on reefs. I**  
 24 **have seen that many times. But those did not**  
 25 **come from harvesting. I have never had the**

THE REPORTING GROUP  
Mason & Lockhart

842

1 **occasion to see where harvesting was efficient**  
 2 **enough to remove all of those oysters.**  
 3 **But to answer your question, if they were all**  
 4 **gone, I would say, yes, that reef is in serious**  
 5 **ecological trouble.**  
 6 **Q.** Okay. Well, let's good. And I'm going to show  
 7 you some pictures before we finish this first  
 8 block of that situation where you have harvested  
 9 reefs where all the oysters have been removed.  
 10 So we'll get to that, so you can explain that to  
 11 the Court then.  
 12 The next paragraph here says -- this is the  
 13 paragraph beginning the practice. And it says,  
 14 the practice of harvesting sub-legal oysters  
 15 appears to be an extension of a "use it or lose  
 16 it" attitude that prevailed during the fall and  
 17 winter of 2010. Following the oil spill in April  
 18 2010, there was an acknowledged threat to oyster  
 19 resources in Apalachicola Bay, and management  
 20 policies were directed toward harvesting  
 21 available resources in the face of a growing risk  
 22 of loss.  
 23 That's what you wrote in this official report  
 24 that was provided to the Governor and provided to  
 25 the federal government. Correct?

THE REPORTING GROUP  
Mason & Lockhart

843

1 **A. That's correct.**  
 2 **Q.** And this is in August 2012. Right?  
 3 **A. That's correct.**  
 4 **Q.** It goes on, throughout the period when oil posed  
 5 an unpredictable threat to the oyster fishery,  
 6 less effort was directed toward enforcing size  
 7 limits, perhaps yielding to the view that it  
 8 would be more beneficial to harvest the available  
 9 resource. But, unfortunately, many oystermen  
 10 have continued the same harvesting practices that  
 11 were allowed during the oil spill threat.  
 12 Now, in that first sentence there, sir, it  
 13 says, less effort was directed toward enforcing  
 14 size limits.  
 15 Now, that's the responsibility of Florida  
 16 Fish and Wildlife Commission. Correct?  
 17 **A. That's correct.**  
 18 **Q.** The size limit being 3 inches and the rule being  
 19 that except for some tolerances, those small and  
 20 juvenile oysters are not supposed to be taken out  
 21 of the water?  
 22 **A. They're not supposed to be.**  
 23 **Q.** And here you're saying in August 2012 that  
 24 even though back when the oil was believed to  
 25 possibly be coming to the Bay -- and it didn't

THE REPORTING GROUP  
Mason & Lockhart

844

1 get there -- but still, now, in August 2012 this  
 2 same harvesting practice is taking place?  
 3 **A. That's correct.**  
 4 **Q.** Next sentence down, you refer here -- this is the  
 5 paragraph beginning the Division's 2011. And it  
 6 states, the Division's 2011 oyster resource  
 7 assessment report for Apalachicola Bay, Division  
 8 of Aquaculture 2011, stated that oyster  
 9 population estimates indicated that recruitment  
 10 would keep pace with harvesting pressure and  
 11 sustain production throughout the 2011/12 winter  
 12 harvesting season, colon, with the caveat that  
 13 increased harvesting pressure and/or the unabated  
 14 harvesting of sub-legal stocks may alter the  
 15 production/harvesting balance. In 2011, reports  
 16 of the harvest and sale of oysters below the  
 17 legal-size limit was still common practice, and  
 18 it is now clear that there are not sufficient  
 19 numbers of juvenile and market-size oysters to  
 20 support harvesting throughout the upcoming  
 21 season.  
 22 That's what you wrote here in August of 2012?  
 23 **A. Yes.**  
 24 **Q.** And this is a warning that you were providing in  
 25 2011, it states, that if this increased

THE REPORTING GROUP  
Mason & Lockhart

845

1 harvesting pressure or the unabated harvesting of  
 2 sub-legal stocks continued, there may not be  
 3 sufficient numbers of juvenile and market-size  
 4 oysters to support harvesting throughout the  
 5 upcoming season. Right?  
 6 **A. That's correct.**  
 7 **Q.** And you did -- you did a 2011 report. This was  
 8 something that you recognized even a year prior  
 9 to this August 2012 report; isn't that the case?  
 10 **A. This -- this was a -- something that is pretty**  
 11 **easy to recognize when you look at the data and**  
 12 **make this interpretation.**  
 13 **What this is stating is that we have a**  
 14 **nine-month season. If you harvest all the**  
 15 **juveniles or sub-legal ones in the first two or**  
 16 **three months of that season, yes, you're going to**  
 17 **begin to run out by that -- by the end of that**  
 18 **season.**  
 19 **Q.** And this is a concern that you raised in 2011,  
 20 not just in 2012?  
 21 **A. I have raised that concern almost every year when**  
 22 **there's some concern about the number of standing**  
 23 **stocks.**  
 24 **And, again, that becomes an allocation issue.**  
 25 **Do you want to try to take them all in the first**

THE REPORTING GROUP  
Mason & Lockhart



846

1 **couple of months of the harvest, or do you want**  
 2 **to try to make that last throughout the whole**  
 3 **season?**  
 4 **The dealers and the processors would love to**  
 5 **be able to say, okay, let's make this last the**  
 6 **whole time. The oystermen, on the other hand,**  
 7 **are saying, I need the money now. I'm going to**  
 8 **harvest now.**  
 9 **So that's -- when they speak of tragedy of**  
 10 **the commons, this is a perfect example of that.**  
 11 **Q.** Let's take a look at what you wrote in the 2011  
 12 report, if we could, please. And I have got this  
 13 behind tab No. 2 in your binder, and it has been  
 14 designated as a joint exhibit submitted by both  
 15 Florida and Georgia. And it's JX-50.  
 16 Are you at the 2011 report?  
 17 **A. Yes. I'm sorry.**  
 18 **Q.** No. I just wanted to make sure.  
 19 And if you would look, please, underneath the  
 20 introduction just to time-set ourselves here, the  
 21 last sentence of the first paragraph states, this  
 22 report summarizes oyster resource surveys  
 23 conducted by the Division of Aquaculture from  
 24 2009 through September 2011.  
 25 Do you see that?  

THE REPORTING GROUP  
Mason & Lockhart

847

1 **A. Yes.**  
 2 **Q.** So we can take generally the date of this report  
 3 to be in or around September 2011?  
 4 **A. I'm sorry. What --**  
 5 **Q.** I'm sorry. Since we don't have the date of the  
 6 particular month --  
 7 **A. Oh, yes.**  
 8 **Q.** -- at the top of it, so we should understand this  
 9 to be about a September 2011 report?  
 10 **A. Okay. Yes.**  
 11 **Q.** Let's go -- I don't want to re-cover things that  
 12 are the same as in the prior report; but there  
 13 are some things that are a little bit different  
 14 here.  
 15 If we could go to page 4. And on page 4 --  
 16 well, let's go down to the very bottom of that  
 17 page. There's the paragraph that begins the  
 18 overall. Do you see that?  
 19 **A. I see it.**  
 20 **Q.** Okay. As you will see if you look up at the top,  
 21 you have the references to intense harvesting  
 22 pressure and the like; and you report on the fact  
 23 that the population parameters are depressed.  
 24 But if we go to this particular paragraph at the  
 25 bottom, it says, the overall condition of reefs  

THE REPORTING GROUP  
Mason & Lockhart

848

1 and the abundance of juvenile, sub-legal, and  
 2 market-size oysters suggest that the overall  
 3 condition of many reefs has declined over the  
 4 past two years. Some of the decline of  
 5 legal-size oysters can be attributed to the  
 6 excessive harvesting of sub-legal oysters during  
 7 the fall and winter of 2010 when a "use it or  
 8 lose it" attitude prevailed.  
 9 Do you see that?  
 10 **A. Yes.**  
 11 **Q.** So here back in September 2011, a year before  
 12 what we were just reading in 2012, you had the  
 13 same concern that you were expressing in this  
 14 official state report. Correct?  
 15 **A. That's correct.**  
 16 **Q.** And if you go to the very end of that page --  
 17 I'll skip the middle sentence there -- there is  
 18 the sentence that begins however. Do you see  
 19 that?  
 20 **A. Okay.**  
 21 **Q.** And then this continues onto page 5 of the  
 22 report. It states, however, it remains uncertain  
 23 whether oyster populations on Cat Point and East  
 24 Hole Bars can sustain concentrated harvesting  
 25 effort for the remainder of the winter harvesting  

THE REPORTING GROUP  
Mason & Lockhart

849

1 season.  
 2 And that's a warning that you put in this  
 3 official 2011 -- September 2011 oyster resource  
 4 assessment report as part of your responsibility  
 5 at DACS. Correct?  
 6 **A. Yes. And it's -- it means the same thing. It --**  
 7 **if harvesting is extensive in the beginning, the**  
 8 **resources may not last throughout the season.**  
 9 **Q.** And you have a similar statement, if we stay on  
 10 the same page and go down one, two, three, four,  
 11 five paragraphs to the one that begins stable or  
 12 declining.  
 13 **A. I see it.**  
 14 **Q.** And there it states, stable or declining  
 15 population estimates over the past two years  
 16 generally indicated that oyster populations are  
 17 stressed -- which you stated before.  
 18 During 2010 and 2011 oyster population  
 19 parameters reflected relatively stable production  
 20 estimates, which, when compared to harvesting  
 21 pressure, number of trips, suggests that resource  
 22 availability may not be capable of sustaining  
 23 current harvesting levels, bags per trip. The  
 24 number of bags per trip has declined each year  
 25 for the past five years.  

THE REPORTING GROUP  
Mason & Lockhart

850

1 Now, could you please explain to the Court  
 2 what you're referring to here when you state  
 3 resource availability may not be capable of  
 4 sustaining current harvesting levels, bags per  
 5 trip?  
 6 **A. In this particular report, this is creating a  
 7 predictive index for what the fishery is going to  
 8 be like in the 2011-2012 winter harvesting  
 9 season.**  
 10 **These data are collected prior to the opening  
 11 of that season. So we have a series of  
 12 production parameters that I'll call them. And  
 13 by analyzing and interpreting that data and those  
 14 production parameters, I'm able to tell the  
 15 oyster industry what I feel is going to be the  
 16 situation for their fishery.**  
 17 **When I can tell by changing parameters -- and  
 18 it might be the number of recruits. It might be  
 19 the density. It might be the predicted bags per  
 20 acre. It might be the percentage of legals and  
 21 sub-legals. It might be the percentage of  
 22 oysters that we expect to recruit. By looking at  
 23 those numbers, if I see that some of those  
 24 numbers are -- have changed to such a degree that  
 25 I think that within the next nine months this is**  

THE REPORTING GROUP  
Mason & Lockhart

851

1 **going to affect what they harvest, then that's  
 2 what I say.**  
 3 **And this is -- in these reports, that's  
 4 pretty much it. It's my interpretation of that  
 5 data as to what you can expect to harvest. When  
 6 I say that the expectation for harvest may not --  
 7 the availability may not be high enough to last  
 8 through nine months, that is always going to  
 9 depend upon harvesting levels.**  
 10 **And, again, I go back to the allocation  
 11 thing. You have nine months to harvest these  
 12 oysters. Do you want to try to harvest them all  
 13 in the first week, or do we want it to last?**  
 14 **So that -- this is where I'm constantly  
 15 trying to influence the -- the harvesting  
 16 community that this is not an unlimited resource  
 17 out there. Based on what I'm looking at, you may  
 18 have trouble meeting your orders in April or May.  
 19 Think about it.**  
 20 **That's what I'm -- I'm telling the industry.**  
 21 **Q.** And you're saying here that at the current  
 22 harvesting levels that were taking place that  
 23 the industry was taking the oysters out of the  
 24 bay, you're warning them that there may not be  
 25 sufficient resource if they keep doing that, you  

THE REPORTING GROUP  
Mason & Lockhart

852

1 know, down the road?  
 2 **A. I'm warning them that's because there are some  
 3 indices in our data that suggest that we're not  
 4 recruiting fast enough or there has been a -- a  
 5 break or an impairment or damage to some portion  
 6 of this cycle.**  
 7 **Q.** And that's what you're putting in this official  
 8 DACS report, which is part of the information  
 9 that the Fish and Wildlife Commission uses in  
 10 evaluating what limits, if any, it should apply  
 11 to harvesting in the bay?  
 12 **A. We had this discussion yesterday. To my  
 13 knowledge -- and I would be the most  
 14 knowledgeable person -- I don't know that FWC has  
 15 used this data to set any kind of limits other  
 16 than extending the harvesting season to five to  
 17 seven days after November 15 or 16 of each year.**  
 18 **Q.** So I just want to make sure that we have got your  
 19 testimony clear, sir, that you, as the most  
 20 knowledgeable and resource manager for  
 21 Apalachicola Bay, take all the time and effort to  
 22 put these reports together and to lay out where  
 23 you have concerns about what may happen in the  
 24 fishery, and none of this goes to FWC?  
 25 **A. You have to -- the report would go to FWC. The**  

THE REPORTING GROUP  
Mason & Lockhart

853

1 **report is a public document. It's typically  
 2 published in the local paper. I typically have a  
 3 meet -- an organizational or public workshop type  
 4 of thing in Franklin County, maybe in a  
 5 presentation in front of the Board of County  
 6 Commissioners, that type of thing, to give them  
 7 the information that we have.**  
 8 **So I always send this to FWC. But the only  
 9 thing in their regulations that relies on this is  
 10 that particular extension of the number of days  
 11 per week in the winter harvesting area.**  
 12 **Q.** Well, you're not saying, sir, that FWC is  
 13 precluded from, on its own having read your  
 14 report and these warnings -- you're not saying  
 15 that FWC is precluded from putting in some limits  
 16 if it decides that's the best way --  
 17 **A. If it wanted to go through their rule-making  
 18 process, yes, they could -- they could use this  
 19 information.**  
 20 **Q.** But it's not even the rule-making process though,  
 21 right, because right after the August 2012 report  
 22 when everybody realized that the resource had  
 23 been so depleted, FWC imposed some limits.  
 24 Right?  
 25 **A. I -- they -- I don't know the answer to that. I**  

THE REPORTING GROUP  
Mason & Lockhart

854

1 **don't believe that there was -- I don't know the**  
 2 **answer to that; so I probably should not say**  
 3 **anything.**  
 4 **But I -- I think that what they did was**  
 5 **through Executive Order extended the harvesting**  
 6 **days. I don't know that they did anything with**  
 7 **bag limits.**  
 8 **Q.** So your recollection is that after receiving the  
 9 August 2012 report where you warned that the  
 10 standing stocks were low and the resource was  
 11 depleted, FWC expanded the amount of days for  
 12 harvesting?  
 13 **A.** **No, that's not what I said.**  
 14 **Q.** Okay.  
 15 **A.** **Those expanded days were previous to this report.**  
 16 **After the 2012 report came out and we had**  
 17 **discussions and we met with the community and**  
 18 **things like that, FWC did not expand the days**  
 19 **after that to the best of my knowledge.**  
 20 **Q.** And you're not saying, sir, that FWC, which is  
 21 the resource manager that manages the fishery --  
 22 you're not saying that they're legislatively  
 23 precluded from taking actions to protect the  
 24 fishery and the resource; are you?  
 25 **A.** **No, they're not legislatively precluded from**  

THE REPORTING GROUP  
Mason & Lockhart

855

1 **that. And I wouldn't -- I would -- when I'm**  
 2 **speaking of resource management and fisheries**  
 3 **management, I consider myself to be a resource**  
 4 **management -- manager, not a fisheries manager.**  
 5 **So when you -- when you combine those two terms,**  
 6 **that's going to make my testimony confusing**  
 7 **because I'm not on the fishery side; I'm on the**  
 8 **resource side.**  
 9 **Q.** Right.  
 10 **A.** **I'm in a different agency.**  
 11 **Q.** Correct. And you for 30 years have been the  
 12 resource manager writing these reports. And,  
 13 frankly, I wasn't aware these are totally public.  
 14 So everybody in the community, FWC and everybody  
 15 can see if you're raising a warning about the  
 16 decreasing population; is that correct?  
 17 **A.** **Yes. Everybody can see that.**  
 18 **Q.** And FWC then has that information. And they're  
 19 the fishery manager, and they're the ones then  
 20 who would get to decide if they're going to do  
 21 anything with this information?  
 22 **A.** **It would be their decision.**  
 23 **Q.** Let's go to the next page. And I'm only going to  
 24 take a short amount of time on it because it's  
 25 very similar to what we looked at before, page 6.  

THE REPORTING GROUP  
Mason & Lockhart

856

1 At the very top of that page, there is the  
 2 paragraph -- and I guess I'll read it, although  
 3 I'll read it slowly enough for madam court  
 4 reporter. It states, there were numerous reports  
 5 of oystermen harvesting oysters below the  
 6 legal-size limit. And observations in the  
 7 marketplace confirmed that the harvest of small  
 8 oysters was very common during the DWH oil spill  
 9 event. This situation resulted from harvesting  
 10 and culling practices attributed to fishermen  
 11 responding to the uncertainties that the bay  
 12 would be closed and the fishery lost. Throughout  
 13 the period when oil posed an unpredictable threat  
 14 to the oyster fishery, less effort was directed  
 15 toward enforcing size limits, perhaps yielding to  
 16 the view that it would be more beneficial to  
 17 harvest the available resource, a "use it or lose  
 18 it" approach.  
 19 And that's what you put in this official  
 20 report back here in September 2011. Right?  
 21 **A.** **That's correct.**  
 22 **Q.** And, again, here you're talking and providing  
 23 this information publicly and to FWC saying size  
 24 limits are not being enforced?  
 25 **A.** **I say that, and I don't know what the reaction**  

THE REPORTING GROUP  
Mason & Lockhart

857

1 **from FWC would have been to see that because I'm**  
 2 **sure they're saying that we are enforcing it the**  
 3 **way we're supposed to.**  
 4 **Q.** I'm sure they are. And we'll get to that  
 5 testimony, because now you have said this two  
 6 years in a row. But FWC, you would expect, would  
 7 say, we are doing a good job?  
 8 **A.** **That's correct.**  
 9 **Q.** But that's not what your view was and what you  
 10 wrote in September 2011 or in August 2012?  
 11 **A.** **This -- let me qualify that a little bit now.**  
 12 **This is -- if you look at this thing, there were**  
 13 **numerous reports.**  
 14 **I get this information from the dealers, the**  
 15 **processors, the oystermen, the community members.**  
 16 **I'm the person they call and talk about this,**  
 17 **these situations. So what I'm doing here in**  
 18 **trying to report to the industry is to bring in**  
 19 **all of the information that I'm given for this.**  
 20 **I do agree that there was a "use it or lose**  
 21 **it" approach. And in discussions as a resource**  
 22 **manager and as a -- and dealing with fisheries**  
 23 **managers, under the circumstances, it was -- it**  
 24 **was not an unprudent decision to allow oystermen**  
 25 **to remove those stocks because it did look like**  

THE REPORTING GROUP  
Mason & Lockhart

858

1 **we were going to lose those harvesting areas.**  
 2 **There would be no point in trying to salvage**  
 3 **those oysters. They wouldn't be there the next**  
 4 **year. So there is no point in doing it. It's**  
 5 **almost like leaving fruit on the vine. We would**  
 6 **go ahead and harvest it because we are at a real**  
 7 **risk of losing the economic benefit that we have**  
 8 **there.**  
 9 **Q.** But at this point, sir, we're in September 2011.  
 10 The oil spill was in April 2010. Right?  
 11 **A. Yes.**  
 12 **Q.** And then you had the same thing --  
 13 **A. Well, I'm talking -- I'm sorry. I'm talking**  
 14 **about while during the oil spill, when there was**  
 15 **a real risk there.**  
 16 **Q.** Right.  
 17 **A. That's what I'm talking about. I'm not talking**  
 18 **about the years following that.**  
 19 **What I have said is that in the years**  
 20 **following that, the same attitude existed and**  
 21 **continued, that that's what I got from various**  
 22 **reports from people.**  
 23 **Q.** But this paragraph, there were numerous reports  
 24 and the "use it or lose it", that's an accurate  
 25 representation of your opinion on this matter.

THE REPORTING GROUP  
Mason & Lockhart

859

1 Correct?  
 2 **A. I -- I would say yes.**  
 3 **Q.** All right. I want to move back or, rather,  
 4 forward in time to when you were putting together  
 5 the August 2012 report that the Governor sent to  
 6 the federal government. And just before that --  
 7 and I believe you and I talked about this before  
 8 in your deposition -- there was a series of notes  
 9 that you put together to set out some information  
 10 to potentially include in the report.  
 11 And I would ask if we can take a look at  
 12 tab 3 of your binder. And behind tab 3 we have  
 13 got JX-150. And, again, being a JX, that means  
 14 this is a document that both Florida and Georgia  
 15 have designated to be entered into evidence.  
 16 If you would, please take a look at JX-150.  
 17 **A. Oh, I have it. I'm sorry.**  
 18 **Q.** And this is the document JX-150. At the top it  
 19 says, Input For Mark's Report, July 2012. Do you  
 20 see that?  
 21 **A. Yes.**  
 22 MR. ECHOLS: And, sir, are you there,  
 23 too, on tab 3, sir?  
 24 SPECIAL MASTER LANCASTER: Yes.  
 25 MR. ECHOLS: Very good.

THE REPORTING GROUP  
Mason & Lockhart

860

1 BY MR. ECHOLS:  
 2 **Q.** Let's go into the Contributing Factors section in  
 3 the middle of the page there, please. And let me  
 4 read here. It says, in April 2010 the Deepwater  
 5 Horizon event caused oyster fishermen in the  
 6 community to change their individual economic  
 7 strategies and thus caused the Franklin County  
 8 Seafood Workers Association, FCSWA, to request  
 9 the Department open Apalachicola Bay in its  
 10 entirety. In order to accommodate their request,  
 11 the Department opened the summer oyster bars  
 12 early, 5/21/10, and subsequently opened the  
 13 winter oyster bars early, 6/18/10.  
 14 Correct?  
 15 And that's consistent with what you testified  
 16 about the steps that FWC took in response to, I  
 17 guess, not only the threat, but the request from  
 18 the Seafood Workers Association to expand the  
 19 availability of harvesting. Right?  
 20 **A. Yes.**  
 21 **Q.** It goes on to say, even after the entire bay was  
 22 open for harvesting, there were numerous reports  
 23 of oystermen harvesting oysters below the legal  
 24 size limit, and observations in the marketplace  
 25 confirmed that the harvest of small oysters was

THE REPORTING GROUP  
Mason & Lockhart

861

1 very common during the DWH oil spill event. This  
 2 situation resulted from harvesting and culling  
 3 practices attributed to fishermen responding to  
 4 the uncertainties that the bay would inevitably  
 5 be closed and the fishery lost.  
 6 And you go on to say there's less effort  
 7 directed at enforcing size limits, and at the  
 8 bottom the "use it or lose it" approach.  
 9 And these are your notes that you were taking  
 10 for yourself at this time in July 2012 in  
 11 preparation for putting together the August 2012  
 12 resource assessment report; is that correct?  
 13 **A. I -- I would probably agree with that. I don't**  
 14 **recall this particular part of my process in**  
 15 **doing it. But it's here, and so I'll accept**  
 16 **that.**  
 17 **Q.** And I don't know if it assists you to recall at  
 18 all, but if you look down at the bottom  
 19 right-hand corner, the very, very bottom  
 20 right-hand corner, do you see that there is a  
 21 number -- what we call a Bates number or a  
 22 document number?  
 23 **A. Yes.**  
 24 **Q.** And it's got the FL-ACF-Berrigan. Do you see  
 25 that?

THE REPORTING GROUP  
Mason & Lockhart

1 **A. Yes.**  
 2 **Q.** Does that help you recall that these are among  
 3 the documents that you were asked to provide and  
 4 gave to the State of Florida's attorneys that  
 5 then were produced to us in the course of the  
 6 litigation?  
 7 **A. I'm sorry. I didn't follow that completely.**  
 8 **Q.** I'll make it simpler. When we asked for -- when  
 9 Georgia and when we asked to have your  
 10 deposition, we also asked you to provide  
 11 documents relating to the topics of this lawsuit.  
 12 Do you recall that?  
 13 **A. Yes.**  
 14 **Q.** And some of the lawyers -- I don't recall which  
 15 one -- from the State of Florida came to you and  
 16 asked you to give them the documents you had  
 17 relating to this lawsuit?  
 18 **A. Okay. Yes. And this was one of those.**  
 19 **Q.** And this is one of those, as you can see --  
 20 **A. Okay.**  
 21 **Q.** -- from the bottom right-hand corner where it has  
 22 your name. That's the way the documents from you  
 23 were numbered.  
 24 **A. Okay. I'm not arguing that. I'm just saying I**  
 25 **don't recall how this entered into the process.**

THE REPORTING GROUP  
 Mason & Lockhart

1 **I mean, typically this is not the way I work.**  
 2 **I usually write the report and then do amending**  
 3 **drafts and that type of thing. I typically**  
 4 **wouldn't go to this kind of trouble and then**  
 5 **write the report.**  
 6 **Q.** Okay. But --  
 7 **A. I'm just confused about how this fits into that**  
 8 **process.**  
 9 **Q.** Sure. But you don't have any dispute, sir, that  
 10 you wrote this?  
 11 **A. No. No. I'm fine with that.**  
 12 **Q.** This is your document, and these are your words.  
 13 Right?  
 14 **A. Yes. My only concern there was that you said**  
 15 **that I made these notes prior to writing the**  
 16 **report. These may have come after I wrote the**  
 17 **report.**  
 18 **But, yes, I'm not -- I'm not arguing that**  
 19 **they're not my notes.**  
 20 **Q.** Would you call this process here that you're  
 21 writing about, the fishermen placing everything  
 22 in the tongs into the bag, would you call that  
 23 tonging up trash?  
 24 **A. Yes. That's the terminology.**  
 25 **Q.** I recall that because in your direct testimony

THE REPORTING GROUP  
 Mason & Lockhart

1 **Q.** Oh, sorry.  
 2 **A. I mean, I understand how it entered into the**  
 3 **process that we're in now. I don't know how it**  
 4 **entered into the process of writing the report.**  
 5 **Q.** Very good. Let's please go down to the paragraph  
 6 that starts further compounding. And I would  
 7 like to -- we have talked about the first part.  
 8 Let's go to the last sentence, please, where it  
 9 starts exacerbating. Are you with me, sir?  
 10 **A. Yes.**  
 11 **Q.** And it's got, exacerbating this harvesting  
 12 pressure is a new cultural characteristic of the  
 13 harvester, wherein fishermen are not only  
 14 ignoring the size restrictions, but placing  
 15 everything in the tongs into the bag, resulting  
 16 in a loss of shell, cultch, and shellstock.  
 17 Do you see that?  
 18 **A. Yes.**  
 19 **Q.** And this is one of the notes that you put down  
 20 for yourself at the time as you're preparing to  
 21 put together the August 2012 official DACS  
 22 report. Right?  
 23 **A. Again, I -- I confirm that this is here; but I**  
 24 **can't confirm that I put this down before or**  
 25 **after the report or whatever.**

THE REPORTING GROUP  
 Mason & Lockhart

1 that you submitted in the case, there was that  
 2 reference. And if we could look -- I don't know  
 3 if you have your direct testimony in front of  
 4 you, but we'll pull it up on the screen. It's  
 5 paragraph 59 in your direct testimony.  
 6 And we -- I believe that --  
 7 MR. ECHOLS: I believe, your Honor, it's  
 8 on page 17 of the written direct testimony,  
 9 sir.  
 10 BY MR. ECHOLS:  
 11 **Q.** And there, sir -- are you there, Mr. Berrigan?  
 12 **A. Yes.**  
 13 **Q.** And there, sir, in paragraph 59 you said in your  
 14 written direct testimony, similarly, the collapse  
 15 of the oyster fishery in Apalachicola Bay in 2012  
 16 was not as a result of harvesters taking uncultured  
 17 oysters and dead shell off the reefs when  
 18 harvesting. This practice is commonly called  
 19 tonging trash. Observations suggest that this  
 20 practice is uncommon, and only practiced by a  
 21 small group of unskilled oystermen. This type of  
 22 harvesting results in a vastly degraded product  
 23 and is meant to deceive the processor and the  
 24 consumer. The concern with this harvesting  
 25 practice is that the oystermen are hauling off

THE REPORTING GROUP  
 Mason & Lockhart

866

1 the bay.  
 2 Correct?  
 3 **A. Yes.**  
 4 **Q.** And that's what you have in your sworn written  
 5 testimony here?  
 6 **A. Yes.**  
 7 **Q.** Let's go back to JX-150. And in JX-150, which  
 8 you have acknowledged --  
 9 MR. ECHOLS: And this is back, again,  
 10 judge, in tab 3 where we were.  
 11 BY MR. ECHOLS:  
 12 **Q.** The portion that was highlighted here saying that  
 13 this is a new cultural characteristic of the  
 14 harvester, wherein fishermen are not only  
 15 ignoring the size restrictions, but placing  
 16 everything in the tongs into the bag, resulting  
 17 in a loss of shell, cultch, and shellstock.  
 18 And that, what you're writing here in 2012 at  
 19 the time of these events, is where you're stating  
 20 that this tonging trash is taking place. Right?  
 21 **A. I see that in both, yes, if that's the question.**  
 22 **Q.** Yes.  
 23 All right. Let's see if we can get through a  
 24 couple things quickly and then finish this line  
 25 of discussion.

THE REPORTING GROUP  
Mason & Lockhart

867

1 If we could turn, please -- we'll move  
 2 forward. We had the August 2012 report. Let's  
 3 go to September, the next month. And in tab 4 of  
 4 your binder, sir, you will find a Summary of  
 5 Oyster Resource Assessment for Apalachicola Bay  
 6 dated September 2012.  
 7 MR. ECHOLS: And for the record, this  
 8 document is JX-74, another joint exhibit.  
 9 BY MR. ECHOLS:  
 10 **Q.** Are you there, sir?  
 11 **A. Yes. I'm sorry. Yes.**  
 12 **Q.** No problem. And if we could look on the -- on  
 13 the very first page --  
 14 MR. ECHOLS: And here we are in tab  
 15 No. 4.  
 16 BY MR. ECHOLS:  
 17 **Q.** And on the very first page on tab No. 4, if we  
 18 could look to the second to the last bullet,  
 19 please. That starts the continued. And here you  
 20 write in this summary in September 2012, the  
 21 continued depletion of the oyster populations  
 22 could lead to longer term debilitation of oyster  
 23 resources and oyster reef habitats. The  
 24 long-term impairment of reef structure, reef  
 25 elevations, shell matrix, and shell balance is of

THE REPORTING GROUP  
Mason & Lockhart

868

1 serious concern because substrate on many reefs  
 2 is degraded to a point where spat settlement and  
 3 recruitment have been disrupted.  
 4 Do you see that, sir?  
 5 **A. Yes.**  
 6 **Q.** And this is what you are putting in this report  
 7 in September of 2012?  
 8 **A. Yes.**  
 9 **Q.** And here, as you were explaining to the Court how  
 10 there is the reef structure and the reef  
 11 elevation, you're noting that there is a  
 12 long-term impairment of it because the substrate  
 13 is degraded and that this may affect the  
 14 reproduction, spat settlement, and recruitment.  
 15 Right?  
 16 **A. That's correct.**  
 17 **Q.** If we could go to tab 5. We're still in  
 18 September 2012.  
 19 MR. ECHOLS: And for the record, tab 5  
 20 is JX-75. That's another joint exhibit.  
 21 BY MR. ECHOLS:  
 22 **Q.** And this document is similar to the -- somewhat  
 23 similar to the format of the August report. This  
 24 is an Oyster Resources in Apalachicola Bay  
 25 September 2012 report. Do you see that?

THE REPORTING GROUP  
Mason & Lockhart

869

1 **A. Yes.**  
 2 **Q.** And if you look at the bottom right-hand corner,  
 3 you can identify, again, this came out of your  
 4 files. It has the numbering system that shows it  
 5 came out of your files. Do you see that?  
 6 **A. Yes.**  
 7 **Q.** I don't want to go over the things -- the  
 8 document is in the record. There's a lot that  
 9 repeats what we have seen in these other  
 10 documents with respect to fishery practices and  
 11 harvesting pressures. But if we could then turn  
 12 back to page 3, are you with me, sir?  
 13 **A. Yes.**  
 14 **Q.** Okay. And then there is the section at the  
 15 bottom of page 3 that says Harvesting. We have  
 16 got the first paragraph there, sir. It says,  
 17 oyster abundance and potential production are  
 18 markedly depressed, possibly reflecting the  
 19 effects of intensive harvesting and poor  
 20 harvesting practices combined with less than  
 21 optimal environmental conditions in 2010 and  
 22 2011.  
 23 And then, as we have seen before,  
 24 overharvesting is most damaging when  
 25 environmental conditions are less than optimal,

THE REPORTING GROUP  
Mason & Lockhart

870

1 recruitment is low, and natural mortality is  
 2 high.  
 3 And both of those are true statements.  
 4 Correct?  
 5 **A. That's correct.**  
 6 **Q.** And the last -- let's go to the next paragraph.  
 7 It states, harvesting practices may have had a  
 8 detrimental impact on standing stocks and oyster  
 9 resources on the primary producing reefs, where  
 10 standing stocks of juvenile, sub-legal, and  
 11 market-size oysters, as well as the overall  
 12 condition of the substrate have declined  
 13 substantially over the past two years as a result  
 14 of continuous, concentrated, and intensive  
 15 harvesting by the majority of the fishing fleet,  
 16 and the excessive harvesting of sub-legal  
 17 oysters.  
 18 And that's what you wrote in September of  
 19 2012?  
 20 **A. Okay.**  
 21 **Q.** Is that accurate, sir?  
 22 **A. Yes.**  
 23 **Q.** And this was a true statement; you were being  
 24 accurate in this official report as part of your  
 25 duties as the resource manager --  
 THE REPORTING GROUP  
 Mason & Lockhart

871

1 **A. Yes.**  
 2 **Q.** -- of the oyster population?  
 3 **A. Yes.**  
 4 **Q.** And then the last sentence -- or, rather, the  
 5 paragraph says, some of the decline of legal-size  
 6 oysters can be attributed to the excessive  
 7 harvesting of sub-legal oysters. Since 2010  
 8 there have been numerous reports of oystermen  
 9 harvesting oysters below the legal size limits,  
 10 and observations in the marketplace confirmed  
 11 that the harvest of small oysters was very common  
 12 during the DWH oil spill event and has persisted  
 13 to the present.  
 14 And you wrote that as well, sir?  
 15 **A. Yes.**  
 16 **Q.** So at this point in time we have at least five  
 17 different occasions that you have raised this  
 18 concern from September 2011 to your July notes --  
 19 just internal, I take it -- the August report,  
 20 the September summary report we just looked at,  
 21 and then this September report. Is that  
 22 accurate?  
 23 **A. Yes. It's a continuous concern.**  
 24 **Q.** All right. Now, sir, you mention in your --  
 25 MR. ECHOLS: We can take that down.  
 THE REPORTING GROUP  
 Mason & Lockhart

872

1 BY MR. ECHOLS:  
 2 **Q.** You mention in your written direct that in the  
 3 fall of 2012, you presented at a meeting of the  
 4 Franklin County Board of Commissioners. Do you  
 5 recall that?  
 6 **A. Yes.**  
 7 **Q.** And this was a public meeting where members of  
 8 the community were invited to come, listen, ask  
 9 questions, participate. Correct?  
 10 **A. Yes.**  
 11 **Q.** And you discussed with them your findings and the  
 12 Department's findings about the health of the  
 13 oyster resource at that time. Do you recall  
 14 that?  
 15 **A. That's correct.**  
 16 **Q.** And --  
 17 **A. I do recall it.**  
 18 **Q.** I'm sorry?  
 19 **A. I do recall it.**  
 20 **Q.** And, in fact, this is something you mentioned in  
 21 your written direct; and it's an exhibit that  
 22 Florida has put on their exhibit list. It's  
 23 Exhibit 608. And it's not a document because  
 24 it's a video.  
 25 This meeting was actually videoed. Right?  
 THE REPORTING GROUP  
 Mason & Lockhart

873

1 **A. I only understand that it has. I have not seen**  
 2 **the video.**  
 3 **Q.** Okay. But you -- you have -- I can -- you cite  
 4 in your written direct that you were at the  
 5 meeting. And I think actually -- hold on a  
 6 second.  
 7 **A. I cite that I was at the meeting, and it was**  
 8 **video recorded.**  
 9 **Q.** Okay. In paragraph 49 of your written direct you  
 10 have the statement, I viewed a true and accurate  
 11 copy -- I think we're missing an of -- the  
 12 Commission meeting at which I presented Exhibit  
 13 608. And it is an accurate representation of  
 14 what occurred during this meeting.  
 15 **A. I have read transcripts, not -- I have not seen**  
 16 **the video.**  
 17 **Q.** Oh, so this was a misstatement; you haven't  
 18 viewed it?  
 19 **A. Okay.**  
 20 **Q.** Well --  
 21 **A. I mean, does it say that I -- okay. All right.**  
 22 **I -- let me make this clear. I have not seen the**  
 23 **video. I have reviewed the transcript.**  
 24 **Q.** Okay. It's an inaccurate statement?  
 25 **A. Okay.**  
 THE REPORTING GROUP  
 Mason & Lockhart

1 Q. Is that correct?

2 **A. Repeat the statement.**

3 Q. It is inaccurate in your written direct testimony

4 to say that you have viewed a copy of this

5 meeting -- a video of the meeting?

6 **A. Does it say I reviewed a copy of the video?**

7 **Which number is it, sir?**

8 Q. Paragraph 49, please.

9 **A. Okay. I was on it.**

10 Q. I don't want to take too much time. Just let the

11 Court know if you view this as accurate or not?

12 **A. Well, I mean, when I think true and accurate**

13 **copy, I'm thinking transcript. I'm sorry.**

14 **That's -- you know.**

15 Q. Okay. Very good.

16 Well, I want to ask you about something that

17 you presented to the Franklin County Board of

18 Commissioners and to the entire community, the

19 oystermen and such that were at this meeting.

20 MR. ECHOLS: If we could go to slide 1,

21 please.

22 BY MR. ECHOLS:

23 Q. And if you wouldn't mind here, we had to pull

24 this off of the YouTube, you know, that's on the

25 internet there. Can we play what you have here.

THE REPORTING GROUP  
Mason & Lockhart

1 fishermen?

2 **A. I use the term we quite a lot in these types of**

3 **meetings. It's trying to be collective in my**

4 **view that I'm part of them, and they're part of**

5 **me. I mean, yes, it's a -- a collaborative type**

6 **of we.**

7 Q. And collaborative in the sense that everybody

8 should be working together in efforts to protect

9 the oyster resource. Correct?

10 **A. That's correct.**

11 Q. You go on here to say, I mean in the past with

12 Apalachicola under normal or optimal conditions,

13 these oyster populations have been so resilient

14 that you've been able to fish them hard -- I

15 guess fish them hard is relatively

16 self-explanatory.

17 You go on to say, you've been able to take

18 the adults. You've been able to take the smaller

19 oysters, and the population has come back. We've

20 seen it come back time and time again.

21 Now, does this go to the point that you, I

22 believe, testified to yesterday that the harvest

23 of the sub-legal oysters, the smaller oysters, is

24 a relatively common practice?

25 **A. Yes. It's a relatively common practice.**

THE REPORTING GROUP  
Mason & Lockhart

1 (Whereupon the video was played.)

2 MR. ECHOLS: And here, if I might

3 approach, your Honor, I have got a copy of

4 this slide from Florida Exhibit 608.

5 BY MR. ECHOLS:

6 Q. And so now, sir, as you're presenting to the

7 Franklin County Board of Commissioners and the

8 Apalachicola oyster industry and community, you

9 intended your statements to be true and accurate;

10 did you not?

11 **A. That's correct.**

12 Q. And what you told them was, as you have explained

13 some today and in your official reports, that,

14 quote, we have lost a lot of reef structure on

15 our most important reefs. And you go on to say

16 that this is a very serious issue. Correct?

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

18 Q. And we're going to talk more about restoration

19 later and things that the State could have,

20 but did not do. But you note that we have got

21 to figure out methods of restoring those.

22 Right?

23 **A. Surely. That's my job.**

24 Q. Right. And when you say we, are you referring

25 there to FDACS, to FWC, to the community, to the

THE REPORTING GROUP  
Mason & Lockhart

1 Q. You go on to say -- and you're providing this

2 information to the Franklin County Board of

3 Commissioners and the community -- in this

4 case -- and that's referring to here in

5 September 6, 2012. Correct?

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

7 Q. So we're talking about the summer of 2012.

8 In this case we probably bent it too far.

9 That's what you told them?

10 **A. That's correct.**

11 Q. You said, we bent until we broke. Correct?

12 **A. That's correct.**

13 Q. And you went on to say, now, so things are going

14 to have to change as far as management is

15 concerned to allow this to come back.

16 And when you're referring to management

17 there, you're referring to fishery management.

18 Correct?

19 **A. Management of the oyster fishery primarily.**

20 Q. And this is September 6, 2012, you know, which --

21 and we don't have to look back to it now; but you

22 can -- is the same date of the Governor's letter

23 to the U.S. Department of Commerce requesting a

24 fishery disaster declaration?

25 **A. I'll take your word for it. I -- I never made**

THE REPORTING GROUP  
Mason & Lockhart



878

1 **that comparison before.**

2 MR. ECHOLS: I'm going to move on to a

3 new subject, your Honor. I don't know if

4 it's a good time to do a break.

5 SPECIAL MASTER LANCASTER: Please.

6 **A. Please take a break and please move on to another**

7 **subject.**

8 (Time Noted: 10:21 a.m.)

9 (Recess Called)

10 (Time Noted: 10:37 a.m.)

11 SPECIAL MASTER LANCASTER: Please.

12 BY MR. ECHOLS:

13 **Q.** Mr. Berrigan, I'm going to totally change gears

14 here now, if I could, and go back to asking your

15 help to explain certain things about the oyster

16 reefs and the sampling process just so that the

17 Court and we all have the same thing in our heads

18 as we're reading these documents. Okay?

19 **A. Okay.**

20 **Q.** One of the things that you talk about in your

21 written direct is that you can tell by looking at

22 the reefs that -- well, you say that the surface

23 of a reef has a different appearance if living

24 oysters are removed from it compared to a normal,

25 unharvested reef or a reef suffering significant

THE REPORTING GROUP  
Mason & Lockhart

879

1 mortality. Right?

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

3 **Q.** And most of the reefs in Apalachicola Bay are

4 subtidal; is that right?

5 **A. Yes.**

6 **Q.** So that's under the water.

7 And as part of your resource assessment, you

8 or some of the folks working for you, Mr. John

9 Gunter, Joe Shields, actually go under the water

10 and look at the reefs; is that right?

11 **A. That's correct.**

12 **Q.** So I just want to make sure, because when I think

13 of reef, I think of coral reefs and such. And

14 this is very, very different; is that right -- or

15 somewhat different?

16 **A. Well, they're living biological features, both**

17 **coral reefs and oyster reefs.**

18 **Q.** All right. I just want to make sure that when

19 we're thinking about it, we know what it looks

20 like. And I have some demonstratives.

21 And I'll tell you up front that this is

22 not Apalachicola. I wasn't able to find those.

23 But our expert, Dr. Lipcius, who helped restore

24 the Chesapeake Bay oyster population, he gave me

25 some pictures to assist the Court as far as

THE REPORTING GROUP  
Mason & Lockhart

880

1 understanding what these things looks like.

2 Okay?

3 **A. Okay.**

4 MR. ECHOLS: If we could put up slide 2,

5 please.

6 BY MR. ECHOLS:

7 **Q.** So what you have here, sir, are three examples

8 that Dr. Lipcius gave me of different conditions

9 of reef substrate. Do these, as a general

10 matter, look kind of familiar to you as far as a

11 subtidal oyster reef?

12 **A. I would certainly recognize it.**

13 **Q.** You know what; I think you may have to move your

14 microphone closer.

15 **A. Yes. I would recognize them as oyster reefs.**

16 **Q.** Sure.

17 **A. The bottom one I wouldn't be 100 percent sure.**

18 **Q.** Sure. But assuming these are all oyster reefs;

19 but the top left-hand corner one, A, now, in this

20 particular picture, you can see -- well,

21 actually, sir, why don't you describe it to the

22 Court. How you -- how would you describe this to

23 the Court?

24 **A. This is a view of what I would consider to be a**

25 **functional oyster reef. You see adult oysters in**

THE REPORTING GROUP  
Mason & Lockhart

881

1 **clusters. You will see smaller oysters. We**

2 **don't have the resolution to see spat or real**

3 **juveniles on there, but this would be a typical**

4 **reef that probably has not been harvested since**

5 **these oysters are, in my opinion, still clustered**

6 **together. This would be very representative of a**

7 **restored reef that hadn't yet been subject to**

8 **harvesting.**

9 **Q.** Okay.

10 MS. WINE: Excuse me, counsel. Do you

11 have hard copies of these demonstratives?

12 We don't -- we haven't been provided

13 anything other than what you're flashing up

14 on the screen right now.

15 MR. ECHOLS: Oh, yes.

16 Do you have that -- oh, sorry.

17 BY MR. ECHOLS:

18 **Q.** And then, sir, if we could bring up picture B, if

19 you wouldn't mind describing it to the Court how

20 you would interpret this.

21 **A. Although -- from looking at this, I can't really**

22 **tell whether we're looking at all dead oysters or**

23 **not. It would appear that we're looking at --**

24 **the center feature there would be of a box, which**

25 **would be a dead oyster with the shell still**

THE REPORTING GROUP  
Mason & Lockhart

882

1 articulated.

2 **But if I was -- in my predirect testimony, I**

3 **explained that when you have a massive mortality,**

4 **the oysters will stay in place. But because**

5 **they're no longer functioning, because they're no**

6 **longer living and pumping water and actively**

7 **creating these microcurrents and those type of**

8 **things that keep the silt off of them, the one**

9 **thing that you will notice typically on a -- when**

10 **you have a mass mortality is that the oysters**

11 **begin to silt in. And I think picture B is**

12 **fairly representative of that.**

13 **And if you do a comparison, you can see --**

14 **although the -- that this -- the comparison is**

15 **obvious here. It's not always so obvious.**

16 Q. So could this represent a live reef that's been

17 harvested, or your interpretation would be that

18 this is a reef that has dead oysters on it?

19 A. **I can't tell that from -- from this. It -- it**

20 **would appear that there are live oysters here;**

21 **but I -- I just could not tell from this. I**

22 **mean, in -- in the real situation, you would --**

23 **you could tap the oysters or be able to just wave**

24 **your hand and remove the silt and be able to tell**

25 **whether they were living or dead. I really can't**

THE REPORTING GROUP  
Mason & Lockhart

883

1 **make that judgment based on the amount of silt.**

2 **But this reef may be a reef that, you know,**

3 **just has a lot of silt on it.**

4 Q. Sure. In any event, regardless whether they're

5 alive or dead, if you were out or an oysterman

6 were out tonging with the big rake handles,

7 tonging up, they would be picking up shells?

8 A. **That's correct. That's correct.**

9 Q. Okay. And that's the process that you described

10 before where you pick up all the shells, put it

11 on the culling board. And this would be in

12 connection with the resource surveys, something

13 that you or Mr. Shields, Mr. Gunter would do in

14 that process?

15 Sorry. Sorry. I went totally sideways.

16 Even if these oysters are dead, the shells

17 are there?

18 A. **That's an important factor --**

19 Q. Right.

20 A. **-- in -- in determining whether or not a reef has**

21 **been harvested or whether there's been a natural**

22 **mortality event.**

23 Q. Okay. Can we take a look at C, please. And now,

24 if you will assume with me that this does reflect

25 what is a reef or supposed to be a reef, how

THE REPORTING GROUP  
Mason & Lockhart

884

1 would you describe this?

2 A. **Well, the closest thing that I could say about**

3 **this -- if, in fact, it is an oyster reef, this**

4 **is what the major reefs in Apalachicola looked**

5 **like after the passage of Hurricane Elena, which**

6 **was an extremely disruptive hurricane in terms of**

7 **tidal surge.**

8 Q. Okay. And this reef has no elevation, you know,

9 no oyster shell whatsoever. Correct?

10 A. **I can't tell.**

11 Q. One of the things -- and tell me if you agree

12 or disagree with this. You know Mr. Kal

13 Knickerbocker who succeeded you at DACS?

14 A. **Yes.**

15 Q. When I was asking Mr. Knickerbocker to explain to

16 me what the quality of the substrate being

17 degraded meant, he told me that -- he said

18 normally a reef has got all kinds of aberrations

19 on it; and it's very rough. That would be

20 consistent with the A picture that we looked at.

21 Right?

22 More or less?

23 A. **Yes.**

24 Q. But then he went on to explain that one that's

25 been harvested heavily, that's been knocked down,

THE REPORTING GROUP  
Mason & Lockhart

885

1 then you're looking at a surface more similar to

2 a tabletop. Does that sound accurate to you?

3 A. **The area that is harvested could be flattened,**

4 **but typically working with tongs is not going to**

5 **do a great deal to the topographic feature.**

6 **Reefs are --**

7 Q. You should move the mike again. I'm having

8 trouble hearing you.

9 A. **Reefs, as I said, are very haphazard in a way, in**

10 **a natural way. But the edges of reefs typically**

11 **will show elevation. And that elevation is built**

12 **up over hundreds of years, maybe thousands of**

13 **years. And it takes some pretty violent storms.**

14 **And Hurricane Elena is the only time that I have**

15 **witnessed anything that violent occurring. And**

16 **it still did not change much of the topography.**

17 **It did level off the tops of bars; but in most**

18 **cases it either exaggerated or -- or somewhat**

19 **obscured elevation by the movement of materials**

20 **from one side of the reef to the other.**

21 MS. WINE: I'm sorry, your Honor. I

22 have been trying to give counsel a lot of

23 leeway; but I just want to note that he was

24 just reading testimony, I believe, to the

25 witness without providing the witness a copy

THE REPORTING GROUP  
Mason & Lockhart

886

1 of that testimony or any context, which I  
 2 believe is improper. I just want to note my  
 3 objection.

4 MR. ECHOLS: Your Honor, this is  
 5 deposition testimony that we have designated  
 6 that will be in the record.

7 SPECIAL MASTER LANCASTER: Sorry?

8 MR. ECHOLS: I'm sorry. This is  
 9 deposition testimony of Mr. Kal Knickerbocker  
 10 which we have designated to the Court to be  
 11 included in the record. When it gets to our  
 12 case, you know, we will proffer that, as the  
 13 other deposition testimony has been.

14 I'm not asking Mr. Berrigan to confirm  
 15 or deny, you know, whether Mr. Knickerbocker's  
 16 statement is correct. I'm asking whether he  
 17 agrees with the characterization of the reef.

18 To the extent that you want me to get a  
 19 deposition, I can pull it. It's up to you.

20 MS. WINE: Your Honor, we would just  
 21 request if he's doing any more of this in the  
 22 future, that he provide the actual testimony  
 23 to the witness so the witness can see what  
 24 he's referencing and look at the context if  
 25 he would like.

THE REPORTING GROUP  
Mason & Lockhart

887

1 SPECIAL MASTER LANCASTER: That's  
 2 reasonable, counsel.

3 MR. ECHOLS: Yes, your Honor. Will do.

4 BY MR. ECHOLS:

5 Q. All right. So to the extent that the picture C  
 6 is a reef there, you would agree by looking at it  
 7 there is zero shell there. There is no habitat  
 8 there that would be suitable for oysters.  
 9 Correct?

10 A. **It would be very poor substrate.**

11 Q. All right. And so if the spat that you talked  
 12 about before were to settle, that spat wouldn't  
 13 have anything to grow on. Right?

14 A. **Silt is a -- is a very debilitating factor for  
 15 clean substrate.**

16 Q. Have you ever heard the term used to describe the  
 17 condition of a reef as being -- as looking like  
 18 a, quote, parking lot? Have you ever heard that  
 19 term before?

20 A. **I probably used that in trying to explain what  
 21 Cat Point reef looked like after Hurricane Elena.**

22 Q. How about with respect to this time period when,  
 23 as you acknowledged, there was excessive and  
 24 intensive and continuous harvesting on Cat Point;  
 25 do you have any recollection of it being

THE REPORTING GROUP  
Mason & Lockhart

888

1 described as a parking lot?

2 A. **I think I have heard that used in -- in work  
 3 groups and that type of thing.**

4 Q. And let's take a look at one example of that.

5 I think we have got some additional exhibits  
 6 here. And so we have got a second binder that  
 7 begins with, I believe, tab 6.

8 Did I give you the proper thing, sir?

9 A. **I see it.**

10 Q. Okay. If you wouldn't mind taking a look at  
 11 tab 6.

12 A. **Okay.**

13 MR. ECHOLS: And tab 6 for the record is  
 14 GX-1297.

15 BY MR. ECHOLS:

16 Q. And you will see that it's two-pages of some  
 17 running e-mails. And as is always kind of  
 18 annoying, in order to have it in sequence you  
 19 have to start at the end and work your way back  
 20 up forward to get the context.

21 So if I could direct you to the second  
 22 page --

23 A. **Correct.**

24 Q. -- and the earliest e-mail there, which starts in  
 25 the middle of that page from Joe Shields, III.

THE REPORTING GROUP  
Mason & Lockhart

889

1 Do you see that?

2 A. **Yes.**

3 Q. And who is Joe Shields, sir?

4 A. **He is a member of my -- my research or resource  
 5 group. He works for DACS. He worked for me. I  
 6 was his direct supervisor.**

7 Q. And he worked for you for approximately 10 years;  
 8 was that right?

9 A. **I -- I don't know how long. I didn't -- I  
 10 wouldn't think that it was 10 years. It might  
 11 have been a shorter duration than what.**

12 Q. But he participated in work with you --

13 A. **Yes.**

14 Q. -- in doing some of the resource protection  
 15 surveys?

16 A. **Yes, he did.**

17 Q. And he did some of the dives as well?

18 A. **Absolutely.**

19 Q. And, in fact, after -- you did most of the dives  
 20 for the first 25 years or so; but then he started  
 21 to do more of them?

22 A. **That's correct.**

23 Q. All right. So, now, here we have got in this  
 24 e-mail Mr. Shields to you. Can you identify  
 25 that, indeed, that's the case?

THE REPORTING GROUP  
Mason & Lockhart

890

1 **A. That's the case.**  
 2 **Q.** And we're here in mid-2012, in July. And if we  
 3 look at what Mr. Shields is telling you in the  
 4 very first paragraph --  
 5 **A. Yes, I see it.**  
 6 **Q.** Okay. And he says there, Mark, we dove on  
 7 Cat Point and East Hole this morning. If  
 8 you recall what we were tonging up when we  
 9 were with the commissioner, you can imagine  
 10 what I saw on East Hole today -- a parking  
 11 lot with oysters concentrated around stone  
 12 crab burrows. My thoughts would be that this  
 13 lack of resource is more a function of extended  
 14 harvesting pressure, rather than the adverse  
 15 effects of a freshet, like the one associated  
 16 with TS Debby. I did not see any sedimentation  
 17 layered on resource.  
 18 Do you see that?  
 19 **A. I see it.**  
 20 **Q.** And it's correct at this time that there had been  
 21 Tropical Storm Debby, and you and the other  
 22 resource managers were checking to see whether  
 23 the storm had caused damage to the reef?  
 24 **A. That's correct.**  
 25 **Q.** And Mr. Shields, as he said, went out and dove  
 THE REPORTING GROUP  
 Mason & Lockhart

891

1 the reef and identified, as he described it, that  
 2 East Hole was a parking lot; and he identified  
 3 two stone crab burrows. Correct?  
 4 **A. That's what he says.**  
 5 **Q.** Now, stone crabs weren't particularly a problem  
 6 in -- as far as predators at this point in time.  
 7 Were they?  
 8 **A. They were an extreme problem at this time.**  
 9 **Q.** Stone crabs were probably less than 4 percent of  
 10 any issue?  
 11 **A. Pardon me?**  
 12 **Q.** Weren't they less than 5 percent, minimal, de  
 13 minimis, as far as any stone crab impact on the  
 14 resource?  
 15 **A. No. I think that they were the major predator on**  
 16 **Cat Point Bar. By far the major predator.**  
 17 **Q.** The only reason I'm asking you, sir, is you know  
 18 that Florida has an oyster expert in this case,  
 19 Dr. David Kimbro?  
 20 **A. Yes, I do.**  
 21 **Q.** And Dr. Kimbro, who we'll have here in a couple  
 22 of days, I'm sure, he said that the stone crabs,  
 23 based on his experiments, were not an issue at  
 24 all, that they were --  
 25 **A. That could be --**  
 THE REPORTING GROUP  
 Mason & Lockhart

892

1 MS. WINE: I would object to that  
 2 characterization. And he's not showing him  
 3 that portion of the report.  
 4 SPECIAL MASTER LANCASTER: Sustained.  
 5 MR. ECHOLS: Do we have his deposition,  
 6 Mr. Smith?  
 7 BY MR. ECHOLS:  
 8 **Q.** I'll come back to that once we pull up the  
 9 testimony.  
 10 **A. Okay.**  
 11 **Q.** But -- so your testimony is at least that stone  
 12 crabs were a major part of the issue as far as  
 13 predation in your experience?  
 14 **A. Definitely.**  
 15 **Q.** And the -- the characterization here that  
 16 Mr. Shields is providing you is that the East  
 17 Hole Bar looked like a parking lot with oysters  
 18 concentrated around the stone crab burrows. And  
 19 he's telling you that his assessment of this,  
 20 based on having done these dives, is that the  
 21 lack of resource is more a function of extended  
 22 harvesting pressure. Correct?  
 23 **A. That's what he is saying.**  
 24 **Q.** And then could you --  
 25 MR. ECHOLS: If we could take that down.  
 THE REPORTING GROUP  
 Mason & Lockhart

893

1 BY MR. ECHOLS:  
 2 **Q.** Could you explain to me what is shell hash.  
 3 **A. Shell hash is the more fine shell. It's the**  
 4 **broken shell that you find as the basis of oyster**  
 5 **reef.**  
 6 **It's a terminology that we use. It probably**  
 7 **does not have a good scientific definition, but**  
 8 **it's finer shell.**  
 9 **Q.** Would it be accurate, sir, that shell hash is  
 10 also not very good substrate?  
 11 **A. Not necessarily. Shell hash is proven to be a**  
 12 **pretty good substrate on Cat Point Bar in the**  
 13 **past. It's one of the reasons that fishermen**  
 14 **like Cat Point Bar is the fact that oysters set**  
 15 **on shell hash; and that produces what they like**  
 16 **to call a single cup oyster, which is a premium**  
 17 **quality product.**  
 18 **Q.** Have you ever heard the term used "shell hash  
 19 parking lot"?  
 20 **A. I understand what he's saying when he says that**  
 21 **because I dove on that same situation.**  
 22 **Q.** Okay.  
 23 **A. But I also understand at the same time what he's**  
 24 **saying about the -- about the stone crabs and the**  
 25 **shell aggregated around the stone crab burrows.**  
 THE REPORTING GROUP  
 Mason & Lockhart

894

1 **This is a very typical scene on Cat Point and had**  
 2 **been for several years.**  
 3 **Stone crabs tend to forage. And they're very**  
 4 **good foragers. And they will pick up all of the**  
 5 **live oysters within a certain circumference of**  
 6 **their homes and drag them there. So when you**  
 7 **find a stone crab burrow, it will be surrounded**  
 8 **by live oysters and dead oysters. And it is easy**  
 9 **enough to pick up a dead oyster shell from a**  
 10 **stone crab burrow and see how the animal ate the**  
 11 **oyster.**  
 12 **Q.** So that there would be shell there then? You  
 13 would find shell?  
 14 **A.** **There is shell around those. And I'm very**  
 15 **familiar with what he's talking about.**  
 16 **Q.** And so it would not look like what we had up  
 17 before, that picture C, where we couldn't see any  
 18 shell, correct, because you would have shell on?  
 19 **A.** **You could probably find some areas where -- that**  
 20 **were devoid of large shells or live oysters. But**  
 21 **in the later stages of this depletion event on**  
 22 **Cat Point, stone crabs were extremely abundant.**  
 23 **I don't know what they were per meter squared**  
 24 **or that type of thing, but the abundance was**  
 25 **greater than we had ever witnessed.**  

THE REPORTING GROUP  
Mason & Lockhart

895

1 **Q.** Let's -- given that we have looked at the  
 2 different pictures of the types of reef  
 3 structure, I wanted to do that to -- for you to  
 4 give the Court the opportunity to understand  
 5 better your sampling and survey methodology --  
 6 **A.** **Correct.**  
 7 **Q.** -- which you describe in your direct. And you  
 8 explained how you used -- how you collect samples  
 9 using quadrats; is that correct?  
 10 **A.** **That's correct.**  
 11 **Q.** And it's -- just so -- it's always easier, at  
 12 least I think, rather than using the word itself,  
 13 to have an item to look at.  
 14 So I have got here --  
 15 **MR. ECHOLS:** I don't have extra copies  
 16 of it. I'm sorry.  
 17 **A.** **I could recognize that anywhere 20 feet deep.**  
 18 **Q.** Can you confirm that this is similar to the type  
 19 of quadrat that you would use?  
 20 **A.** **It is.**  
 21 **MR. ECHOLS:** I don't know if your Honor  
 22 wants to see what this looks like.  
 23 **BY MR. ECHOLS:**  
 24 **Q.** Okay. So this is a PVC quarter meter square  
 25 pipe. And as you testified in your direct, this  

THE REPORTING GROUP  
Mason & Lockhart

896

1 would be weighted; and you throw it off the boat  
 2 randomly. It settles to the bottom on the reef.  
 3 Is that right?  
 4 **A.** **Semi-random.**  
 5 **Q.** Okay.  
 6 **A.** **If that quadrat landed in an area where there**  
 7 **were no oysters, we would not sample that. We**  
 8 **would replace the quadrat.**  
 9 **Q.** Okay. And -- I'm sorry. And the next step is  
 10 once the quadrat has gone down, the diver -- you  
 11 or Mr. Shields or whoever the diver is -- goes  
 12 and --  
 13 **MR. ECHOLS:** Can we put the picture of  
 14 the reefs back up, please.  
 15 **BY MR. ECHOLS:**  
 16 **Q.** And so this quadrat would land on some surface?  
 17 **A.** **That's correct.**  
 18 **Q.** It could be like A or B or C. And then you would  
 19 scoop up everything that's within that square; is  
 20 that right?  
 21 **A.** **That's correct.**  
 22 **Q.** And then you take what's in the square, and you  
 23 put it in a mesh bag?  
 24 **A.** **Yes.**  
 25 **Q.** And this Georgia Depo 2, if you could identify  

THE REPORTING GROUP  
Mason & Lockhart

897

1 it. Is this the type of mesh bag generally that  
 2 would be used?  
 3 **A.** **No. We would use typically a dive bag. This**  
 4 **looks like a culture bag. It's a nice bag, but**  
 5 **it's not what we would use. We would use**  
 6 **something with a much larger mesh so that water**  
 7 **would pour through it easily.**  
 8 **Q.** Okay. Well, this is not a great demonstrative  
 9 then; but I'm going to --  
 10 **A.** **I would like to have those for my clam farm.**  
 11 **Q.** I will tell Dr. Lipcius that he put me in a bad  
 12 situation.  
 13 No, just kidding.  
 14 So if the quadrat lands on one of these  
 15 surfaces, if it landed on a surface like A, you  
 16 would be scooping up a lot of material to go in  
 17 the mesh bag. Correct?  
 18 **A.** **That's correct.**  
 19 **Q.** If it landed on a surface like C, there is not  
 20 much of anything there; is that right?  
 21 **A.** **Well, there -- yes. I can't make that call from**  
 22 **this picture. But if you -- we certainly would**  
 23 **sample that bottom if we -- if the quadrat landed**  
 24 **on that bottom, we would sample that.**  
 25 **Q.** I'm sorry. You would sample it, you said?  

THE REPORTING GROUP  
Mason & Lockhart

1 **A. Yes.**  
 2 **Q.** Okay.  
 3 **A. Because it's representative of the reef.**  
 4 MR. ECHOLS: Could we have these slides?  
 5 (Discussion off the record.)  
 6 MR. ECHOLS: Okay. If we could put up  
 7 the next demonstrative.  
 8 BY MR. ECHOLS:  
 9 **Q.** Again, this is just to assist everybody with  
 10 being able to see. And recognizing, as I do now,  
 11 that this bag is not exactly the type; but here,  
 12 for instance, would be a situation if you went  
 13 down to the quadrat and you scooped up a bunch of  
 14 shell and put it in a bag. And your bags have  
 15 larger mesh, but it could --  
 16 **A. Yes. It's the same.**  
 17 **Q.** It is the same, okay. And that would be -- this  
 18 is both -- in your process you would scoop up  
 19 both live and dead oysters and shell?  
 20 **A. That's correct.**  
 21 **Q.** Everything that's within the quadrat you put in  
 22 the bag. And if it were a healthy reef like we  
 23 were looking at before, it's a pretty full bag.  
 24 Right?  
 25 **A. It could be so full that it's difficult for**  
 THE REPORTING GROUP  
 Mason & Lockhart

1 slide, please.  
 2 BY MR. ECHOLS:  
 3 **Q.** So this is, just so you and the Court are aware,  
 4 the center of East Hole oyster bar in January  
 5 2013 when Dr. Kimbro's graduate students were  
 6 diving there. I took this off of his video. It  
 7 was online. Do you see that?  
 8 **A. No, I haven't, sir.**  
 9 **Q.** I'm sorry. But here is a situation where there  
 10 is no dead shell at all. You're not getting dead  
 11 oysters subject to predation.  
 12 **A. That looks pretty bad.**  
 13 **Q.** Closer to a parking lot?  
 14 Okay. All right. We're done with that.  
 15 **A. What was the date there?**  
 16 **Q.** January 2013.  
 17 **A. Okay.**  
 18 **Q.** So this is directly after the oyster disaster  
 19 declaration has been requested and right at the  
 20 time, as you have been describing, that Cat Point  
 21 and East Hole have been subject to continuous and  
 22 intensive harvesting and that sub-legal and legal  
 23 oysters are being taken and poor harvesting  
 24 practices are taking place where people aren't  
 25 throwing the oysters back in as they should.  
 THE REPORTING GROUP  
 Mason & Lockhart

1 **the diver to lift, or it could be like you see**  
 2 **in this other picture that there's not much in**  
 3 **it.**  
 4 **Q.** Okay.  
 5 MR. ECHOLS: Now, can we go to the next  
 6 demonstrative, please.  
 7 BY MR. ECHOLS:  
 8 **Q.** Here -- maybe that's a better bag, actually.  
 9 Here we have a situation where you can see in  
 10 the top left, there is the quadrat?  
 11 **A. That's correct.**  
 12 **Q.** And then the -- the mesh bag, there is a  
 13 different style mesh bag, I believe.  
 14 **A. That's a dive bag. That's the type we use.**  
 15 **Q.** Okay. That's the type you use.  
 16 Here. I'll give you a hard copy, if you  
 17 like.  
 18 And this is a situation here where there's  
 19 almost nothing being pulled up in these samples.  
 20 Correct?  
 21 **A. That's what it looks like.**  
 22 **Q.** So there's no shell, dead or alive, live oysters,  
 23 or anything. Right?  
 24 **A. That's what it appears to be, yes.**  
 25 MR. ECHOLS: And can we flip to the next  
 THE REPORTING GROUP  
 Mason & Lockhart

1 Right?  
 2 **A. I didn't say that. That's -- what this shows**  
 3 **is -- yes, this could be on East Hole. Is this**  
 4 **representative of all of East Hole? I can't tell**  
 5 **you that.**  
 6 **Q.** Sure.  
 7 **A. And would we be sampling on a place like that? I**  
 8 **can tell you, no; we would not.**  
 9 **So I'll take your word that it is what it is.**  
 10 **Q.** But change gears again now, still -- it would  
 11 make sense to continue; but in a related manner  
 12 as we have looked at, is it correct, sir, that  
 13 different reefs are different, you know,  
 14 depending on where they are in the bay, the  
 15 salinity and other conditions that they are  
 16 exposed to, and the substrate characteristics and  
 17 the like? You would agree with that; would you  
 18 not?  
 19 **A. Yes, I definitely would agree that they are**  
 20 **different.**  
 21 **Q.** And would you also agree, sir, that what happens  
 22 on one reef may not be a good representation of  
 23 what you could expect bay-wide or on another  
 24 reef?  
 25 **A. That's correct.**  
 THE REPORTING GROUP  
 Mason & Lockhart

902

1 Q. Basically each one of these reefs acts as its own  
 2 little individual ecosystem?  
 3 A. I'm trying to think of the right word for that.  
 4 I mean, when we talk about ecosystem, we're  
 5 talking about a little larger thing. But  
 6 there -- there's -- let's just say that they are  
 7 isolated ecosystems that -- there is terminology  
 8 for it; and it's not micro, eco, or macro. But I  
 9 don't recall what it is.  
 10 But your statement is essentially correct.  
 11 Q. Okay. Basically -- basically all of these reefs  
 12 are acting as kind of individual ecosystems based  
 13 on the conditions of the portion of the bay  
 14 they're in. Right?  
 15 A. As a scientist, I just have a difficult time  
 16 agreeing with that because they're not isolated  
 17 as far as reproductive potential. They are  
 18 dependent upon other reefs for reproduction.  
 19 The -- their reproduction is not isolated. Once  
 20 they have spawned into the water column, those  
 21 larvae may move miles from -- from that reef. So  
 22 larvae that are spawned on a reef are not  
 23 necessarily going to set on a reef -- on the same  
 24 reef. Most likely they won't.  
 25 Q. Okay. Sir, do you remember that you and I met  
 THE REPORTING GROUP  
 Mason & Lockhart

903

1 before when I took your deposition?  
 2 A. Yes.  
 3 Q. Okay. I'm not trying to be controversial at all,  
 4 but just to be complete and accurate, if I can  
 5 refer you to page 148 of your deposition.  
 6 A. Okay.  
 7 Q. And if you will see in the area of lines 11 to  
 8 25, I had asked you a question about what you  
 9 were noting at this point in time. And you said  
 10 in part in response there, quote, and we -- I'm  
 11 starting on line 17. And we early found out that  
 12 what happens on one reef is not a good  
 13 representation of what to expect bay-wide or on  
 14 another reef and things like that. All of these  
 15 reefs are acting as kind of individual ecosystems  
 16 based on the conditions of the -- that portion of  
 17 the bay.  
 18 Correct? That was your testimony?  
 19 A. That's correct. I don't find a problem with  
 20 that, except that trying to be more scientific  
 21 about it, my terminology of individual ecosystems  
 22 is -- you know, it's very broad there.  
 23 Q. Sure. And then -- but you also then would agree  
 24 it's very difficult to make a statement of one  
 25 size fits all when you're talking about oysters  
 THE REPORTING GROUP  
 Mason & Lockhart

904

1 in Apalachicola Bay; would that be accurate?  
 2 A. Yes. I agree with the premise that we're dealing  
 3 with here that one reef is not representative of  
 4 the other reef -- of another reef.  
 5 Q. And also not representative of the bay. Right --  
 6 a single reef?  
 7 A. Not a single reef.  
 8 Q. In fact, as you have explained to me, as a matter  
 9 of fact, it's impossible; and it shouldn't be  
 10 done. Right?  
 11 A. It should not be done.  
 12 Q. Yes. I take it you were not involved in working  
 13 with Florida's experts in connection with their  
 14 preparing their expert reports?  
 15 A. No, I was not.  
 16 Q. So to that extent -- to the extent, if it is the  
 17 case, that Dr. White had a model that based  
 18 conditions on the bay on a single reef, you would  
 19 have told him that it's impossible to make a  
 20 statement of one size fits all and shouldn't be  
 21 done to reach conclusions about the entire bay  
 22 from a single reef?  
 23 MS. WINE: Your Honor, I object to that  
 24 again. Again, he's characterizing something  
 25 that an expert witness said or maybe said,  
 THE REPORTING GROUP  
 Mason & Lockhart

905

1 his characterization of it, and asking the  
 2 witness to comment on it.  
 3 MR. ECHOLS: Judge, I don't think it's  
 4 an unfair question for me to -- whether I'm  
 5 accurate or not, obviously Dr. Wilson will be  
 6 here. Counsel will have redirect. If I'm  
 7 shown to be wrong, that's fine. But given  
 8 that I have got Mr. Berrigan, who has got  
 9 30-plus years of experience evaluating the  
 10 bay, and this is his sworn testimony, I don't  
 11 think it's an unfair question.  
 12 SPECIAL MASTER LANCASTER: Would you ask  
 13 the question again, please.  
 14 MR. ECHOLS: Sure.  
 15 BY MR. ECHOLS:  
 16 Q. And I can keep it very simple. Would you agree,  
 17 sir, that in your opinion based on your  
 18 experience as one of the most knowledgeable  
 19 people about the bay, that it would be  
 20 inappropriate and should not be done to draw  
 21 conclusions about the entire bay based on a  
 22 single oyster bar?  
 23 MS. WINE: Now, he's just asking him a  
 24 hypothetical. And he's a fact witness, your  
 25 Honor.  
 THE REPORTING GROUP  
 Mason & Lockhart

906

1 SPECIAL MASTER LANCASTER: I'm sorry?

2 MS. WINE: I said now he's asking a

3 hypothetical. And he's a fact witness, not

4 an expert witness, your Honor.

5 SPECIAL MASTER LANCASTER: You may

6 answer.

7 **A. To the issues that you address there, you will**

8 **have to repeat to me.**

9 **But let me say this before that. I am not a**

10 **modeler. I really don't do very much modeling.**

11 **And I know that there are a lot of limitations to**

12 **modeling, and they're based on available**

13 **information. So I would never tell anybody don't**

14 **do this.**

15 **And I forget exactly what you said in the**

16 **middle of that question that I -- that I found a**

17 **little bit objectionable. But I think it was**

18 **something to the effect that I would never tell**

19 **somebody to do that or something like that. And**

20 **I would actually encourage them to do the**

21 **modeling.**

22 **Now, whether or not I would trust their**

23 **conclusions, if their conclusions were opposed or**

24 **contradictory to what I have personally observed,**

25 **I would have a problem with that.**

THE REPORTING GROUP  
Mason & Lockhart

907

1 **Q.** One thing, as you described when we were looking

2 at the picture of the different types of reef

3 structures, when you first looked at the A

4 picture that looked -- was very healthy, had the

5 elevation, you said it appeared to be a restored

6 reef. Do you recall that?

7 **A. Yes, I said -- what I think I said was this**

8 **photograph looks like photographs that we have**

9 **taken of recently restored reefs. We -- I have**

10 **seen very similar things like this in our work.**

11 **Q.** And changing to that topic, the restoration of

12 reefs was part of your responsibilities in DACS.

13 Right?

14 **A. That's correct.**

15 **Q.** And one of the main ways that this restoration is

16 done is through a process calling shelling or

17 reshelling?

18 **A. That's correct.**

19 **Q.** And is it also known sometimes as cultching?

20 **A. Yes, it could be called cultching.**

21 **Q.** And could you describe generally for the Court

22 what does this restoration process of cultching

23 or reshelling -- what does it involve?

24 **A. As I explained earlier in trying to give the**

25 **basis of the life cycle of oysters, oysters need**

THE REPORTING GROUP  
Mason & Lockhart

908

1 **a clean surface to set on. The act of shelling**

2 **is putting clean shell on these reefs so that**

3 **there is a clean surface available for oysters to**

4 **set on. It's a very common practice and probably**

5 **the most simple management practice that we can**

6 **do that has proven to be successful. Very**

7 **simple, adding habitat, creating habitat that the**

8 **oysters can use.**

9 **Typically this is done in a large scale.**

10 **Typically we use a barge to deploy the materials.**

11 **We also collect these oyster shells often from**

12 **processing plants so that we recycle the shell**

13 **that's from shucked oysters.**

14 **By placing it out there, we are -- we are**

15 **creating or rehabilitating, the term that we use**

16 **most, reef structure. And we can deploy that at**

17 **various levels, depending upon how impaired the**

18 **reef structure is.**

19 **Q.** You would agree that it's a -- it's an important

20 resource management tool for maintaining and

21 enhancing productive oyster habitats?

22 **A. It's a -- did you say important?**

23 **Q.** Important resource.

24 **A. Yes, it is important.**

25 **Q.** And I think you called it a best management

THE REPORTING GROUP  
Mason & Lockhart

909

1 practice?

2 **A. It's among the best management practices that I**

3 **have been involved in.**

4 **Q.** And when we were looking at some of the other

5 pictures and you described how -- the functional

6 reef versus reefs that may not be in that good a

7 shape, would you agree that restoring habitat is

8 an important aspect in restoring reef

9 functionality?

10 **A. Yes.**

11 **Q.** And, in fact, actually, you did a couple of

12 papers about large-scale reef restorations that

13 were done in Apalachicola Bay back in the

14 mid-'80's; isn't that right?

15 **A. That's correct.**

16 **Q.** Because, as you mentioned before, you had -- in

17 the '85 time period there was Hurricane Elena

18 and, I think, Kate back to back; and it

19 practically decimated the entire oyster

20 population in the bay?

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

22 **Q.** And at that point in time, given the decimation

23 of the oyster population, the State took some

24 significant and prompt actions to restore the bay

25 and the reefs. Right?

THE REPORTING GROUP  
Mason & Lockhart



910

1 **A. It was relatively prompt. I think it took maybe**  
 2 **two years to line up the budget and --**  
 3 **Q.** I'm sorry. Among the things that the State did  
 4 was to put in place a massive reshelling program.  
 5 Right?  
 6 **A. It was a large reshelling program for the time.**  
 7 **Q.** And I think if you -- I don't know if you can  
 8 ball park it, somewhere in the neighborhood of  
 9 200 acres was shelled within -- to -- in each  
 10 year in a two-year period. Does that sound about  
 11 right?  
 12 **A. That's -- that's an estimate that I could deal**  
 13 **with. I don't recall the actual acreage.**  
 14 **Q.** Now, then at some point in time, the State of  
 15 Florida stopped funding shelling directly.  
 16 Right?  
 17 **A. Their -- at one time we did have a legislative**  
 18 **line item that was a recurring budget for the**  
 19 **shelling program. It was a relatively small**  
 20 **budget.**  
 21 **Following one of the hurricanes -- and I**  
 22 **can't recall which one or the exact dates, but --**  
 23 **I was able to request and be awarded grants for**  
 24 **oyster restoration projects. And it was Florida**  
 25 **and the other Gulf states. So we oftentimes**

THE REPORTING GROUP  
Mason & Lockhart

911

1 **shared in these Congressional funding programs.**  
 2 **When we were receiving those funds, the**  
 3 **legislative budget did not include money for**  
 4 **shelling. So -- and we probably received that**  
 5 **Congressional or federal dollars for the last --**  
 6 **for probably my entire tenure at the Department**  
 7 **of Agriculture. And because we switched**  
 8 **agencies, there was no budget request when we**  
 9 **were already getting money.**  
 10 **So it would be inaccurate really to say that**  
 11 **the State stopped funding it when they actually**  
 12 **weren't funding it because we already had funds.**  
 13 **So they weren't -- we weren't getting double**  
 14 **funding.**  
 15 **Q.** Right. I didn't mean to say otherwise. You  
 16 weren't getting double funding. You, as part of  
 17 your job in resource management, would go out and  
 18 get grants and apply for grants?  
 19 **A. That's correct. That was in the report.**  
 20 **Q.** So you had to get the money from a grant from the  
 21 federal government or wherever. And since you  
 22 were able to get the money that way, the State  
 23 didn't have to have it as its own budget line  
 24 item?  
 25 **A. That's right. The agency did not put it in their**

THE REPORTING GROUP  
Mason & Lockhart

912

1 **annual budget request.**  
 2 **Q.** And most years you were -- you were successful in  
 3 getting some funds for shelling; but there were  
 4 some years when you weren't?  
 5 **A. There may have been a gap in there; but I'm**  
 6 **thinking for the last 10 years that I was with --**  
 7 **or the last 13 years that I was with the**  
 8 **Department of Agriculture, we were probably**  
 9 **getting federal funding. I mean, there may be a**  
 10 **gap there; but we had at least three grants**  
 11 **throughout that period of time of either five or**  
 12 **seven-year duration, I think.**  
 13 **Q.** Fair to say though that at least with this  
 14 collapse of the oyster fishery, there was by the  
 15 time you left in April 2013; is that right?  
 16 **A. Yes.**  
 17 **Q.** By the time you left in April 2013, there hadn't  
 18 been any large amount of Florida state funds  
 19 devoted towards reshelling any portion of the bay  
 20 after the collapse?  
 21 **A. There was no state budget. The EDRP budget that**  
 22 **we were involved with, I think, ran until maybe**  
 23 **the end of the fiscal year for the feds in 2013.**  
 24 **So when I left, we were still operating on**  
 25 **federal moneys. And then there were additional**

THE REPORTING GROUP  
Mason & Lockhart

913

1 **moneys that were allocated from various work**  
 2 **programs and things like that that I am not**  
 3 **familiar with.**  
 4 **Q.** But as you testified, you were able to do some  
 5 shelling with the funds that you obtained.  
 6 Correct?  
 7 **A. That's correct.**  
 8 **Q.** And in general, you got pretty good results from  
 9 the reefs where you did the shelling; didn't  
 10 you?  
 11 **A. I would say that we were pretty good at what we**  
 12 **were doing.**  
 13 **Q.** And I just want to have a couple examples of that  
 14 because you reported on the fact that you were  
 15 doing this resource management. You're shelling  
 16 areas, and the oysters are doing pretty well  
 17 during these couple of years in 2011 and 2012.  
 18 If you wouldn't mind looking, sir, at tab 7 of  
 19 your binder.  
 20 **SPECIAL MASTER LANCASTER:** Is this  
 21 binder 1 or 2?  
 22 **MR. ECHOLS:** It's binder 2, your Honor.  
 23 **SPECIAL MASTER LANCASTER:** Thank you.  
 24 **MR. ECHOLS:** I think it starts at tab 6.  
 25 Do you have that, sir?

THE REPORTING GROUP  
Mason & Lockhart

914

1 BY MR. ECHOLS:

2 **Q.** Okay. And can you -- for the record, this is

3 tab 7. This document is Joint Exhibit 52, JX-52.

4 And can you identify this, sir, as being one of

5 the -- the types of assessments that you and your

6 staff, Mr. Gunter, Marshall, and Shields, would

7 do to check up and evaluate on bars that you had

8 reshelled? Is that accurate?

9 **A. Yes. This was a -- this was a different type of**

10 **reconnaissance. These were tonging samples as**

11 **opposed to quadrat samples.**

12 **Q.** Right. Right. So it is a different methodology.

13 So as you were explaining before, this would

14 just be using the hand tongs as opposed to going

15 down with the quadrat. Right?

16 **A. Yes.**

17 **Q.** Okay. If you look just on -- if you go to the

18 first page -- and I apologize that these -- I

19 could not find pictures in color for this

20 document; so we have got these black and white.

21 But I'll give you a better one shortly.

22 **A. I have seen these in color, I'm sure.**

23 **Q.** I'm sure. And so this is the page at the top

24 that says Bulkhead. Are you there, sir?

25 **A. Which page?**

THE REPORTING GROUP  
Mason & Lockhart

915

1 **Yes. First picture?**

2 **Q.** Yes.

3 **A. Bulkhead.**

4 **Q.** Bulkhead. And what's Bulkhead?

5 **A. Bulkhead is a bar in the summer harvesting area**

6 **in the eastern Apalachicola Bay.**

7 **Q.** And rather than me go through these line by line,

8 can you just explain to the Court, please, what

9 is set forth here? What is being reported about

10 the results of the assessment of Bulkhead Bar?

11 **A. Bulkhead Bar, and then we have -- this is a plant**

12 **site that was planted in July and August of 2008.**

13 **The estimated volume of the plant was 1,000 cubic**

14 **yards.**

15 **Based on their tong samples, they are looking**

16 **at low mortality, which means that the oysters**

17 **that they're tonging there are mostly alive. A**

18 **good spat set is -- you can see spat on these**

19 **oysters, good growth, zero harvesting pressure.**

20 **That's -- and this is an area in the summer**

21 **harvesting area, which means that oyster**

22 **harvesters are not there.**

23 **This is a peculiar thing about a lot of our**

24 **plant sites is that oystermen, even when they**

25 **know there's oysters on it, do not want to**

THE REPORTING GROUP  
Mason & Lockhart

916

1 **harvest on it because it would mean that we were**

2 **doing too good a job. I mean, that's a strange**

3 **thing. I have no understanding of that.**

4 **Growth is occurring on second generation**

5 **oysters, which is good. That means -- that's**

6 **typically what we shoot for a lot. We know that**

7 **we try to get some spat to set in the beginning;**

8 **but we know that the second generation is going**

9 **to be the most important generation because we're**

10 **going to have achieved what we were looking for,**

11 **getting a living, functional reef base, which is**

12 **really what oysters are going to prefer.**

13 **They do have a -- a stimulation to set where**

14 **there are other living oysters, which makes sense**

15 **in their survival. You know, they set where**

16 **there are oysters -- living oysters. That's good**

17 **for them.**

18 **Q.** Okay. And just to keep track of where we are

19 date-wise, this -- and on the front page, it's

20 February 2011 when this assessment is done.

21 **A. Okay.**

22 **Q.** And you note in that same page that -- or

23 Mr. Shields or whoever put this together notes

24 that perhaps the site could use some more

25 substrate coming up.

THE REPORTING GROUP  
Mason & Lockhart

917

1 Could you turn in two more pages, please.

2 And then, unfortunately, these are not numbered;

3 but this at the top says Hotel.

4 **A. Hotel Bar.**

5 **Q.** Okay. Hotel is another bar; is that correct?

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

7 **Q.** And I see, as in the prior page, they identify

8 the dates when you did some reshelling at this

9 bar and the volume that was planted. Again, here

10 when it says zero harvesting pressure, is that

11 the same thing that you just were explaining that

12 the oystermen were not going to the site?

13 **A. The -- as I had said earlier, you can distinguish**

14 **by looking at oysters whether or not there's been**

15 **harvesting pressure.**

16 **And let me say that the man who is doing the**

17 **tonging here is a real oysterman. He has been a**

18 **lifelong oysterman. So we were very happy to**

19 **have him. And when he makes a lick with those**

20 **tongs, he can tell a whole lot about what's going**

21 **on.**

22 **Q.** Okay. Who is that?

23 **A. James Marshall.**

24 **Q.** James Marshall, very good.

25 Now, the last part, could you explain to the

THE REPORTING GROUP  
Mason & Lockhart

918

1 Court at the very bottom of that paragraph where  
 2 it says, excellent overall. Could easily be  
 3 2,000 bushels per acre when dive assessments  
 4 occurred in late spring, what does that mean?  
 5 **A. It means that just based on what they're looking**  
 6 **at, they feel that if we had done quadrat**  
 7 **sampling, that the production parameters might**  
 8 **yield as high as 2,000 bushels per acre.**  
 9 **Q.** Is that a lot of bushels per acre?  
 10 **A. That's extremely high.**  
 11 **Q.** That would be a very functional, a very healthy  
 12 reef?  
 13 **A. That would be a healthy reef.**  
 14 **Q.** And this is one that you planted on dates in  
 15 2008, 2009, and 2010?  
 16 **A. Yes. This is a little bigger plant, 6,600 cubic**  
 17 **yards.**  
 18 **Q.** Now, since these are all terrible black and white  
 19 pictures -- I have got some things in color.  
 20 It's not -- it's from after -- just after you  
 21 left; but it's -- you will see, just so you can  
 22 explain to the Court what these things are,  
 23 Mr. Shields had pulled these. This is GX-1305.  
 24 Do you have that, sir?  
 25 **A. Yes.**

THE REPORTING GROUP  
Mason & Lockhart

919

1 **Q.** Okay. As I said, I know you were not copied on  
 2 this. This is from April 2014 after you had  
 3 left. But this is Mr. Shields reporting on an  
 4 assessment that he did on some of the plant  
 5 sites. And I only provided it here because we  
 6 got a lot better pictures in this.  
 7 And, you know, I will leave it to you, sir,  
 8 whichever, based on your experience, would be  
 9 informative to explain to the Court, show the  
 10 Court some of these things we have been talking  
 11 about like spat and spat settlement, what it  
 12 actually looks like. You can pick and direct the  
 13 Court to whichever picture you think best  
 14 explains that.  
 15 **A. If I was looking at these slides and making a**  
 16 **determination, I would not be as encouraged by**  
 17 **this as this would appear to be. As a matter of**  
 18 **fact, I might use this to -- to actually show the**  
 19 **opposite.**  
 20 **These -- this -- let's start at the back**  
 21 **page.**  
 22 **Oh, the back page looks great. I'm sorry.**  
 23 **Q.** So --  
 24 **A. Let's start at the back. Let's start at the**  
 25 **back, yes.**

THE REPORTING GROUP  
Mason & Lockhart

920

1 **Q.** Just to make sure we have got everybody on the  
 2 same page, is this the one that at the very  
 3 bottom right-hand corner it ends in 313?  
 4 **A. Yes. That's a good one to start. That's a --**  
 5 **that's a view that I would really be encouraged**  
 6 **to see. And if we roll to the previous one**  
 7 **before that --**  
 8 **Q.** 312?  
 9 **A. The longer picture. The one right before that**  
 10 **one. It's an enlarged view of the same**  
 11 **oysters -- that one.**  
 12 **Q.** And is that, sir, the culling board that you  
 13 described before?  
 14 **A. No. That's just a -- that's a walkway on an**  
 15 **oyster boat that the oysterman would stand on**  
 16 **while he's tonging.**  
 17 **Q.** Let me direct you, if I could, please, to the  
 18 page that has 307 in the bottom right-hand  
 19 corner. Could you please identify and explain to  
 20 the Court what this shows is the --  
 21 **A. This is a piece of shell hash that has a juvenile**  
 22 **oyster attached to it that has some barnacles**  
 23 **growing on it.**  
 24 **Q.** So there's -- there is a spat on this?  
 25 **A. There's not spat that I can see. This -- by the**

THE REPORTING GROUP  
Mason & Lockhart

921

1 **time this oyster is that size, which is about an**  
 2 **inch, we would no longer consider that spat.**  
 3 **That would be something that I would consider as**  
 4 **a juvenile oyster. Once -- once an oyster starts**  
 5 **to develop and the shell develops away from the**  
 6 **shell that it's attached to, then it's no longer**  
 7 **considered spat in my terminology.**  
 8 **Q.** Got it.  
 9 In any event, your experience has been that  
 10 there have been good results in development of  
 11 juvenile oysters in the sites where you had  
 12 planted in a lot of cases?  
 13 MS. WINE: I'm sorry. We're looking at  
 14 something from 2014 now. Are you asking  
 15 about when he was there in the '08, '09, '10?  
 16 MR. ECHOLS: That wasn't my question,  
 17 no.  
 18 BY MR. ECHOLS:  
 19 **Q.** I said in any event, sir, your experience has  
 20 been that when you and the folks working for you  
 21 at DACS restored reefs, you had -- did get some  
 22 good results from that restoration?  
 23 **A. Yes. We had -- we were -- we had some very**  
 24 **successful restoration projects and some that**  
 25 **were less successful.**

THE REPORTING GROUP  
Mason & Lockhart

922

1 Q. All right.

2 **A. But typically when we're putting down cultch**

3 **material, it's almost always going to be a**

4 **positive.**

5 Q. Okay. Let's look at another example then. Can

6 you turn back to your binder, tab 8.

7 **A. Are we not going to give an explanation of these**

8 **pictures?**

9 Q. No. It was just so we could have something in

10 color.

11 And tab 8 -- behind tab 8 we have got Joint

12 Exhibit 60. Are you there, sir?

13 **A. Yes.**

14 Q. Okay. And this Joint Exhibit 60 you will see at

15 the top says October 2011 Assessment of Minor

16 Bars in the Western End of Apalachicola Bay.

17 Now, in October 2011, you still were working

18 for DACS; and you were responsible for resource

19 management. Right?

20 **A. October 2011?**

21 Q. Yes, sir.

22 **A. Yes.**

23 Q. And here, is this, similarly to the prior report

24 we looked at, one of those assessments that your

25 staff is doing to assess how planted reefs are

THE REPORTING GROUP  
Mason & Lockhart

923

1 developing?

2 **A. They -- it looks to me here that they have**

3 **assessed more than just planted bars.**

4 Q. Oh, I'm sorry. That's -- you're absolutely

5 right. I see that at the top here it states that

6 this assessment was undertaken due to reports by

7 the industry and a leaseholder of a large number

8 of dead or dying oysters found in the western end

9 of the bay.

10 And sometimes it would be the case that

11 oystermen, folks in the industry would come to

12 DACS and say, hey, I see something that doesn't

13 look right. And you would go out to check to

14 find out if there was a problem or not?

15 **A. That's correct.**

16 Q. Right. Yes, I'm sorry. This wasn't just based

17 on planting.

18 Can you look then at the overall description

19 there with the paragraph that says Overall.

20 **A. Yes. I see it.**

21 Q. And there it says, and here we are in October

22 2011. We're still in the drought. Correct?

23 **A. We are -- we are in the process, yes.**

24 Q. Right.

25 **A. We're in the progression of this thing.**

THE REPORTING GROUP  
Mason & Lockhart

924

1 Q. And here it says in this assessment of these bars

2 on the western end of Apalachicola Bay, with the

3 exception of Scorpion Reef, all areas exhibited

4 new growth, a good spat set, overall good health

5 and high numbers of live oysters. The appearance

6 of the oyster meat and texture is improving.

7 They are becoming fatter and healthier as the

8 temperatures cool.

9 Do you see that?

10 **A. Yes.**

11 Q. That's all positive. Right?

12 **A. Those are positives.**

13 Q. And then we go on. It says, the minimal fresh

14 mortality observed was the result of predation by

15 the oyster drill. During drought conditions, the

16 oyster drill is able to embed within these reef

17 complexes and can have a significant impact on

18 the health of the oyster reef.

19 And that's correct, too. Right?

20 **A. Yes.**

21 Q. And as you testified yesterday, when there's

22 drought, when it's drier, oyster drills show up

23 in these locations. Correct?

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

25 Q. And then it goes on to say, at present, the

THE REPORTING GROUP  
Mason & Lockhart

925

1 oyster drill can be found throughout the western

2 portion of the bay system. Mortalities will

3 continue until the river begins to rise.

4 But at this point here we're already near the

5 end of 2011. It says, the Scorpion Reef area was

6 the only area observed to be in poor condition.

7 Right?

8 **A. That appears to be what they saw.**

9 Q. And at the last two sentences of that paragraph

10 it says, however, as noted earlier, the other

11 reefs observed were in good condition. There

12 were no significant mortality events occurring in

13 the western end of the bay.

14 Right?

15 **A. That -- that's a broad statement that they made.**

16 Q. That's a broad positive statement. Right?

17 **A. If it were correct, I would say it was a positive**

18 **statement.**

19 Q. You figure Mr. Shields and Mr. Gunter got it

20 wrong?

21 **A. No. I'm thinking that their terminology, the**

22 **western end of the bay, is one thing. Where**

23 **these leases are is where they're talking about.**

24 **If they were talking about the southwestern**

25 **portion of the bay where the mortalities had**

THE REPORTING GROUP  
Mason & Lockhart

926

1 **begun and where we had already quit sampling by**  
 2 **this time because of extensive mortality, that**  
 3 **would throw that statement into question.**  
 4 **Q.** But here --  
 5 **A.** **As for where they're talking about, if they're**  
 6 **talking about where they -- where these leases**  
 7 **are located is western Apalachicola Bay, I'm**  
 8 **agreeable to that.**  
 9 **Q.** Okay. If we can turn one page in, please. It's  
 10 the page that at the top -- and we can ignore the  
 11 pictures since they're black and white, if we  
 12 like; but at the very top it says North Spur  
 13 Plant Site. Do you see that?  
 14 **A.** **Yes.**  
 15 **Q.** What does plant site mean?  
 16 **A.** **That would be an area that we had done**  
 17 **restoration on.**  
 18 **Q.** And can you agree with me, sir, as reflected here  
 19 in this October 2011 report, in the middle of the  
 20 drought at the North Spur plant site where you  
 21 had done restoration, the DACS people working for  
 22 you were reporting no sign of fresh mortality,  
 23 good growth, large range of size classes, animals  
 24 looked healthy, good overall appearance, one  
 25 fresh box, one drill, and no harvesting occurring

THE REPORTING GROUP  
Mason & Lockhart

927

1 at this site.  
 2 Do you read that the same way I do?  
 3 **A.** **Yes. At that time things were -- were fairly**  
 4 **good; and we were encouraged.**  
 5 **Q.** I'm sorry. Can we go to the next page there. We  
 6 have got Little Gully.  
 7 **A.** **That's correct.**  
 8 **Q.** And so Little Gully, is that another reef?  
 9 **A.** **That's a location on Dry Bar Reef.**  
 10 **Q.** Oh, it's on Dry Bar. Okay.  
 11 And here it says that this is a test -- or,  
 12 rather, a sampling that was done with the tongs  
 13 again; is that right?  
 14 **A.** **I'm assuming that all of this was done by tongs**  
 15 **since there's no quadrat data with it.**  
 16 **Q.** And here, again, on Little Gully, which you said  
 17 is on Dry Bar, is that --  
 18 **A.** **Yes.**  
 19 **Q.** Okay. And here, again, we have got no sign of  
 20 fresh mortality, and new growth. Animals look  
 21 healthy, good overall appearance. There are two  
 22 boxes -- and for the Court's purpose, boxes,  
 23 those are dead oysters. Right?  
 24 **A.** **Recently dead oysters where the shell is still**  
 25 **articulated.**

THE REPORTING GROUP  
Mason & Lockhart

928

1 **Q.** Recently dead oysters. And they're called boxes.  
 2 And some -- there's new boxes and old boxes;  
 3 is that right?  
 4 **A.** **I would suppose you could categorize new and old.**  
 5 **Q.** And then sometimes is it the case that these  
 6 things are called gapers? Have you heard that  
 7 before?  
 8 **A.** **Yes, you could use that term. Gapers, typically**  
 9 **you're talking about very fresh dead oysters.**  
 10 **Q.** Okay. So they're dead oysters.  
 11 So we have two dead oysters, fresh boxes, and  
 12 two drills present; but otherwise, the  
 13 description here is that -- you would  
 14 characterize, would you not, that this bar --  
 15 this portion of the bar is doing quite well?  
 16 **A.** **Yes. I -- I think that you have shown that at**  
 17 **this time, and they have shown at this time that**  
 18 **the bay, in fact, is in good shape and coming**  
 19 **back.**  
 20 **That's one of the things that I have**  
 21 **represented about this area and the recovery from**  
 22 **the Deepwater oil spill. At this time, things**  
 23 **were looking pretty good. But the things that I**  
 24 **would add to this that need to be qualified is**  
 25 **that the southern portions of St. Vincent Sound**

THE REPORTING GROUP  
Mason & Lockhart

929

1 **where you would expect the highest salinity**  
 2 **conditions were already in bad shape. And**  
 3 **Scorpion Reef in western St. Vincent Sound where**  
 4 **you would expect the most high salinity**  
 5 **conditions, those were already in bad shape.**  
 6 **So what we have demonstrated here is, yes,**  
 7 **what we were doing out there, it all looked good.**  
 8 **At this time things looked like we were in good**  
 9 **shape. This was nine months before we started to**  
 10 **really recognize that -- the severity of the**  
 11 **depletion.**  
 12 **Q.** Well, that's not exactly right though; is it,  
 13 sir?  
 14 **A.** **And then a year -- by a year later, these reefs**  
 15 **were essentially gone.**  
 16 **Yes, that's my observations of it.**  
 17 **Q.** At the time that you wrote the August 2012  
 18 resource assessment report --  
 19 **A.** **That's right.**  
 20 **Q.** -- there were reefs that were doing relatively  
 21 well; were they not?  
 22 **A.** **They were still doing relatively well in July**  
 23 **of 2012. By October -- and I went back out**  
 24 **there -- when we started to recognize the**  
 25 **severity of the situation, there weren't 5**

THE REPORTING GROUP  
Mason & Lockhart

930

1 **percent of the oysters on these reefs right here**  
 2 **alive.**  
 3 **Q.** Okay. Let's split the difference here. Let's go  
 4 to September. We'll go to the -- let's go back  
 5 to the meeting that you had with the Franklin  
 6 County Board of Commissioners --  
 7 **A. Okay.**  
 8 **Q.** -- in September 2012 and what you told them.  
 9 **A. Right.**  
 10 **Q.** And what you told the entire oyster community.  
 11 **A. Yes. That was in September.**  
 12 **Q.** Yes.  
 13 MR. ECHOLS: Just put them in order.  
 14 Okay.  
 15 BY MR. ECHOLS:  
 16 **Q.** All right. So we have got some additional clips.  
 17 And we'll get you the slides here from the  
 18 meeting that you attended and spoke to the  
 19 community about the status of the oyster reefs in  
 20 September 2012, the same date that the Governor  
 21 sent the request for the disaster declaration to  
 22 the federal government.  
 23 Do you know what; while he's collecting those  
 24 things to distribute, why don't you please turn  
 25 to tab 9 as he hands these all out. Tab 9 in  

THE REPORTING GROUP  
Mason & Lockhart

931

1 your binder -- I'll meet you up here in October  
 2 because this is tab 9, which is a GX-1296  
 3 document.  
 4 And are you there, sir, at tab 9 at the top  
 5 says --  
 6 **A. Yes. 1296.**  
 7 **Q.** Yes. It says, synopsis of activities conducted  
 8 by BAD staff on October 2012. Do you see it?  
 9 **A. Yes.**  
 10 **Q.** And what's the BAD staff?  
 11 **A. That's the Bureau of Aquaculture Development.**  
 12 **And that's Department of Agriculture and Consumer**  
 13 **Services.**  
 14 **Q.** That's your department?  
 15 **A. That's my group, yes.**  
 16 **Q.** Your group. And you're still at the -- in this  
 17 group in October 2012.  
 18 And, again, if you look at the bottom  
 19 right-hand corner, this is one of the documents  
 20 you provided us.  
 21 **A. Okay.**  
 22 **Q.** Let me take you to the bottom section there where  
 23 it has the heading East Hole Managed Site. Do  
 24 you see that?  
 25 **A. Yes.**  

THE REPORTING GROUP  
Mason & Lockhart

932

1 **Q.** And there in this document summarizing some of  
 2 the activities of your group it says under East  
 3 Hole Managed Site, background. In order to  
 4 compare and contrast the conditions of the  
 5 natural bars which are currently underproducing,  
 6 a managed or planted bar was chosen to  
 7 demonstrate differences during diving assessments  
 8 which will occur the week of October 22.  
 9 Do you see that?  
 10 **A. Yes.**  
 11 **Q.** And it continues on to say, initial observations  
 12 suggest that one of the East Hole plant sites  
 13 chosen had been worked. A spat set was observed  
 14 everywhere throughout the site, and large oysters  
 15 were present.  
 16 And then it continues to the next page and  
 17 says, and overall, everything was still growing.  
 18 This is a good example of a site which has been  
 19 refurbished and has produced. It will be  
 20 utilized during resource assessments next week.  
 21 And that is the case that even here in  
 22 October 2012 you were finding that bars that you  
 23 had planted and refurbished were doing well --  
 24 doing quite well even though we're here in  
 25 October 2012 during the drought?  

THE REPORTING GROUP  
Mason & Lockhart

933

1 **A. This particular bar on East Hole, I did dive on**  
 2 **it, I think, in October. And it is as was stated**  
 3 **here.**  
 4 **This is not my report. I didn't write this.**  
 5 **But this looks like it probably came from Joe,**  
 6 **yes.**  
 7 **Q.** No reason to think that Joe is giving you  
 8 inaccurate information?  
 9 **A. No, no.**  
 10 **Q.** Okay.  
 11 **A. He sees things somewhat different than me; but,**  
 12 **no, I'm not suggesting that at all.**  
 13 **And then --**  
 14 **Q.** Very good. Let's go back --  
 15 MS. WINE: I think he needs to finish.  
 16 **A. -- the situation on East Hole was as stated. It**  
 17 **did not appear that it had been fished, and it**  
 18 **appeared that it was still doing okay at that**  
 19 **time. But that was a very -- that was, you know,**  
 20 **a outlier.**  
 21 **Q.** Okay. Because this is a portion of East Hole  
 22 that had not been fished, you said. Right?  
 23 **A. Apparently not.**  
 24 **Q.** Okay. Let's go back to September. And this will  
 25 be the last thing I do in this section. And we  

THE REPORTING GROUP  
Mason & Lockhart

934

1 were talking about the Board of Commissioners  
 2 meeting that you attended and presented. And I  
 3 believe everybody has the slides from that now.  
 4 I just want to ask you about some of the  
 5 additional things you told the Board of  
 6 Commissioners and all the members of the  
 7 Apalachicola oyster community about how the bars  
 8 were doing relatively, especially comparing those  
 9 that you had planted versus those that had not  
 10 been.  
 11 MR. ECHOLS: Can we look at slide 5,  
 12 please.  
 13 (Whereupon the video was played.)  
 14 BY MR. ECHOLS:  
 15 Q. Okay. In that -- that, again, is you, sir,  
 16 presenting to the Franklin Board of County  
 17 Commissioners and the Apalachicola oyster  
 18 community?  
 19 A. Yes.  
 20 Q. And here you're noting to -- at the same time,  
 21 September 2012, when the Governor's request is  
 22 going for a disaster declaration, that there are  
 23 areas of the bay that have normal reef structure,  
 24 normal oyster populations; and these are small --  
 25 very small areas, and most of those are managed

THE REPORTING GROUP  
Mason & Lockhart

935

1 areas that you, DACS, have been planting over the  
 2 last few years. Correct?  
 3 A. That's correct.  
 4 Q. And those areas that you planted and reshelled,  
 5 they survived very well. That's what you told  
 6 them?  
 7 A. They had survived very well to that point.  
 8 Q. Yes. To that point, which is September 2012?  
 9 A. That's correct.  
 10 Q. And then you further go on to say that not only  
 11 did they survive well, they have normal size  
 12 frequencies, distribution, spat, juveniles,  
 13 adults, mortality; everything is normal on the  
 14 bar that you planted. Right?  
 15 A. I will agree with that.  
 16 Q. Okay. Let's go and see what else you said.  
 17 MR. ECHOLS: Let's go to slide 6,  
 18 please.  
 19 (Whereupon the video was played.)  
 20 BY MR. ECHOLS:  
 21 Q. Do you see that, again, here we are talking about  
 22 on East Hole -- I'm not sure if this is the same  
 23 portion that we were looking at before; but  
 24 you're telling everybody that the bars that had  
 25 been shelled were doing fine. Right?

THE REPORTING GROUP  
Mason & Lockhart

936

1 A. I don't know the context of this statement. I  
 2 would have to see what the but, no, meant.  
 3 Q. Okay. But actually what had happened in between  
 4 was some guy interrupted you, and you said you  
 5 would take questions later. So I took out the  
 6 interruption.  
 7 But, regardless, whatever you're referring  
 8 to, you're saying there are some bars that are  
 9 doing fine. Right?  
 10 A. Let me read this.  
 11 I'm talking about shell. The bars that I'm  
 12 talking about right now are on East Hole. Some  
 13 of you who have already been out there fishing  
 14 know where we're talking about.  
 15 I would -- I would take from this excerpt  
 16 that we're talking about the same planted reef  
 17 that we have been talking about on East Hole.  
 18 Q. Got it.  
 19 MR. ECHOLS: Let's go to slide 7,  
 20 please. You can go ahead and play that.  
 21 (Whereupon the video was played.)  
 22 BY MR. ECHOLS:  
 23 Q. And that's, again, you presenting to the Franklin  
 24 Board of Commissioners and the Apalachicola  
 25 oyster community; and that's what you told them?

THE REPORTING GROUP  
Mason & Lockhart

937

1 A. Yes.  
 2 And you have to understand the context here.  
 3 Most of this listening audience are not real  
 4 receptive to what we have to say. What they want  
 5 us to say is there was oil in there and there was  
 6 dispersant in there and there was a mass  
 7 extinction. What I'm giving them is an  
 8 explanation of why we know that there was not a  
 9 mass extinction because there are living,  
 10 functioning reefs out there at this point.  
 11 Q. And, in fact, you tell them that you looked at  
 12 some of the shell that we planted most recently  
 13 covered with spat. And that's a good, healthy  
 14 thing --  
 15 A. Yes.  
 16 Q. -- right?  
 17 All right.  
 18 MR. ECHOLS: Let's go to the next slide,  
 19 please.  
 20 (Whereupon the video was played.)  
 21 BY MR. ECHOLS:  
 22 Q. And that's true also, is it not, that you were  
 23 identifying to the Franklin County community and  
 24 the commissioners that there was a difference  
 25 from some reefs to others; and, in fact, that the

THE REPORTING GROUP  
Mason & Lockhart

938

1 areas that you had managed and shelled were not  
 2 so severely damaged. Right?  
 3 **A. As some of the natural reefs in the area, yes.**  
 4 **Q.** Right. Let's just put slide 1 back up once more.  
 5 And we don't need to play this at all.  
 6 This is where we started earlier today. And  
 7 you can see how it all relates to the broader  
 8 conversation because you were telling in this  
 9 section of the presentation that -- the community  
 10 that we have got to figure out methods of  
 11 restoring those. Right?  
 12 **A. Yes. We were at a point now where we need to**  
 13 **think more progressively about restoration.**  
 14 **Q.** And here you're talking not just about the little  
 15 smaller reefs or the minor bars. In the prior  
 16 sentence you are explaining that we have lost a  
 17 lot of reef structure on our most important  
 18 reefs, which is very serious. Right?  
 19 **A. That's correct.**  
 20 **Q.** And then the last thing that you tell the  
 21 community, using we because everyone should  
 22 protect the resource, is that for things to come  
 23 back, things are going to have to change as far  
 24 as management is concerned to allow this to come  
 25 back. Correct?

THE REPORTING GROUP  
Mason & Lockhart

939

1 **A. Yes.**  
 2 **Would you like me to explain that?**  
 3 **Q.** No thank you.  
 4 I'm done with this section.  
 5 MR. ECHOLS: Your Honor, I don't know if  
 6 you want to take a lunch break.  
 7 SPECIAL MASTER LANCASTER: Do you have  
 8 an estimate counsel of how -- I'm talking  
 9 to -- yes. Do you have an estimate of how  
 10 long you're going to be with this witness?  
 11 MS. WINE: Well, I don't believe he's  
 12 finished with the examination.  
 13 SPECIAL MASTER LANCASTER: I thought he  
 14 was.  
 15 MR. ECHOLS: Oh, no. I'm sorry, judge.  
 16 I didn't know if you thought that given I was  
 17 at a breaking point, I think I have only --  
 18 let's see. I have just got one more subject  
 19 matter, which should be able to be done, you  
 20 know, in 40 minutes or so.  
 21 I didn't know if you thought --  
 22 SPECIAL MASTER LANCASTER: Four-zero?  
 23 MR. ECHOLS: Four-zero, yes, sir.  
 24 SPECIAL MASTER LANCASTER: We'll take a  
 25 break.

THE REPORTING GROUP  
Mason & Lockhart

940

1 (Time Noted: 12:00 p.m.)  
 2 (Recess Called)  
 3 (Time Noted: 1:00 p.m.)  
 4 MR. ECHOLS: Good afternoon, your Honor.  
 5 SPECIAL MASTER LANCASTER: Good  
 6 afternoon.  
 7 MR. ECHOLS: One thing, with my  
 8 apologies before of not being able to quickly  
 9 identify the section for the question I was  
 10 asking of Dr. Kimbro relating to stone crabs  
 11 versus the oyster drills, I just wanted to  
 12 direct the Court's attention and  
 13 Mr. Berrigan's to -- Dr. Kimbro's direct  
 14 testimony was what I was recalling, paragraph  
 15 85.  
 16 And, again, with apologies. That's what  
 17 I wasn't able to locate before.  
 18 BY MR. ECHOLS:  
 19 **Q.** Dr. Kimbro's direct testimony said, in all our  
 20 experiments, 95 percent of the predation on  
 21 oysters was caused by a predatory snail. And I  
 22 had been asking you, sir, Mr. Berrigan, whether  
 23 your experience with the bay indicated that only  
 24 5 percent of the predation was caused by the  
 25 stone crab or other things. But you said that

THE REPORTING GROUP  
Mason & Lockhart

941

1 was inconsistent with your experience; is that  
 2 correct?  
 3 **A. On Cat Point specifically.**  
 4 **Q.** Okay. Thank you. That was all.  
 5 I want to change topics. The last topic  
 6 here, sir, I want to ask you to explain to the  
 7 Court about landings data, the fishery dependent  
 8 data and what that is. And just as an intro,  
 9 could we please, if you wouldn't mind going back  
 10 to your binder, tab 1, the JX-77. And in your  
 11 August 2012 report -- and this is just to have  
 12 as a reference, if I can find it -- so this is  
 13 page 2 of the report. The one that at the very  
 14 top --  
 15 **A. Yes, I have it.**  
 16 **Q.** Okay. At the top it says in 2011. And then  
 17 there's the table 1 in the middle.  
 18 And I wanted to confirm with you, sir, that  
 19 this table of oyster landings in Apalachicola Bay  
 20 is the -- what you would call fishery dependent  
 21 data; that is, the data that the Fish and  
 22 Wildlife Commission collects about the pounds of  
 23 oysters that are harvested and brought to the  
 24 dock to be sold or eaten; is that correct?  
 25 **A. Yes.**

THE REPORTING GROUP  
Mason & Lockhart



942

1 **Q.** And similarly, in that you can see running down  
 2 the second column, it's measured in pounds of  
 3 meat. Is that right?  
 4 **A. Pounds of meat.**  
 5 **Q.** Pounds of meat, right.  
 6 And this also reports of number of trips,  
 7 which we have talked about before. Correct?  
 8 **A. Correct.**  
 9 **Q.** And the list -- the number of licenses that have  
 10 been issued as well. Correct?  
 11 **A. That's correct.**  
 12 **Q.** And I think in a prior question we talked about  
 13 bags per trip, but that's the next column.  
 14 Right?  
 15 **A. That's correct.**  
 16 **Q.** And looking at the harvesting licenses column,  
 17 can you confirm for me, please, that in 2010 that  
 18 reflects the highest number of harvesting  
 19 licenses that is listed for that 10-year, 11-year  
 20 period?  
 21 **A. Yes, it is.**  
 22 **Q.** Now, the landings data, although it's -- strike  
 23 that.  
 24 The landings data is the official FWC data of  
 25 how many oysters have been harvested. Right?

THE REPORTING GROUP  
Mason & Lockhart

943

1 **A. Yes. I would -- those numbers would have come**  
 2 **from FWC fishery statistics.**  
 3 **Q.** And those are supposed to be live oysters that  
 4 are taken out of the water and brought to the  
 5 dock?  
 6 **A. That's correct.**  
 7 **Q.** And -- but you believe, however, that landings  
 8 data such as these are likely underreported?  
 9 **A. I would -- I would believe that they are**  
 10 **underreported.**  
 11 **Q.** In fact, you would agree with me, would you not,  
 12 that there is a substantial amount of  
 13 underreporting by oystermen?  
 14 **A. I have never tried to make an estimate of -- of**  
 15 **that. I don't know how that could be estimated,**  
 16 **whether it's substantial or not. But I will**  
 17 **agree with the underreporting.**  
 18 **Q.** How about if I rephrase it. You do believe, do  
 19 you not, there is a lot of underreporting?  
 20 **A. I believe that there's underreporting.**  
 21 **Q.** Okay. Mr. Berrigan, not to torture you at this  
 22 point, do you still have your deposition with you  
 23 up there?  
 24 **A. I may have just dropped it over the side. I'm**  
 25 **not sure.**

THE REPORTING GROUP  
Mason & Lockhart

944

1 **Q.** I'll grab it.  
 2 **A. Thanks.**  
 3 **Q.** No problem.  
 4 If I could direct you, please, to page 220,  
 5 line 5.  
 6 **A. Okay.**  
 7 **Q.** Okay, sir. And when I took your deposition, were  
 8 you asked these questions; and did you give these  
 9 answers?  
 10 Question. Did you believe at the time based  
 11 on your --  
 12 (Discussion off the record.)  
 13 BY MR. ECHOLS:  
 14 **Q.** -- based on your experience that there was  
 15 underreporting of landings by fishermen?  
 16 Answer. Yes.  
 17 And did you believe that there was a  
 18 substantial amount of underreporting by  
 19 oystermen?  
 20 Answer. I do believe there is a lot of  
 21 underreporting.  
 22 Was that your testimony, sir?  
 23 **A. Okay. It is.**  
 24 **Q.** So that means that these numbers that we have on  
 25 the screen that are the official Fish and

THE REPORTING GROUP  
Mason & Lockhart

945

1 Wildlife pounds of meat that are brought to the  
 2 dock in your opinion are even higher in reality  
 3 as far as the pounds of oysters that are taken  
 4 out of the bay and harvested. Correct?  
 5 **A. I would -- in my opinion, that is correct; but we**  
 6 **always use the official statistical data in our**  
 7 **reporting. I don't -- I don't try to indicate**  
 8 **that there's a lot of underreporting or there's**  
 9 **substantial underreporting. We use these values.**  
 10 **Q.** Right. If you wouldn't mind turning, sir,  
 11 please, to tab 10 in your binder, which is binder  
 12 No. 2. And at binder No. 2, for the record, this  
 13 is GX-498. Do you have that, sir?  
 14 **A. I have it.**  
 15 **Q.** And do you see at the top here, this is an e-mail  
 16 from you dated December 4, 2012?  
 17 **A. I see it.**  
 18 **Q.** And if you need to, for context, please do refer  
 19 to the earlier part of the e-mail, which is  
 20 Mr. Steve Brown asking you to explain why there's  
 21 a difference of about 24 percent in monitoring  
 22 station reports. Do you see that?  
 23 **A. Yes.**  
 24 **Q.** And in your response to Mr. Brown you say, Steve,  
 25 I think that all landings were required to pass

THE REPORTING GROUP  
Mason & Lockhart

946

1 through check stations, so I believe that the  
 2 check stations are a reliable indicator of actual  
 3 landings. I would suspect that the reported  
 4 landings would be less, since reporting would not  
 5 be 100 percent. I also believe that the  
 6 discrepancy you saw represents an actual failure  
 7 to report landings. Under normal circumstances  
 8 the discrepancy probably exceeds 24 percent.  
 9 Dealers were probably less likely to underreport  
 10 since they knew that landings were being  
 11 monitored.  
 12 That's what you wrote to Mr. Brown?  
 13 **A. Yes.**  
 14 **Q.** And there you are referring, are you not, sir, to  
 15 the period after Hurricane Elena and Kate during  
 16 the time that the State was taking steps to  
 17 restore the oyster fishery?  
 18 **A. That's correct.**  
 19 **Q.** And at that point in time, the State of Florida  
 20 put in place check stations. Right?  
 21 **A. That's correct.**  
 22 **Q.** And when the check stations were in place,  
 23 oystermen, when they came off the bay with their  
 24 harvest, had to go through the check station to  
 25 have their harvest weighed and examined to make

THE REPORTING GROUP  
Mason & Lockhart

947

1 sure that it was compliant with the size  
 2 requirements as well as to have the proper  
 3 weight. Right?  
 4 **A. Size requirement primarily, I think.**  
 5 **Q.** Okay.  
 6 **A. And bag limits.**  
 7 **Q.** And bag limits. I'm sorry, and bag limits, too.  
 8 But since 1990 or -- oh, I'm sorry. You said  
 9 since 1991 there haven't been check stations --  
 10 there were not check stations from 1991 up until  
 11 December 2012 in place. Right?  
 12 **A. No, there were not.**  
 13 **Q.** And as a result, you're explaining to Mr. Brown  
 14 that you would expect that some of the oystermen  
 15 and dealers are not reporting all of the  
 16 landings. Right?  
 17 **A. I would suspect -- what I have said here is an**  
 18 **effort to explain the discrepancy. The most**  
 19 **easy-to-accept discrepancy would be that some**  
 20 **oystermen were still not reporting, even though**  
 21 **they went through the check stations.**  
 22 **Q.** And --  
 23 **A. Which meant that they had to fill out a trip**  
 24 **ticket, which they may not have filled out the**  
 25 **trip tickets or the trip tickets could have been**

THE REPORTING GROUP  
Mason & Lockhart

948

1 **less. I'm saying that that's not an unusual**  
 2 **assumption to assume that some of them were not**  
 3 **reporting.**  
 4 **Q.** And it's also, as you testified earlier, not an  
 5 unusual assumption; and it was your belief that  
 6 there is a lot of underreporting?  
 7 **A. I -- it is my belief that there is or there was.**  
 8 **Q.** I'm sorry, sir. When we just went through --  
 9 when we had your deposition in -- was it  
 10 January -- February -- February of this year,  
 11 sir, that's when you testified under oath that  
 12 you do believe there is a lot of underreporting.  
 13 Right?  
 14 **A. Well, there -- I'm sorry, yes. I do both. But I**  
 15 **thought we were talking about this particular**  
 16 **e-mail right here when I said was. No, I believe**  
 17 **that there's underreporting consistently, yes.**  
 18 **Q.** Would you mind, sir, please turning to tab 11 in  
 19 your binder. Do you have that, sir?  
 20 **A. Oh, I have it. I'm sorry.**  
 21 **Q.** No problem.  
 22 And tab 11 is Joint Exhibit 78, JX-78. And  
 23 if you would look, please, at -- and I guess for  
 24 context here, we have to go to the back, the  
 25 second page first, since it's a string of e-mails

THE REPORTING GROUP  
Mason & Lockhart

949

1 again. And if we go to the middle e-mail there  
 2 from Steve Brown to David Heil -- and you know  
 3 David Heil. Right?  
 4 **A. Yes.**  
 5 **Q.** And David Heil actually, when you started at  
 6 FDACS, he was your supervisor?  
 7 **A. That's correct.**  
 8 **Q.** And then at some point he transferred over to  
 9 FWC; is that correct?  
 10 **A. Yes. Right.**  
 11 **Q.** And here Steve Brown is e-mailing to David Heil.  
 12 And there's an attachment here. And I'm just  
 13 doing this then for the context.  
 14 He says, David, attached is a summary showing  
 15 oyster landings from 2007 to 2012, preliminary,  
 16 for Franklin County as well as total Gulf  
 17 landings. In determining completeness for 2012,  
 18 I compared monthly landings to 2011, second tab.  
 19 You can see that monthly harvest in 2012 far  
 20 outpaces 2011, so I'm not sure data through June  
 21 2012 are yet complete. But most appear to be in.  
 22 There is a fair amount for July with some August  
 23 data as well.  
 24 Do you see that?  
 25 **A. Yes.**

THE REPORTING GROUP  
Mason & Lockhart

950

1 Q. And this gets forwarded from Mr. Brown, then from  
 2 Mr. Heil to Mr. Estes. And Mr. Estes, as you go  
 3 up a notch here in the e-mail string, Mr. Estes  
 4 is an assistant director of FWC?  
 5 **A. He's an assistant division director of Marine  
 6 Fisheries Management, I believe.**  
 7 Q. And that's part of?  
 8 **A. That's FWC.**  
 9 Q. Yes, thanks. Part of FWC.  
 10 And then you have got the e-mail from you  
 11 there above that, from Mark Berrigan. And you're  
 12 e-mailing Joe Shields and Leslie Palmer. And if  
 13 you would just look at the first two sentences  
 14 there. Before I flip to the back and ask you  
 15 some questions, you say, FYI, interesting how  
 16 many oysters were harvested so far in 2012. See  
 17 the by-month comparisons for landings and trips.  
 18 Do you see that?  
 19 **A. Yes.**  
 20 Q. All right. Now, to see the by-month comparisons  
 21 for landings and trips we have to go in a couple  
 22 of pages to where the attachment is of the Excel  
 23 chart. And it's the next page after this. So  
 24 this would be the last page of that document, I  
 25 believe.

THE REPORTING GROUP  
Mason & Lockhart

951

1 Are you at where we have --  
 2 **A. Yes.**  
 3 Q. -- the 2011 running down with pounds and trips in  
 4 2012?  
 5 **A. Yes.**  
 6 Q. Okay. And you understand this to be the by-month  
 7 landings data that was being provided to Mr. Heil  
 8 that he requested?  
 9 **A. I would believe that's the case.**  
 10 Q. And do you read this as I do that if you look at  
 11 the month column, going down the second column to  
 12 the left, that those would be the -- 1 would be  
 13 January; 2, February; 3, and so on?  
 14 **A. Yes. I agree.**  
 15 Q. And then we were looking at the table you had in  
 16 your -- in your August 2012 report. Here we also  
 17 have pounds like the FWC pounds reported?  
 18 **A. Yes.**  
 19 Q. And we also have trips. Correct?  
 20 **A. That's correct.**  
 21 Q. And so 1 being January in 2011; and going across,  
 22 then we have got the column for 2012. Correct?  
 23 **A. That's correct.**  
 24 Q. Therefore, it would be your understanding of this  
 25 first row to be that in January 2012, according

THE REPORTING GROUP  
Mason & Lockhart

952

1 to the official FWC data, 332,556 pounds of  
 2 oysters were harvested?  
 3 **A. That's correct.**  
 4 Q. And that compares to January 2011, the prior  
 5 year, in which there were only 160,768 pounds  
 6 harvested. Right?  
 7 **A. That's correct.**  
 8 Q. So in January 2012, more than double the amount  
 9 of oysters --  
 10 **A. That's correct.**  
 11 Q. So I take it if more than double the amount of  
 12 oysters were harvested, there must have been a  
 13 lot of live oysters available?  
 14 **A. That would certainly indicate it. But it looks  
 15 like they might be the same amount. I mean, the  
 16 number of trips is about twice as much; and the  
 17 number of landings is about twice as much, just  
 18 at first glance at that.**  
 19 Q. Okay. But we can agree that there were twice --  
 20 more than twice as many pounds of oysters --  
 21 **A. Landed.**  
 22 Q. -- taken out of the bay and landed?  
 23 **A. That's correct.**  
 24 Q. Similarly, if we go down a month to February of  
 25 2012, we have 289,000-and-change of oysters that

THE REPORTING GROUP  
Mason & Lockhart

953

1 are harvested. Correct?  
 2 **A. Yes.**  
 3 Q. And if you look at February in the prior year, in  
 4 2011 it's 199,000. Right?  
 5 **A. Okay.**  
 6 Q. So we're not quite 100,000 more; but it's more --  
 7 substantially more. Right?  
 8 Would you agree with me?  
 9 **A. I agree it's more.**  
 10 Q. Okay. And, similarly, if you look at March, you  
 11 have 283,896 compared to 219,000. And I guess we  
 12 can look at April and May. And would you agree  
 13 with me that then during the first five months,  
 14 in every month, January through May of 2012,  
 15 there were more pounds of oysters harvested than  
 16 in the same five months in 2011?  
 17 **A. Yes. I agree.**  
 18 Q. Now, this data was identified as being  
 19 preliminary, do you recall from the e-mail,  
 20 because we don't have it for the entirety of the  
 21 year. Right?  
 22 **A. Well, it's preliminary in a lot of ways. Usually  
 23 the annual data is not completely confirmed until  
 24 about six to nine months into the following year.  
 25 So the asterisks would stay on that data for**

THE REPORTING GROUP  
Mason & Lockhart

954

1 **2012. But that's -- it's --**  
 2 **Q.** Luckily, since now we're in 2016, we have final  
 3 data --  
 4 **A. I would think so.**  
 5 **Q.** -- from Fish and Wildlife --  
 6 **A. I would think so.**  
 7 **Q.** -- since it runs through 2012.  
 8 MR. ECHOLS: And this is a -- it's an  
 9 Excel file or a column file; so, your Honor,  
 10 I had to convert it into a bar chart in order  
 11 to be able to see it. But it's GX-1248.  
 12 MS. WINE: Your Honor, I just want to  
 13 note that this is the first time we're seeing  
 14 this.  
 15 MR. ECHOLS: It is -- I'm sorry, judge.  
 16 It's listed on the exhibit list.  
 17 And just to be clear, your Honor, this  
 18 is the official Fish and Wildlife landings  
 19 data that I put into a bar chart because,  
 20 otherwise, all you have is a list of numbers.  
 21 And the -- my understanding is that the  
 22 parties -- both parties have agreed that  
 23 there are a number of large data sets that  
 24 would be unwieldy to actually hand a big  
 25 stack of Excel things.

THE REPORTING GROUP  
Mason & Lockhart

955

1 So as long as it is replicable and I  
 2 provide the time periods of the specific data  
 3 that's provided, they have access; and they  
 4 know what all this is. It's on the exhibit.  
 5 MS. WINE: Your Honor, we haven't had a  
 6 chance to check that. I see that he cites a  
 7 source here. We have no idea who compiled  
 8 this, who made the chart. We have had no  
 9 ability to assess it.  
 10 SPECIAL MASTER LANCASTER: You may  
 11 proceed.  
 12 BY MR. ECHOLS:  
 13 **Q.** Now, Mr. Berrigan, as I said, what we have got is  
 14 the official Fish and Wildlife landings summary  
 15 data. And we have pulled out here, I think -- if  
 16 my math is right, it's about 25 years worth of  
 17 that data. Do you see that?  
 18 **A. Yes.**  
 19 **Q.** Now, could you first -- first, one thing, just  
 20 generally would you agree with me that looking at  
 21 this data, that the harvest rate is not the same  
 22 in every year. I mean, there is a degree of  
 23 variation from year to year?  
 24 **A. Harvest rate?**  
 25 **Q.** Well, the -- let's say the amount harvested.

THE REPORTING GROUP  
Mason & Lockhart

956

1 **A. Yes. The actual landings is different, yes.**  
 2 **Q.** Yes, sir. So, for instance, if you go back to  
 3 1989, it's as low as 820,000, whereas, in 2012  
 4 it's 3.03 million. Right?  
 5 **A. Yes. That's what it looks like from this chart.**  
 6 **Q.** And also, would you agree that based on the  
 7 official landings data in 2011 and 2012, those  
 8 are the two highest amounts of landings of  
 9 oysters over the past 25 years?  
 10 **A. Yes. Based on this chart I would agree.**  
 11 **Q.** And this is at a time when your reports, as far  
 12 as the resource assessment for 2011 and 2012,  
 13 have indicated that the abundance, the  
 14 availability of the population of oysters is  
 15 expected to be either stable or declining.  
 16 Correct?  
 17 **A. I'm not sure I followed that. But I -- what I**  
 18 **will say is, yes, my reports suggest that in**  
 19 **this -- with intensive harvesting, that there**  
 20 **will be a decline in that final season there,**  
 21 **that 2012-2013 season.**  
 22 **Q.** Right. We had the 2011 report that said that --  
 23 **A. Yes. They're both -- both were indicators of**  
 24 **declining landings.**  
 25 **Q.** Right. And you recall because there was the

THE REPORTING GROUP  
Mason & Lockhart

957

1 caveat that you had put in there that said that  
 2 if harvesting continues at this level, the  
 3 resource may not be able to keep up. Do you  
 4 recall that?  
 5 **A. I recall that. And if we had that data, it would**  
 6 **confirm what I'm saying.**  
 7 **Q.** It would confirm -- and this would confirm that  
 8 the landings data -- official landings data of  
 9 FWC, which we pulled from the government itself,  
 10 that these two years when the oyster population  
 11 is declining, according to your surveys, these  
 12 two years, the very most amounts in pounds of  
 13 oysters are being pulled out of the bay; is that  
 14 right?  
 15 **A. The amount here, yes, as shown is the highest.**  
 16 **But we don't have -- you're not showing the data**  
 17 **for the 2013 year, which would have been the end**  
 18 **of the 2012-2013. You would have seen a very**  
 19 **marked decline in these production numbers. And**  
 20 **that's what I was predicting.**  
 21 **Q.** Well, exactly. Particularly because the intense  
 22 commercial harvesting had continued?  
 23 **A. The same level of harvesting or more**  
 24 **harvesting -- the predictability of the declining**  
 25 **number of harvests would be confirmed if we had**

THE REPORTING GROUP  
Mason & Lockhart

958

1 **that data. That's -- that's my statement there.**

2 **Q.** One other thing that's taking place or not taking

3 place, rather, around this time --

4 MR. ECHOLS: Can we flip back to JX-150,

5 please.

6 BY MR. ECHOLS:

7 **Q.** And JX-150 is -- tab 3. If you go to tab 3 in

8 your binder, please?

9 **A. Which binder?**

10 **Q.** Binder No. 1, please. And this is the document

11 that on the first page says Input For Mark's

12 Report, the notes that you had taken down. Do

13 you recall that?

14 **A. Yes.**

15 **Q.** If we could please go to the second page of that

16 document.

17 **A. I have it.**

18 **Q.** And I just wanted to confirm for you; we talked

19 earlier about the importance of restoration and

20 reshelling. Correct?

21 **A. Yes.**

22 **Q.** And at the very bottom here of your notes for

23 your report, you include that Cat Point/East Hole

24 and Dry Bar/St. Vincent, no cultching in over a

25 decade. Do you see that?

THE REPORTING GROUP  
Mason & Lockhart

959

1 **A. No, I don't. But it sounds like an accurate**

2 **statement.**

3 **I don't know where you are.**

4 **Q.** I'm at the very, very, very, very bottom.

5 **A. Okay.**

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

7 **A. Yes, I see it now.**

8 **Q.** And you said that sounds like an accurate

9 statement. These -- the primary producing

10 bars for the bay, Dry Bar/St. Vincent and

11 Cat Point/East Hole didn't have any substantial

12 cultching in over a decade at this point.

13 Correct?

14 **A. That's -- Cat Point was -- probably was never**

15 **cultched in 100 years.**

16 **Q.** Okay. All right. Mr. Berrigan, you would agree

17 with me, would you not, that having gone through

18 these reports for 2011 and 2012, we saw that for

19 two years in a row these official resource

20 assessment reports you had were warning about the

21 high level of harvesting taking place. Correct?

22 **A. It warned that if intensive harvesting occurs,**

23 **the resource will not sustain harvesting through**

24 **that winter harvesting period.**

25 **Q.** And that is precisely what your report said, that

THE REPORTING GROUP  
Mason & Lockhart

960

1 intensive harvesting was taking place. Correct?

2 **A. It was taking place, and the numbers that you put**

3 **up there showed it.**

4 **Q.** And concentrated harvesting and continuous

5 harvesting; is that right?

6 **A. Concentrated and continuous harvesting, it's**

7 **continuous for nine months --**

8 **Q.** Yes?

9 **A. -- if the oysters are available.**

10 **Q.** You do recall your report says continuous

11 harvesting. Right?

12 **A. I -- I'll buy that.**

13 **I'm getting --**

14 **Q.** I'm sorry. I couldn't hear you, sir?

15 **A. I said I will agree with that.**

16 **I mean, you have shot me full of a lot of**

17 **statements here; and I'm not keeping up with**

18 **every one of them quite as well as you are.**

19 **Go ahead.**

20 **Q.** Okay. Would you also agree with me that over

21 this two years in a row, your official reports,

22 which were public and made available to FWC,

23 expressed concerns about the sub-legal harvesting

24 taking place?

25 **A. Yes.**

THE REPORTING GROUP  
Mason & Lockhart

961

1 **Q.** And they further noted that the sub-legal

2 harvesting was not being enforced against.

3 Right?

4 **A. It was my opinion that sub-legal harvesting was**

5 **going on. I do not know for fact whether or not**

6 **it was underreported or even occurring.**

7 **That was the word on the street. That's what**

8 **I have been told. That is my opinion that it was**

9 **occurring. But I was not out there measuring or**

10 **counting or doing any of those things to prove**

11 **one way or the other.**

12 **Q.** And, similarly, we saw in at least four, perhaps

13 five occasions that you were commenting on this

14 "use it or lose it" approach to harvesting

15 oysters. Right?

16 **A. Yes. And I -- and you have to understand what**

17 **"use it or lose it" means in this context.**

18 **This -- when you have -- when you're at risk of**

19 **losing the whole crop, you might as well harvest**

20 **it. There's no point in trying to salvage it,**

21 **save it, or do anything like that because natural**

22 **mortality is going to wipe it out. You might as**

23 **well get the economic benefit from it.**

24 **Leaving it there does not mean that it's**

25 **going to be available to the fishery at another**

THE REPORTING GROUP  
Mason & Lockhart

962

1 **time. It will be lost to the fishery. That's**  
 2 **what "use it or lose it" means.**  
 3 **Q.** In 2011 and 2012 when the oil hadn't reached the  
 4 bay, "use it or lose it" to you still meant that  
 5 all the oysters should be harvested?  
 6 **A. If they were saleable. And we had these**  
 7 **discussions. If they were saleable oysters,**  
 8 **would it be better to leave them there to die; or**  
 9 **would it be an economic advantage to harvest**  
 10 **them?**  
 11 **Although this was never an official policy,**  
 12 **there were discussions; and the discussions would**  
 13 **lean toward it's better to use them than lose**  
 14 **them.**  
 15 **Q.** By the time you retired from DACS in April 2013,  
 16 would it be accurate to say that FWC had never  
 17 closed the bay entirely from harvesting, at least  
 18 from this 2010, the oil spill, to April 2013 when  
 19 you left FWC, never?  
 20 **A. Would it be entirely true to say what again,**  
 21 **please?**  
 22 **Q.** That FWC never entered an Executive Order closing  
 23 the bay from harvesting.  
 24 **A. No. The bay was never closed to harvesting.**  
 25 **It's not really a management decision to do that.**  
 THE REPORTING GROUP  
 Mason & Lockhart

963

1 **Q.** Does --  
 2 **A. For the most part by that time, the depletion**  
 3 **event had proceeded so far that most of the**  
 4 **oysters were already dead. Fishermen are not**  
 5 **going to go into areas that are already depleted.**  
 6 **So it doesn't -- it's really not a management**  
 7 **decision to close those areas because they're not**  
 8 **going to go to them. The oysters are already**  
 9 **gone. They're already dead.**  
 10 **Q.** Do you recall, sir, back in the 1980's after  
 11 Hurricane Elena had decimated the oyster  
 12 population that there was, indeed, a period of  
 13 time when FWC closed the entire bay from  
 14 harvesting?  
 15 **A. Yes, there was.**  
 16 **Q.** And that was in order to assist with the recovery  
 17 of the resource having been decimated. Correct?  
 18 **A. That's correct.**  
 19 **Q.** And at this point in time with the resource being  
 20 at least depleted, FWC did not close the bay  
 21 entirely at all. Right?  
 22 **A. No. But it was a management option that was**  
 23 **discussed that closures would help accelerate**  
 24 **recovery. I mean, it is -- it is an option that**  
 25 **could be used. It wasn't used in the process or**  
 THE REPORTING GROUP  
 Mason & Lockhart

964

1 **in the progress of this depletion event, but**  
 2 **neither was it in 1985. That -- those closures**  
 3 **were introduced and adopted as part of a recovery**  
 4 **plan.**  
 5 **Q.** Right. And the bay was in need of recovery at  
 6 this point in time; was it not?  
 7 That's what you explained to the Franklin  
 8 County Board of Commissioners. Right?  
 9 **A. Yes, it's very much in need of recovery.**  
 10 **Q.** And --  
 11 **A. But recovery couldn't begin until conditions were**  
 12 **reasonable to assume some sort of -- some level**  
 13 **of success. There was no recovery plan in place**  
 14 **when I was talking to those people.**  
 15 **Q.** You would agree with me, would you not, sir, that  
 16 closing the bay probably would have accelerated  
 17 recovery?  
 18 **A. There's been -- as far as I know, we haven't**  
 19 **started a recovery process yet. I was -- I was**  
 20 **actually gone.**  
 21 **I did make some notes and provided management**  
 22 **options. And those management options would have**  
 23 **included area closures for restored areas. But**  
 24 **none of that had been implemented at the time**  
 25 **that I was there. And I don't know that a true**  
 THE REPORTING GROUP  
 Mason & Lockhart

965

1 **recovery plan has been implemented to this point.**  
 2 **Q.** Right. But you would agree with me, would you  
 3 not, that one view would be that closing the bay  
 4 would accelerate recovery?  
 5 **A. In the broadest stroke, yes. But it would -- it**  
 6 **wouldn't accelerate recovery during a depletion**  
 7 **event.**  
 8 **Q.** All right. Could you --  
 9 **A. Those are two different things with different**  
 10 **timetables. That depletion event would**  
 11 **essentially have to come to an end before you**  
 12 **would start recovery.**  
 13 **I left in 2013. The depletion event was**  
 14 **still ongoing. And that's -- that's when -- when**  
 15 **you follow those numbers out and get into 2013,**  
 16 **then you will start to understand how that**  
 17 **declaration of disaster was determined and funded**  
 18 **and those kind of things. We're cutting this off**  
 19 **in -- before it reaches its final culmination.**  
 20 **Q.** Sir, would you mind going to page 240 of your  
 21 deposition transcript, please.  
 22 So I'm not talking about then. I'm talking  
 23 about February 19, 2016, when you provided your  
 24 sworn testimony.  
 25 **A. Which number?**  
 THE REPORTING GROUP  
 Mason & Lockhart

1 **Q.** Page 240, please, line 6 --  
 2 **A. Okay.**  
 3 **Q.** -- and where you were asked this question, and  
 4 did you give this answer.  
 5 Question. Have you had any conversations  
 6 with Mr. Knickerbocker -- your successor -- or  
 7 anyone -- the "your successor" part I added.  
 8 Have you had any conversations with  
 9 Mr. Knickerbocker or anyone else within the State  
 10 about whether it may have assisted the recovery  
 11 of the resource to close the bay more  
 12 significantly than was done?  
 13 There is an objection.  
 14 Answer. I have not had any discussions with  
 15 Mr. Knickerbocker about it. I have certainly had  
 16 discussions about it with oyster dealers and  
 17 processors and oystermen and things like that.  
 18 That is one view, that closing the bay would  
 19 accelerate recovery. And that's probably very  
 20 true.  
 21 Was that your testimony, sir?  
 22 **A. And it still would be. That is not what we were**  
 23 **discussing, but that would still be my testimony,**  
 24 **as stated here.**  
 25 **At the time that this conversation took place**  
 THE REPORTING GROUP  
 Mason & Lockhart

1 have a minute, I think we have another map  
 2 that we would like to set up by the witness,  
 3 if that's okay.  
 4 SPECIAL MASTER LANCASTER: Please.  
 5 MS. WINE: And, your Honor, just for the  
 6 record, the map that they are setting up is  
 7 just a blow-up of a map that was included in  
 8 Mr. Berrigan's prefiled direct testimony at  
 9 page 9 and then, again, attached at the back  
 10 of his direct testimony.  
 11 REDIRECT EXAMINATION  
 12 BY MS. WINE:  
 13 **Q.** Good afternoon, Mr. Berrigan.  
 14 **A. Good afternoon.**  
 15 **Q.** I would like to start with the September 2012  
 16 Franklin County Commissioners meeting that  
 17 Georgia's counsel asked you about and showed you  
 18 some video clips from. Do you know what I'm  
 19 talking about?  
 20 **A. Yes.**  
 21 **Q.** And, sir, they showed you just selective portions  
 22 of that meeting that was videotaped. Correct?  
 23 **A. Yes.**  
 24 **Q.** And, in fact, I don't know if you still have --  
 25 were you handed these individual --  
 THE REPORTING GROUP  
 Mason & Lockhart

1 **in the deposition, I was representing the Oyster**  
 2 **Dealers Association. And they strongly were in**  
 3 **favor of bay closures during recovery. But this**  
 4 **was -- this was well after 2013 -- 2012 --**  
 5 **2012-2013 in the harvesting season. So they're**  
 6 **not really on the same time scale, these two**  
 7 **discussions.**  
 8 **Q.** And at the time of your deposition, sir, in  
 9 February when I took your deposition, you were  
 10 not being paid by the State of Florida as a  
 11 consultant. Were you?  
 12 **A. I was not.**  
 13 **Q.** And today, as you're testifying in court and  
 14 providing your direct testimony, you are now a  
 15 paid consultant for the State of Florida.  
 16 Correct?  
 17 **A. Not during this testimony.**  
 18 **Q.** No. But since then -- since your deposition, you  
 19 were hired as a consultant. And, in fact, I  
 20 believe it's paragraph 1 of your direct  
 21 testimony, you are a paid consultant?  
 22 **A. I was paid to provide the pretrial direct**  
 23 **testimony, if I said that correctly.**  
 24 **Q.** Okay. Thank you.  
 25 MS. WINE: Your Honor, if we could just  
 THE REPORTING GROUP  
 Mason & Lockhart

1 **A. Yes.**  
 2 **Q.** -- slides?  
 3 The last one that has page 8 in the bottom  
 4 right-hand corner --  
 5 **A. Yes.**  
 6 **Q.** Let me know; do you have that one in front of  
 7 you?  
 8 **A. Yes.**  
 9 **Q.** And, sir, you will recall that they just played  
 10 that snippet right there without any context  
 11 around it. Correct?  
 12 **A. Yes.**  
 13 MS. WINE: And, your Honor, if I may, we  
 14 took the liberty of preparing a full  
 15 transcription of that meeting as opposed to  
 16 just the portions that are depicted on these  
 17 slides that Georgia's counsel handed out.  
 18 May I hand these out, your Honor?  
 19 SPECIAL MASTER LANCASTER: Please.  
 20 MS. WINE: And we have marked it as a  
 21 new exhibit, FX-875.  
 22 BY MS. WINE:  
 23 **Q.** Now, sir, if you would indulge me, I would like  
 24 to play exactly what you said right after this  
 25 snippet that they played that's depicted on  
 THE REPORTING GROUP  
 Mason & Lockhart

970

1 No. 8.

2 MS. WINE: So if you would, Mr. Walton,

3 could you play clip No. 5.

4 (Whereupon the video was played.)

5 BY MS. WINE:

6 Q. Sir, is it still your view today that the primary

7 problem that caused the depletion event in 2011

8 and 2012 is the lack of fresh water?

9 A. **Yes, it is.**

10 Q. And, sir, you went on -- actually, before that

11 statement you explained in that meeting the

12 progression that you saw and the reasons why you

13 came to that conclusion. Do you recall that?

14 A. **I don't recall it, but it would have made sense**

15 **for me to make that effort.**

16 Q. Okay. Let's see if we can help you out with that

17 memory.

18 MS. WINE: If you would, Mr. Walton,

19 please play clip 2.

20 (Whereupon the video was played.)

21 BY MS. WINE:

22 Q. And, sir, is that consistent with your

23 recollection that in your September 2011 oyster

24 assessment report when you first began to see the

25 depletion event, you identified the lack of fresh

THE REPORTING GROUP  
Mason & Lockhart

971

1 water and the need for some major changes in

2 freshwater input as a critical issue?

3 A. **Yes.**

4 Q. And, sir, just to continue where you talk about

5 the progress --

6 MS. WINE: If we could, Mr. Walton,

7 please play clip 3.

8 (Whereupon the video was played.)

9 BY MS. WINE:

10 Q. Sir, in what you just listened to, is that

11 consistent with your recollection of how the

12 depletion event progressed throughout the bay?

13 A. **Yes, it is.**

14 Q. And, sir, if you could, since you're the first

15 witness actually speaking about the bay and the

16 oyster bars, if the Special Master would allow

17 this, could you show us on that map -- and I

18 realize that nobody is going to be able to read

19 the names of the bars on that maybe. But show us

20 on that map, which, again, is contained in your

21 prefiled direct, how the depletion event

22 progressed and its impact in the various areas

23 where we find bars.

24 MR. ECHOLS: Your Honor, may I come over

25 to the side so I can see this?

THE REPORTING GROUP  
Mason & Lockhart

972

1 SPECIAL MASTER LANCASTER: Certainly.

2 THE WITNESS: Do you want me to do it on

3 that screen?

4 MR. ECHOLS: Oh, sure.

5 MS. WINE: I would say whatever is

6 easier for you and for the Special Master.

7 SPECIAL MASTER LANCASTER: Either way.

8 MR. ECHOLS: If you could, that would be

9 great. Thank you.

10 A. **I believe that the scenario that I'm about to run**

11 **through is consistent with what I have written in**

12 **those reports as far as the effects of high**

13 **salinity in the bay.**

14 SPECIAL MASTER LANCASTER: Mr. Berrigan,

15 will you keep your voice up so the reporter

16 can get that.

17 THE WITNESS: I'll do my best, sir.

18 A. **Let me give a brief description of the bay**

19 **system. You may have already had this; you may**

20 **not. But typically when I'm talking about**

21 **Apalachicola Bay, it includes the entire bay**

22 **system. The system includes St. Vincent Sound,**

23 **which is to here; Apalachicola Bay, which is**

24 **here. I speak of this as being eastern**

25 **Apalachicola Bay, which is the summer harvesting**

THE REPORTING GROUP  
Mason & Lockhart

973

1 **season area; and western Apalachicola Bay, which**

2 **is the western portion of this bay. This area is**

3 **called St. George Sound, and it contains the**

4 **reefs that we have talked the most about today,**

5 **Cat Point Bar and East Hole. These are a**

6 **contiguous bar that run north and south across**

7 **the entire bay system.**

8 **This is a new bridge that you can see there.**

9 **And if -- if it was drawn on here, you would see**

10 **where the Intracoastal Waterway comes out of the**

11 **river, come downs here to a point above Hotel**

12 **Bar, and then goes back to the east and out that**

13 **way.**

14 **And fresh water -- the freshwater source**

15 **being all of this area, East Bay River, St.**

16 **Mark's, Apalachicola River, all of these**

17 **tributaries provide fresh water into here.**

18 **Typically there's a prevailing wind and tidal**

19 **action that moves from east to west in the bay**

20 **during most of the season. So some fresh water**

21 **is swept into the mouths and some fresh water**

22 **that comes out of here on the tide is swept to**

23 **the east.**

24 **You can see these reefs right here, the main**

25 **reefs, are very close to where the fresh water is**

THE REPORTING GROUP  
Mason & Lockhart



974

1 going to be the highest.

2 Where we saw this event begin -- and in

3 several of those reports it talks about even in

4 2010 we had quit sampling St. Vincent Bar. At

5 one time we had four sampling stations along

6 St. Vincent Bar here. That would have been from

7 the southern end to the northern end.

8 By 2011, the winter harvesting season, this

9 bar was eliminated from sampling at all. There

10 were no adult oysters that we found in our

11 sampling stations. So we don't sample when

12 there's nothing there. That's not the aim of our

13 sampling was not to determine cause and effects

14 and things like that. Our -- the point of our

15 sampling was to determine where there are oysters

16 and how many are there so we can tell the

17 fishermen essentially where they are. We weren't

18 involved in 20 years of telling them where they

19 weren't.

20 The -- this area across here is Dry Bar,

21 which we talked about; North Spur, which is

22 another area that we talked about.

23 But in -- when the samples were taken in July

24 of 2012 -- and this is a year after the

25 photographs and stuff that we talked about --

THE REPORTING GROUP  
Mason & Lockhart

975

1 close to a year -- there were pockets in here

2 where oysters were still good, particularly on

3 North Spur which had been recently restored.

4 Green Point, that had been recently restored.

5 These two were the principal areas that we're

6 talking about that had -- there were some on

7 these smaller bars back here were still okay.

8 So this area right here was still receiving

9 some influence from fresh water.

10 But when we went back out again in October

11 and November of 2012 and looked at these after we

12 had already predicted that things were going to

13 get worse, the mortality event had now

14 encompassed all the St. Vincent Sound.

15 Previously we talked about Scorpion and those

16 that were out there that we -- that were -- where

17 it was first noticeable. Now, the entire area

18 was essentially depleted of oysters, including

19 oyster leases that weren't being fished, and

20 specifically this lease, which actually had some

21 freshwater source, was completely depleted.

22 These inner tidal reefs I walked along, there

23 weren't any live oysters on them.

24 And what we saw and what we observed

25 throughout this movement or progression of this

THE REPORTING GROUP  
Mason & Lockhart

976

1 depletion event was a large number of conchs.

2 And I'm just going to use the word conchs

3 because that's what we use to commonly call that.

4 By November, the last time that I went out

5 there to look at these, we were doing tong

6 samples. And we came all the way to the jetties.

7 Now, the Intracoastal Waterway cuts the

8 jetties. It's right there. They're right on the

9 edge of the Intracoastal Waterway. And all of

10 these oysters -- 95 percent of these oysters were

11 now dead. And so that whole thing had progressed

12 that way.

13 What -- what this really involves then is

14 there's no more fishing out here. People -- the

15 fishing fleet had pretty much moved to this spot

16 at the beginning of the summer harvesting season

17 in 2012; and they essentially stayed there. When

18 they came back out here, there was nothing there.

19 So we have compressed all of the fishing that

20 could have been on all of these bars to right

21 here. This is the area where we're fishing.

22 And much of the conversation that we have had

23 and discussion that we have had about intensive

24 harvesting was the inevitable consequence of not

25 being able to fish anywhere else. Of course,

THE REPORTING GROUP  
Mason & Lockhart

977

1 they're going to fish these stocks down. That

2 was inevitable.

3 And we see that and we see the landings up;

4 that's good. The value was extremely high,

5 highest they have ever had. The demand was the

6 highest it's been, because the other states

7 weren't producing.

8 So, yes, there was extreme harvesting

9 pressure. Did it have a debilitating effect?

10 Yes, it did, on those standing stocks.

11 But the harvesting pressure in those two

12 years had nothing to do with the mass depletion

13 that took place in this bay and all of this other

14 area. And it is my opinion that high salinity

15 based on benthic ecology that we observed was

16 responsible for the depletion event throughout

17 the bay.

18 Q. Thank you, sir. Unless the Special Master has

19 something else, you can take your seat again.

20 And, sir, if you would indulge me with one

21 more piece of this video.

22 You went on to explain the importance of

23 fresh water after you identified it as the

24 biggest problem. Again, this is the last clip

25 from the Franklin County Commission meeting in

THE REPORTING GROUP  
Mason & Lockhart

978

1 September of 2012.

2 MS. WINE: Mr. Walton, please play clip 4.

3 (Whereupon the video was played.)

4 BY MS. WINE:

5 Q. Now, sir, I think you just said that when you

6 were out there looking in the bay, you saw a lot

7 of dead oysters; is that correct?

8 A. **That's correct.**

9 Q. And what is the magnitude of the mortality that

10 you saw out in the reefs?

11 A. **I would characterize it as 100 percent, although**

12 **that's very unlikely that it's 100 percent. But**

13 **the efficiency of predation was extremely high.**

14 Q. And is seeing a number of dead oysters on the

15 reefs consistent with the theory that intensive

16 harvesting caused the issue on those reefs?

17 MR. ECHOLS: Objection, your Honor.

18 She's leading the witness.

19 SPECIAL MASTER LANCASTER: Sustained.

20 BY MS. WINE:

21 Q. Sir, is -- by seeing dead oysters on the reefs,

22 what did that tell you, if anything, about the

23 cause of the start of the depletion?

24 A. **Well, it's -- it's the same discussion as we had**

25 **previously where you can clearly distinguish**

THE REPORTING GROUP  
Mason & Lockhart

979

1 **between reefs that have been harvested, reefs**

2 **where there's been a natural mortality event, or**

3 **epizootic, or one that has been depleted by other**

4 **causes.**

5 **For the most part, when we examined reefs in**

6 **October and November of 2012, it was very clear**

7 **that tonging was not taking place, that whole bed**

8 **oysters were there and that all size categories**

9 **from spat to adults were affected and not -- not**

10 **just affected, were killed.**

11 Q. And, sir, what does the presence of predators

12 indicate to you?

13 A. **Well, the first thing that is noted, that their**

14 **presence indicates high salinity. These are**

15 **marine predators, and typically they would not be**

16 **there in any numbers like what we saw under**

17 **normal fluctuating salinity regimes. This was a**

18 **prolonged high salinity situation that allowed**

19 **these predators to become established and also**

20 **complete their life cycle in the bay, which was a**

21 **fairly abnormal situation for the most part.**

22 Q. And, sir, what types of predators did you observe

23 in the bay during the depletion event?

24 A. **Well, the two major ones that we observed were**

25 **the Florida rock snail or oyster drill or Thais**

THE REPORTING GROUP  
Mason & Lockhart

980

1 **haemastoma, all the same, in the western portion**

2 **of the bay; and stone crabs, Menippe mercenaria,**

3 **in St. George Sound on Cat Point and East Hole.**

4 Q. And, sir --

5 A. **There were other marine predators there as well;**

6 **and there were other marine organisms there that**

7 **typically would not be there under normal**

8 **fluctuating salinities, including marine sponges,**

9 **marine soft and hard corals, various types of**

10 **echinoderms. There were a lot of animals with**

11 **marine affinities that typically would not be on**

12 **those reefs that were there.**

13 Q. And, sir, if predators have gotten to the oyster

14 population on a reef, when you go look at that

15 reef, what would you expect to see?

16 A. **Say that again, please.**

17 Q. If predators have been attacking an oyster

18 population on a reef, when you go look at that

19 reef, what would you expect to see?

20 A. **Well, if it was while the -- while predation is**

21 **actively occurring, you would see the predators.**

22 **And they would be essentially all over the live**

23 **oysters and going through their feeding process.**

24 **If the event -- if you observed the reef**

25 **after the event, you would simply see oysters,**

THE REPORTING GROUP  
Mason & Lockhart

981

1 **particularly in place, but gaped. And if you**

2 **look at those oysters or closely observe them,**

3 **you would see that the -- even in the very**

4 **freshly dead ones, the shell is very good. But**

5 **you look inside, and the meats are gone.**

6 Q. And, sir, if a reef has been harvested intensely,

7 or overharvested is a term that Georgia's counsel

8 has used, what would you expect to see when you

9 look at that reef?

10 A. **If it had been harvested, you would find far less**

11 **intact oysters. You would find evidence that --**

12 **of tonging, which would break up the clusters and**

13 **break up the reef a little bit. It would be**

14 **fairly evident that tongs had been used.**

15 Q. And, sir, if you would, in the bars where you

16 noticed -- you observed the depletion events

17 progressing, what did you actually see on those

18 bars?

19 A. **Well, in the beginning, when we looked at the**

20 **southern portions of St. Vincent Bar, we saw a**

21 **bar that had become completely dysfunctional.**

22 **Very little shell material was remaining. And**

23 **this is not unusual for that particular bar**

24 **because it is in a high energy area. When the**

25 **oysters die, because of tidal movement and wave**

THE REPORTING GROUP  
Mason & Lockhart

982

1 action and scour, the shells break up and are  
 2 quickly broken up.  
 3 When I looked at oysters between the time  
 4 period, let's say, of July when the samples were  
 5 taken and then went back and looked in late  
 6 October and November, the condition of the reef  
 7 was essentially the same, except all the oysters  
 8 were dead. The oysters, like I said, were  
 9 still -- when they were clustered, they were  
 10 still there. The clusters were still there. We  
 11 saw dead oysters from the size of a thumbnail up  
 12 to marketable size. It looked like a functioning  
 13 reef at that point, but all the oysters were --  
 14 all the meats in the oysters were gone. They  
 15 were dead.  
 16 Q. And, sir, prior to this event, had Dry Bar and  
 17 St. Vincent Bar been productive reefs in the bay?  
 18 A. They have been very productive, but they also --  
 19 St. Vincent's Bar, let me be clear, has always  
 20 been subject to salinity variations. It's a  
 21 pretty harsh environment out there on that reef.  
 22 But when conditions are suitable or favorable, it  
 23 has been very productive.  
 24 Q. Now, sir, you said just before, and it's  
 25 reflective of something you said in paragraph 56

THE REPORTING GROUP  
Mason & Lockhart

983

1 of your prefiled direct, that you believe that  
 2 overharvesting or intense harvesting on Cat Point  
 3 and East Hole was a result of the depletion event  
 4 and not a cause. Is that correct?  
 5 A. That's correct. That's what I tried to point out  
 6 there that this was the inevitable consequence of  
 7 depletion within the bay starting from the more  
 8 distant areas from the river, compressing inward,  
 9 that it not only -- not only compressed the  
 10 living populations to a smaller isolated area, it  
 11 compressed the fishing pressure to that area.  
 12 And I might add that during this time -- and  
 13 I probably already said this -- that prices were  
 14 high. Demand was high. And there were not a lot  
 15 of other jobs around. So a lot of people were  
 16 involved in the oyster harvesting.  
 17 Q. And, sir, you have said that you don't believe  
 18 that overharvesting or intense harvesting was a  
 19 cause of the depletion event. Do you believe  
 20 that the taking of oysters smaller than 3 inches  
 21 in size was a cause of the depletion event?  
 22 A. No, I don't even see that they're related. I see  
 23 that one is the result of the depletion event.  
 24 The depletion event had started and was  
 25 progressing throughout this period that -- since

THE REPORTING GROUP  
Mason & Lockhart

984

1 fishing was occurring. And it just -- it just  
 2 became more compressed and more intense on a very  
 3 isolated oyster population. I did not feel that  
 4 taking those oysters had anything to do with it.  
 5 I mean, it -- what it did was it increased  
 6 the early harvest of some of those so that the  
 7 product ran out maybe sooner than it would have  
 8 had there been some sort of allocation of that --  
 9 of that crop. But that's just not the way that  
 10 it is. The fishermen are going to take what's  
 11 there.  
 12 Q. And, sir, you stated earlier that you don't think  
 13 the taking of an oyster that's less than 3 inches  
 14 in size has a biological effect on the bay. What  
 15 did you mean by that?  
 16 A. It would -- in some fisheries where you would  
 17 effectively diminish the larger adults, they  
 18 might -- it might have some impact on  
 19 reproductive potential. In oysters, they begin  
 20 to contribute to the reproductive population at a  
 21 very early age, some of them probably maybe just  
 22 a few months old.  
 23 Most small oysters are male. Most larger  
 24 oysters are females. By taking sub-legal  
 25 oysters, you're not having -- you're not

THE REPORTING GROUP  
Mason & Lockhart

985

1 effectively changing the biological reproductive  
 2 potential.  
 3 As a matter of fact, when we reviewed some of  
 4 these things, we had in the past looked at  
 5 reducing the size limit. And during that time I  
 6 wrote position papers indicating that reducing  
 7 the size limit was not going to have a biological  
 8 effect or a negative biological effect.  
 9 And another thing that we did, we tried -- we  
 10 also talked about moving the season back so that  
 11 we could protect the small oysters until they  
 12 grow. That was not intended to have a biological  
 13 effect either.  
 14 There is no evidence that removing sub-legal  
 15 oysters has ever had an adverse impact on  
 16 reproductive potential in Apalachicola Bay.  
 17 Apalachicola Bay is an extremely productive  
 18 system. It's not like a lot of other systems,  
 19 and it's certainly not like systems further north  
 20 in the Chesapeake and those areas where what I'm  
 21 saying would not be true for those oyster  
 22 populations because those oyster populations are  
 23 much more vulnerable to losing gametes. But in  
 24 Florida, and especially in Apalachicola Bay,  
 25 reproductive potential is extremely high and is

THE REPORTING GROUP  
Mason & Lockhart

986

1 **not affected by taking that end of the crop.**

2 **Q.** Sir, what is about poor culling practices or

3 tonging trash, as Georgia's counsel referred you

4 to; could that have caused the depletion event

5 that took place in Apalachicola Bay?

6 **A.** **It certainly wouldn't have caused a depletion**

7 **event. These things that occurred 24 months into**

8 **the progress of this depletion event certainly**

9 **can't be moved to the beginning to be a cause.**

10 **They're a consequence. And consequences of**

11 **running out of a crop too early leads some**

12 **harvesters to really bad practices. I mean,**

13 **maybe they're trying to feed their family. Maybe**

14 **they're trying to do something else with the**

15 **money. But that sector of poor harvesting is**

16 **there.**

17 **I mean, I assume that in the information that**

18 **I was given, that there's some factual point to**

19 **that. I have never seen it. I have never opened**

20 **up a bag of oysters and seen just trash. But we**

21 **hear it from people that are on the water and**

22 **those kind of things. I don't think it's a**

23 **widespread practice. I think it's a widespread**

24 **conversation.**

25 **I don't think that the dealers are in**

THE REPORTING GROUP  
Mason & Lockhart

987

1 **business to buy trash. I don't know how they**

2 **would sustain their business. Their customers**

3 **are certainly not going to continue to buy a**

4 **product that's trash. So it's not a sustainable**

5 **practice. I don't know who would buy dead shell.**

6 **Q.** And, sir, if you could please take the first

7 binder of documents that Georgia's counsel gave

8 you and turn to tab 3, which is JX-150. And

9 these are some notes written in -- you said these

10 were your notes, although you couldn't recall

11 exactly when you prepared them. Is that correct?

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

13 **Q.** And you will recall that Georgia's counsel

14 referenced some language in this document that

15 had to do with poor tonging practices. Correct?

16 **A.** **Okay.**

17 **Q.** And what he didn't show you was the overview in

18 this document.

19 MS. WINE: So, Mr. Walton, if we could

20 just blow up the overview.

21 BY MS. WINE:

22 **Q.** And, sir, if we read this, it says, downward

23 fluctuations in resource availability can be

24 attributed to less than optimal environmental

25 conditions, increased predation, and natural

THE REPORTING GROUP  
Mason & Lockhart

988

1 mortality resulting in weak recruit and extensive

2 harvesting on some of the major reef complexes.

3 Do you see that, sir?

4 **A.** **Yes.**

5 **Q.** And is that consistent with your view that the

6 intense -- or overharvesting was a cause of the

7 depletion event -- excuse me, was a consequence

8 of the depletion event and not a cause of the

9 depletion event?

10 **A.** **Yes, that's my opinion. And my observations**

11 **would support that opinion.**

12 **Q.** And is that the observations that are laid out in

13 the rest of that paragraph, sir?

14 **A.** **Yes. Yes.**

15 **Q.** And you will see, sir, you go on to say that the

16 reefs are showing negative effects of severe

17 drought and decreased freshwater flow rates from

18 the Apalachicola River, parens, less than 1 foot

19 river height since May 2011, including decreased

20 recruitment and increased natural oyster

21 mortality, parens, predation, disease, and stress

22 associated with high salinity regimes.

23 Do you see that, sir?

24 **A.** **Yes.**

25 **Q.** And is that consistent with your view --

THE REPORTING GROUP  
Mason & Lockhart

989

1 **A.** **Yes, it is.**

2 **Q.** -- that the lack of fresh water was the cause of

3 the depletion event here?

4 **A.** **Yes, it is.**

5 **Q.** Sir, you mentioned briefly when you were shown

6 the progression of events -- of the depletion

7 event that on the map there were some private

8 leased oyster bars; is that correct?

9 **A.** **That's correct.**

10 **Q.** And can you just explain what those are.

11 **A.** **The State has for some time leased sovereignty**

12 **submerged lands to private individuals to grow**

13 **oysters. They would take nonproductive bay**

14 **bottom and cultch that or plant it with shell.**

15 **And it's an extensive method of farming oysters.**

16 **And it's a practice that is quite common**

17 **throughout the Gulf and in Apalachicola Bay. I**

18 **think there's about 600 acres of submerged lands**

19 **in Apalachicola Bay that are held under private**

20 **lease.**

21 **Q.** And, sir, do you know whether Mr. Tommy Ward is

22 one of those leaseholders?

23 **A.** **Yes, he is.**

24 **Q.** And, sir, on that map, do you know approximately

25 where his leases are located?

THE REPORTING GROUP  
Mason & Lockhart

990

1 **A. Yes, I do.**  
 2 **Q.** And could you show the Special Master, if you  
 3 would, just the general area.  
 4 THE WITNESS: Can you see this, sir?  
 5 Can you see that okay?  
 6 SPECIAL MASTER LANCASTER: Yes.  
 7 THE WITNESS: Down in this corner --  
 8 SPECIAL MASTER LANCASTER: Yes?  
 9 THE WITNESS: -- this is a shellfish  
 10 lease right here. It's labeled here lease  
 11 525. This is a lease that is owned by  
 12 Mr. Ward.  
 13 This is another lease here, another  
 14 lease there, another lease there, another  
 15 lease there, lease there, lease there. So  
 16 those are the locations of the oyster leases.  
 17 BY MR. ECHOLS:  
 18 **Q.** And, sir, the private leases, are they open to  
 19 the public for harvesting?  
 20 **A. No, they're not.**  
 21 **Q.** At any time?  
 22 **A. At no time are they open to the public.**  
 23 **Q.** So in your view, sir, are they subject to intense  
 24 harvesting?  
 25 **A. No, they're not.**

THE REPORTING GROUP  
Mason & Lockhart

991

1 **Q.** And, sir, did you visit any of these leased areas  
 2 when you were observing the depletion event in  
 3 Apalachicola Bay?  
 4 **A. Yes, I did.**  
 5 **Q.** And what did you observe in those leased areas?  
 6 **A. I observed extensive mortality on the leased**  
 7 **areas, and I was assured by the leaseholders that**  
 8 **it was not from harvesting.**  
 9 **Q.** And what -- what did you see in terms of the  
 10 mortality? Were you able to see why there were  
 11 dead oysters?  
 12 **A. In two instances, we did observe a large**  
 13 **abundance of conchs.**  
 14 **Q.** And, sir, are all the leases in the area that you  
 15 just depicted for the Special Master, are they  
 16 all in that one area that you just listed for the  
 17 Special Master?  
 18 **A. Yes. They're all in St. Vincent Sound or the**  
 19 **westernmost portion of Apalachicola Bay. They're**  
 20 **all located in areas that were affected by high**  
 21 **salinity throughout this event.**  
 22 **Q.** Sir, if you would, I would like to look at some  
 23 of the documents that Georgia's counsel showed  
 24 you. So if you still have the first binder in  
 25 front of you, and turn to tab 2, if you would.

THE REPORTING GROUP  
Mason & Lockhart

992

1 And I will try not to belabor this, but,  
 2 again, like the video, you were only shown  
 3 selected portions of this document, which is your  
 4 2011 oyster resources assessment report.  
 5 Correct?  
 6 **A. That's correct.**  
 7 **Q.** And, sir, if you would, turn to page 4. Do you  
 8 see the heading that says Fishery Trends in  
 9 Apalachicola Bay?  
 10 **A. I do.**  
 11 **Q.** Do you see that first paragraph that begins  
 12 annual oyster resources?  
 13 **A. Yes.**  
 14 **Q.** It says it shows moderate fluctuations in oyster  
 15 densities, standing stocks, and production  
 16 estimates. Do you see that?  
 17 That's that first sentence still.  
 18 **A. Yes.**  
 19 **Q.** And then we come to language that is very similar  
 20 to what we looked at in JX-150, which was tab 3.  
 21 Also that document was from October of 2011, so  
 22 from the very same time period. That said  
 23 downward fluctuations can be attributed to less  
 24 than optimal environmental conditions, increased  
 25 predation, and natural mortality resulting in

THE REPORTING GROUP  
Mason & Lockhart

993

1 weak recruitment and extensive harvesting on some  
 2 of the major reef complexes.  
 3 Do you see that?  
 4 **A. Yes.**  
 5 **Q.** And, again, sir, that's consistent with your  
 6 view that the extensive harvesting was a result  
 7 of the depletion event and not a cause; is that  
 8 true?  
 9 **A. That's true.**  
 10 **Q.** And, sir, if you would, take out the other binder  
 11 and turn to tab 8. Tab 8 is JX-60. Let me know  
 12 when you're there, sir.  
 13 **A. I'm there.**  
 14 **Q.** Okay. And Georgia's counsel also showed you this  
 15 document, which is dated October 2011. And when  
 16 he was showing it to you, he did not show you --  
 17 actually, excuse me. He did show you the section  
 18 that's labeled Overall. And he read very quickly  
 19 a sentence that I want to ask you about.  
 20 It's right in the middle of the paragraph.  
 21 It starts with mortalities.  
 22 MS. WINE: Mr. Walton, if you see that  
 23 sentence.  
 24 BY MS. WINE:  
 25 **Q.** It was -- the previous sentence is talking about

THE REPORTING GROUP  
Mason & Lockhart

994

1 the presence of oyster drills in the bay. And it  
 2 says, mortalities associated with this predator  
 3 will continue until the Apalachicola River begins  
 4 to rise. Do you see that?  
 5 **A. Yes, I do.**  
 6 **Q.** And, sir, do you agree with that statement?  
 7 **A. Yes. The statement would say that if we do not**  
 8 **have additional fresh water, we're not going to**  
 9 **get rid of these predators.**  
 10 **Q.** And, sir, if you turn to the last page of this  
 11 document, there is a section entitled  
 12 Conclusions. And, again, this is your concluding  
 13 remarks in October of 2011. And, again, in the  
 14 middle of the paragraph there's a sentence that  
 15 says, there is the presence of the oyster drill  
 16 predator.  
 17 Do you see that?  
 18 MS. WINE: Mr. Walton, this is the last  
 19 page of the document; and if you would  
 20 highlight the sentence that says, there is  
 21 the presence of the oyster drill predator.  
 22 BY MS. WINE:  
 23 **Q.** And right after it says, this predator will  
 24 continue to be a fixture until the Apalachicola  
 25 River levels rise and salinity levels decline.

THE REPORTING GROUP  
Mason & Lockhart

995

1 Do you see that, sir?  
 2 **A. Yes, I do.**  
 3 **Q.** And do you agree with that statement?  
 4 **A. Yes, I agree with that.**  
 5 **Q.** And this was your view in the fall of 2011 when  
 6 you were first noticing the depletion event  
 7 occurring. Correct?  
 8 **A. Yes. This is my view. This is not my report**  
 9 **though.**  
 10 **Q.** Thank you for that correction.  
 11 This is consistent with your view at the  
 12 time. Correct?  
 13 **A. It is consistent, yes.**  
 14 **Q.** Thank you, sir.  
 15 **A. This is from my staff.**  
 16 **Q.** Thank you.  
 17 Now, sir -- and sorry for flipping binders.  
 18 If you can go to the first binder Georgia's  
 19 counsel handed you. And if you could, sir, turn  
 20 to tab 1, which is JX-77. And a couple pages  
 21 into that exhibit is your 2012 -- August 2012  
 22 oyster resource assessment report. Do you see  
 23 that, sir?  
 24 **A. Yes, I do.**  
 25 **Q.** And, again, sir, you were shown a very select

THE REPORTING GROUP  
Mason & Lockhart

996

1 portion of this document regarding harvesting.  
 2 Do you recall that?  
 3 **A. Yes.**  
 4 **Q.** And I would just like to take a few moments to  
 5 walk through some of the other statements that  
 6 you made in this document. Okay?  
 7 **A. Okay.**  
 8 **Q.** So, sir, if we turn to page 3, you will see the  
 9 second to last paragraph is talking about Cat  
 10 Point and East Hole. And that's a paragraph I  
 11 believe Georgia's counsel asked you about.  
 12 Correct?  
 13 **A. I'm not certain, but --**  
 14 **Q.** Okay. And if you go down to the next one, it's  
 15 talking about Dry Bar and St. Vincent Bar. Do  
 16 you see that?  
 17 **A. Yes.**  
 18 **Q.** And it talks about the samples that were taken  
 19 from Dry Bar and St. Vincent Bar. Correct?  
 20 **A. Yes.**  
 21 **Q.** And if you look --  
 22 MS. WINE: Again, Mr. Walton, I'm making  
 23 your life tough, but right in the middle of  
 24 that paragraph it says, samples were  
 25 collected.

THE REPORTING GROUP  
Mason & Lockhart

997

1 BY MS. WINE:  
 2 **Q.** Do you see that sentence?  
 3 MS. WINE: If we could just highlight through  
 4 the end of that paragraph, Mr. Walton.  
 5 BY MS. WINE:  
 6 **Q.** And it says, samples were collected from the  
 7 Little Gully area on Dry Bar, because no live  
 8 oysters were collected on St. Vincent Bar.  
 9 And, sir, what did you mean there?  
 10 **A. When we went to sample the normal sample stations**  
 11 **on St. Vincent's Bar, there were no live oysters.**  
 12 **Q.** And, sir, just, again, why don't you sample dead  
 13 oysters or reefs that have no live oysters?  
 14 **A. The purpose of our sampling is to -- to provide a**  
 15 **predictive index of oyster populations and**  
 16 **harvestable oysters and where they can be found.**  
 17 **This is supposed to act as an aid to both the**  
 18 **fishermen and the processors. We were not in the**  
 19 **process at that time of trying to document or**  
 20 **confirm the absence of oysters or the depletion**  
 21 **of oysters. We simply don't sample where there's**  
 22 **no oysters. It's not something that is useful to**  
 23 **us in what we're trying to accomplish.**  
 24 **Q.** And, sir, that paragraph continues, St. Vincent  
 25 Bar extending from Dry Bar southward was

THE REPORTING GROUP  
Mason & Lockhart

998

1 continued -- considered to be depleted of  
 2 marketable oysters. The oyster population on  
 3 St. Vincent Bar was likely decimated by stress  
 4 associated with high salinity, disease, and  
 5 predation.  
 6 Do you see that, sir?  
 7 **A. Yes, I do.**  
 8 **Q.** And what did you mean there?  
 9 **A. As it -- as it says, the reason that we saw or**  
 10 **considered to be the most reasonable solution to**  
 11 **why there were no oysters on there was that this**  
 12 **area was very subject to high salinities because**  
 13 **of its location in the bay. And with those high**  
 14 **salinity -- prolonged high salinity regimes, we**  
 15 **had stress, predation, and natural mortality.**  
 16 **Q.** Now, sir, if you could turn to the next page,  
 17 which is page 4 of this document, the first full  
 18 paragraph on that page -- it's a long paragraph.  
 19 **A. I see it.**  
 20 **Q.** You will see it starts at the beginning talking  
 21 about some reefs, North Spur, Green Point, and  
 22 Cabbage Lumps. Do you see that?  
 23 **A. Yes.**  
 24 **Q.** Where are those reefs located, sir?  
 25 **A. Those reefs are located in either the -- North**  

THE REPORTING GROUP  
Mason & Lockhart

999

1 **Spur and Green Point are in the western portions**  
 2 **of Apalachicola Bay; and Cabbage Lumps is located**  
 3 **in the eastern portions of St. Vincent Sound.**  
 4 **They're a relatively close grouping of reefs.**  
 5 **Q.** And, sir, you go on to say in the middle of that  
 6 paragraph --  
 7 MS. WINE: There is a sentence that  
 8 begins also. Mr. Walton, if you can  
 9 highlight that.  
 10 Right there, yes.  
 11 BY MS. WINE:  
 12 **Q.** Also, oysters on these reef will likely be  
 13 subject to intense predation from rock snails,  
 14 while salinity levels remain high.  
 15 Do you see that?  
 16 **A. Yes, I do.**  
 17 **Q.** And what did you mean by that sentence?  
 18 **A. We could see a progression of predation that was**  
 19 **leading to these bars. And if there was no fresh**  
 20 **water or a strong enough fluctuation in the**  
 21 **salinity regime to retard the movement of these**  
 22 **predators, they were going to essentially eat**  
 23 **their way to these bars and then eat the oysters**  
 24 **on these bars.**  
 25 **Q.** You go on in that paragraph to say, oyster  

THE REPORTING GROUP  
Mason & Lockhart

1000

1 populations on shallow and inner tidal reefs in  
 2 the Miles -- and then you list a few. Could you  
 3 just, if you would, sir, tell us where the Miles  
 4 are located?  
 5 **A. The Miles are in St. Vincent Sound, and they're**  
 6 **called the Miles because they essentially are how**  
 7 **many miles from the Intracoastal Waterway. So**  
 8 **you have all the way out from 1 Mile, but the**  
 9 **first noticeable mile is 2 Mile, which is a 2**  
 10 **mile channel. And then you go out to 13 Mile,**  
 11 **while is pretty much the westernmost end of**  
 12 **St. Vincent Sound. And collectively it's called**  
 13 **the Miles. But we're referring to St. Vincent**  
 14 **Sound.**  
 15 **Q.** Sir, you go on to say that those reefs are also  
 16 severely stressed, showing signs of intense  
 17 predation and natural mortality.  
 18 Is that consistent with what you were seeing  
 19 at this time?  
 20 **A. Yes, it was.**  
 21 **Q.** And you go on to say bars in northwestern  
 22 Apalachicola Bay and eastern St. Vincent Sound,  
 23 including Green Point, North Spur, and Cabbage  
 24 Lumps -- and just to pause there, are those the  
 25 ones we were talking about earlier in this  

THE REPORTING GROUP  
Mason & Lockhart

1001

1 paragraph?  
 2 Can you perhaps show the Special Master where  
 3 those ones are?  
 4 **A. Cabbage Lumps is right here. North Spur is right**  
 5 **here.**  
 6 **And the other one was Green Point?**  
 7 **Q.** Yes.  
 8 **A. Green Point is right here.**  
 9 **So they're clustered right here in the**  
 10 **northern portion of the bay. And like I tried to**  
 11 **point out on that map, they would have had the**  
 12 **last influence of fresh water. So they would**  
 13 **have been the reefs that we would have expected**  
 14 **to stand up the longest. But they, too, were**  
 15 **affected.**  
 16 **Q.** Right. And you go on to say about those reefs  
 17 that they are more strongly influenced by river  
 18 flows than bars located further away from the  
 19 river mouth. Prevailing flows and circulation  
 20 patterns move plumes of fresh water westward from  
 21 the river over these reefs before they are  
 22 dispersed throughout the bay and St. Vincent  
 23 Sound.  
 24 Sir, is that what you were just describing in  
 25 terms of the location?  

THE REPORTING GROUP  
Mason & Lockhart

1002

1 **A. That's what I was trying to describe, yes.**  
 2 **Q.** Thank you, sir.  
 3 Sir, now, if you would, please turn to page 5  
 4 of this document.  
 5 **A. I have it.**  
 6 **Q.** Okay. And, again, in this paragraph you're  
 7 talking about -- well, the second sentence says,  
 8 declining populations can be attributed to less  
 9 than optimal environmental conditions.  
 10 Do you see that?  
 11 We're going to highlight it right now.  
 12 **A. Second sentence?**  
 13 **Q.** Second sentence. It's the second paragraph that  
 14 begins data analyses.  
 15 **A. Oh, okay. I was looking at -- okay.**  
 16 **Q.** Right. So it says --  
 17 **A. Yes.**  
 18 **Q.** -- declining populations can be attributed to  
 19 less than optimal environmental conditions,  
 20 prolonged drought, reduced river discharge rates,  
 21 high salinity.  
 22 Do you see that?  
 23 **A. Yes, I do.**  
 24 **Q.** And you go on to say in the next sentence, it is  
 25 evident from divers' observations that many reefs

THE REPORTING GROUP  
Mason & Lockhart

1003

1 in Apalachicola Bay are showing the negative  
 2 effects of decreased rainfall and freshwater flow  
 3 rates from the Apalachicola River over the past  
 4 two years, including depressed recruitment and  
 5 increased natural oyster mortality, predation,  
 6 disease, and stress associated with high salinity  
 7 regimes.  
 8 Do you see that language, sir?  
 9 **A. Yes, I do.**  
 10 **Q.** And why did you include that in this document,  
 11 sir?  
 12 **A. That is a general summary of the depletion event.**  
 13 **And the observations by the divers confirmed**  
 14 **the -- the plausibility of the event being caused**  
 15 **the way we think it was.**  
 16 **Q.** And, sir, just one last excerpt from this  
 17 document that I would like to direct your  
 18 attention to. You will see on pages 6 and 7 you  
 19 have a section entitled Natural Mortality and  
 20 Predation?  
 21 **A. Which document?**  
 22 **Q.** The same document, sir. I'm sorry.  
 23 **A. Page 6 and 7?**  
 24 **Q.** Page 6 you will see the heading Natural Mortality  
 25 and Predation and -- about the middle of the

THE REPORTING GROUP  
Mason & Lockhart

1004

1 page.  
 2 **A. I'm on tab 5. Where should I be?**  
 3 **Q.** Sorry. You should be on tab 1. We're still in  
 4 your August 2002 -- excuse me, 2012 oyster  
 5 assessment report, which is at the end of that  
 6 first tab.  
 7 **A. Okay. I have it.**  
 8 **Q.** Are you with me?  
 9 **A. Uh-huh.**  
 10 **Q.** Page 6. Do you see the heading Natural Mortality  
 11 and Predation?  
 12 **A. Yes, I do.**  
 13 **Q.** And, sir, if you go down to the last paragraph  
 14 that begins observations and sampling. Do you  
 15 see that?  
 16 **A. Yes, I do.**  
 17 **Q.** And the next sentence reads, oyster drills are  
 18 considered as one of the most serious oyster  
 19 predators along Florida's Gulf Coast and have  
 20 become established in Apalachicola Bay over the  
 21 past two years.  
 22 It goes on to say, reports from oystermen  
 23 suggest that drills are more abundant than at any  
 24 time in recent memory. It appears that drill  
 25 populations are moving farther into the estuary

THE REPORTING GROUP  
Mason & Lockhart

1005

1 as oyster populations in the more marine portions  
 2 of the bay are depleted.  
 3 Sir, why did you include that language in  
 4 this report?  
 5 **A. Again, that is to confirm the process or the**  
 6 **progress of the depletion event. We began**  
 7 **noticing predation by snails in the higher**  
 8 **salinity areas. And as the high salinity**  
 9 **persisted and was spread over the oyster bars**  
 10 **that were more proximal to the river, the snails**  
 11 **moved that way. They moved along with the**  
 12 **salinity regime and the food supply.**  
 13 **Q.** And, sir, that paragraph continues, high number  
 14 of drills were found wherever viable oyster  
 15 populations were observed. The presence and  
 16 establishment of snail populations correlate with  
 17 high salinity waters. It is also disturbing that  
 18 drills are completing their life cycles within  
 19 the estuary since egg cases, juvenile, sub-adult,  
 20 and adult snails are abundant on oyster reefs.  
 21 Sir, why did you include that comment about  
 22 the life cycles of the snails?  
 23 **A. The fact that the snails were able to complete**  
 24 **their life cycle is confirmation of the prolonged**  
 25 **period of high salinity. I'm not really familiar**

THE REPORTING GROUP  
Mason & Lockhart



1006

1 **with what their life cycle is, but throughout my**  
 2 **time diving there in 2012, observing those --**  
 3 **those leases, we saw hundreds of egg cases, which**  
 4 **confirmed the fact that the snails were there to**  
 5 **stay until they were flushed out by serious**  
 6 **freshwater input.**  
 7 **Q.** Thank you, sir. We're done with that document.  
 8 If you could now turn briefly to tab 5, so  
 9 you were ahead of me.  
 10 This is JX-75. And it's a September 2012  
 11 oyster assessment report that Georgia's counsel  
 12 showed you. First of all, can you just explain  
 13 what this September 2012 report is, just a month  
 14 after the last report that we were looking at.  
 15 **A. I believe that this is an effort to synthesize**  
 16 **the information into more or less an executive**  
 17 **summary or something of that nature.**  
 18 **Q.** Okay, sir. And if you could, please, turn to  
 19 page 2 of that document. I believe Georgia's  
 20 counsel just directed you to a -- one statement  
 21 regarding harvesting. And I would like to direct  
 22 you to this page 2 and the heading Prolonged  
 23 Drought in Lower River Discharge. Do you see  
 24 that?  
 25 **A. Yes, I do.**

THE REPORTING GROUP  
Mason & Lockhart

1007

1 **Q.** And, sir, I don't want to belabor this by reading  
 2 all of it, given that we just went through the  
 3 August 2012 report, but if I could, under the  
 4 first paragraph in that heading, the last  
 5 sentence says, fresh water is a critical factor  
 6 driving fluctuations in salinity that prevents  
 7 destructive marine predators from becoming  
 8 established.  
 9 Sir, is that consistent with your view of  
 10 what was happening with the depletion event?  
 11 **A. Yes, it is.**  
 12 **Q.** And lastly, at the bottom of that page, the last  
 13 sentence in the last paragraph says, poor  
 14 recruitment -- poor recruitment and poor survival  
 15 can be directly attributed to prolonged high  
 16 salinity environment, which is also confirmed by  
 17 the presence of marine predators, primarily stone  
 18 crabs and Florida rock snails, parens, oyster  
 19 drills.  
 20 Do you see that?  
 21 **A. Yes, I do.**  
 22 **Q.** And is that consistent with your view of what  
 23 caused the depletion event?  
 24 **A. Yes, it is.**  
 25 **Q.** Sir, you were asked some questions about

THE REPORTING GROUP  
Mason & Lockhart

1008

1 reshelling. Correct?  
 2 **A. That's correct.**  
 3 **Q.** And could you tell us which bars in Apalachicola  
 4 Bay the State of Florida traditionally reshelled?  
 5 If you can generalize it.  
 6 **A. Yes. I'm trying to do it in that way.**  
 7 **I believe that we have made an effort to**  
 8 **reshell most of the bars in Apalachicola other**  
 9 **than Cat Point Bar.**  
 10 **Q.** And why is that?  
 11 **A. There has been resistance from the fishing**  
 12 **community for us to have our heavy equipment on**  
 13 **that bar because it has always been the**  
 14 **lifeblood, and it really has never needed it. I**  
 15 **mean, Cat Point Bar has traditionally been the**  
 16 **source of a -- a very sustainable resource,**  
 17 **highly renewable resource. It never really**  
 18 **needed that much. It was thriving on its own.**  
 19 **And I believe that the community probably felt,**  
 20 **well, if it's not broke, you don't need to be**  
 21 **worried about it. So we did avoid planting**  
 22 **there.**  
 23 **But in the eastern portion of the bay, we --**  
 24 **over time we planted some on East Hole, some on**  
 25 **Platform Bar, Porter's Bar, Peanut Patch. In the**

THE REPORTING GROUP  
Mason & Lockhart

1009

1 **summer areas, we planted on Norman's Lump,**  
 2 **Lighthouse, Bulkhead, Hotel. In the western part**  
 3 **of the bay, we planted on Green Point, North**  
 4 **Spur, planted some on St. Vincent's Bar, planted**  
 5 **Cabbage Top, Paradise Flats, Bayou Flats. So**  
 6 **there's a good cross-section of the bay that has**  
 7 **been rehabilitated by shell planting.**  
 8 **Q.** And, sir, Georgia's counsel showed you a  
 9 document. It was JX-52. But it was reflective  
 10 of shelling efforts in 2008, 2009, and 2010.  
 11 Correct?  
 12 **A. Yes.**  
 13 **Q.** I'm not trying to test your memory on the years;  
 14 I'm just trying to move us along.  
 15 **A. That is testing my memory. I don't --**  
 16 **Q.** Thank you, sir.  
 17 Now, sir, do you think if -- let me ask it  
 18 this way. Do you think that the 2012 depletion  
 19 event could have been prevented if Florida had  
 20 done more reshelling in the bay?  
 21 **A. Under the circumstances, no. There's nothing**  
 22 **that could have been done with the poor**  
 23 **environmental quality. And when I say poor**  
 24 **environmental quality, I'm talking about high**  
 25 **salinity. Under those circumstances, the areas**

THE REPORTING GROUP  
Mason & Lockhart

1010

1 **that we rehabilitated just happened to be in**  
 2 **areas that were -- had some influence of fresh**  
 3 **water. So they did work for a while. But they,**  
 4 **too, were finally depleted by predation.**  
 5 MS. WINE: My colleagues are reminding  
 6 me that we have been going for quite awhile.  
 7 Would this be a time for a -- a good time for  
 8 an afternoon break?  
 9 SPECIAL MASTER LANCASTER: Let me ask  
 10 counsel to confer and advise us, and  
 11 particularly advise Mr. Berrigan, whether you  
 12 think you're going to be able to finish this  
 13 afternoon or not, because depending upon your  
 14 answer, we'll either take a break; or we'll  
 15 recess for the weekend.  
 16 MS. WINE: Your Honor, I don't have very  
 17 much more. I anticipate he could definitely  
 18 get out of here. But --  
 19 SPECIAL MASTER LANCASTER: I would ask  
 20 you to confer with counsel.  
 21 MS. WINE: Oh, I'm sorry, sir.  
 22 (Discussion off the record.)  
 23 MS. WINE: We have conferred, and we're  
 24 both confident that we could get Mr. Berrigan  
 25 out of here today even with an afternoon

THE REPORTING GROUP  
Mason & Lockhart

1011

1 break.  
 2 SPECIAL MASTER LANCASTER: We'll take a  
 3 break.  
 4 MS. WINE: Thank you, sir.  
 5 SPECIAL MASTER LANCASTER: And we'll  
 6 hold you to it.  
 7 THE WITNESS: Yes.  
 8 (Time Noted: 2:42 p.m.)  
 9 (Recess Called)  
 10 (Time Noted: 2:56 p.m.)  
 11 BY MS. WINE:  
 12 **Q.** Sir, I can assure you I just have a few more  
 13 questions.  
 14 Under the -- you recall you were asked about  
 15 potential closure of the bay. Correct?  
 16 **A. Yes.**  
 17 **Q.** And, sir, under the environmental conditions that  
 18 you observed during this depletion event with the  
 19 low flows and high salinity, would closing the  
 20 bay in your view have prevented the depletion  
 21 event?  
 22 **A. It would not have.**  
 23 **Q.** And why not?  
 24 **A. Closing the bay would have had nothing to do with**  
 25 **altering the conditions that were causing the**

THE REPORTING GROUP  
Mason & Lockhart

1012

1 **depletion.**  
 2 **Q.** And why do you say that?  
 3 **A. Closing the bay would have nothing to do with**  
 4 **lowering the salinity in the bay.**  
 5 **Q.** Now, sir, you managed the oyster resources in  
 6 Apalachicola Bay for 30 years. Correct?  
 7 **A. That's correct.**  
 8 **Q.** And together with your predecessors, the bay has  
 9 been managed for over 50 years. Correct?  
 10 **A. Yes. At least 50 years.**  
 11 **Q.** And throughout history, what are the causal  
 12 factors that you have observed as causing major  
 13 depletion events in the bay?  
 14 **A. Primarily catastrophic events, too much fresh**  
 15 **water; and too high salinities, not enough fresh**  
 16 **water.**  
 17 **Q.** And, sir, has intensive harvesting ever caused a  
 18 major depletion event in Apalachicola Bay?  
 19 **A. Not that I'm aware of.**  
 20 **Q.** And has the taking of juvenile oysters ever  
 21 caused a major depletion event in Apalachicola  
 22 Bay?  
 23 **A. Not that I'm aware of.**  
 24 **Q.** And, sir, you have seen the bay bounce back, be  
 25 resilient after some of the depletion events in

THE REPORTING GROUP  
Mason & Lockhart

1013

1 the past. Correct?  
 2 **A. That's correct.**  
 3 **Q.** And what was different in 2012?  
 4 **A. Well, in my -- my last observation is 2012**  
 5 **conditions had not improved. They were the high**  
 6 **salinity, low freshwater input was still**  
 7 **continuing when I left. Conditions to my**  
 8 **knowledge may not have even improved yet. I'm**  
 9 **not certain.**  
 10 **Q.** Thank you, sir. I have no further questions.  
 11 RE-CROSS-EXAMINATION  
 12 BY MR. ECHOLS:  
 13 **Q.** Mr. Berrigan, I think we're all in agreement  
 14 there were less than optimal environmental  
 15 conditions. Correct?  
 16 **A. That's correct.**  
 17 **Q.** We were in a drought which was affecting most of  
 18 the southeastern United States, including  
 19 Georgia, including Florida. Right?  
 20 **A. That's correct.**  
 21 **Q.** We have had droughts before. There have been  
 22 higher salinity. There have been predators.  
 23 Correct?  
 24 **A. That's part of the ecology of oystering.**  
 25 **Q.** In fact, yesterday you said -- you tried at least

THE REPORTING GROUP  
Mason & Lockhart

1014

1 to make sure it was clear that we understand  
 2 that. You said it wasn't a surprise at all to  
 3 you. Right?

4 **A. It wasn't a surprise to me to see the origin of**  
 5 **this depletion. It wasn't surprising to me to**  
 6 **see the progression of the depletion. But it was**  
 7 **surprising to me to see how catastrophic it**  
 8 **actually was.**

9 **Q.** Now, one thing I didn't understand, sir. A  
 10 couple of times in your responses to Ms. Wine's  
 11 questions you said it was an inevitable  
 12 consequence that the primary producing bars would  
 13 be fished because the other bars had been  
 14 affected by predators and salinity. Do you  
 15 recall saying that?

16 **A. Yes, I do.**

17 MR. ECHOLS: Could you put the map up.  
 18 Are you able to pull out -- first,  
 19 let's -- this middle portion here, let's do  
 20 that.

21 BY MR. ECHOLS:  
 22 **Q.** So, now, we have got the Dry Bar/St. Vincent and  
 23 the Cat Point/East Hole, those are primary  
 24 producing bars. Correct?

25 **A. That's correct. With Cat Point being the primary**  
 THE REPORTING GROUP  
 Mason & Lockhart

1015

1 **one.**

2 **Q.** A large portion of the oysters that are harvested  
 3 in any given year come from those bars. Right?

4 **A. A large portion do.**

5 **Q.** This is a managed fishery; isn't it?

6 **A. Yes, it is.**

7 **Q.** It's managed by the State?

8 **A. Yes, it is.**

9 **Q.** Now, are these bars exempt from being managed by  
 10 Fish and Wildlife?

11 **A. All the bars are managed the same.**

12 **Q.** So are you -- you're not testifying, are you,  
 13 sir, that because there was a drought and because  
 14 some of the outlying bars were affected by  
 15 predation, that required Fish and Wildlife to let  
 16 the oystermen fish these bars to extinction?

17 **A. Would you say that again, please.**

18 **Q.** Fish and Wildlife wasn't required to let the  
 19 oystermen harvest all the oysters off these  
 20 primary producing bars. Right?

21 **A. They weren't required to. And under normal**  
 22 **circumstances, they wouldn't be able to fish all**  
 23 **the oysters off of those bars.**

24 **Q.** Right. But this was not normal circumstances.

25 **A. No, this was not.**  
 THE REPORTING GROUP  
 Mason & Lockhart

1016

1 **Q.** It's a drought. Doesn't FWC have to manage the  
 2 fishery during drought as well as during good  
 3 weather?

4 **A. Well, I think I see what you're saying; but as**  
 5 **this event progressed, it would have been**  
 6 **essentially too late to try and manage individual**  
 7 **reefs that had living populations. I mean, I**  
 8 **don't understand what the point would be there.**

9 **You would manage the remaining oysters for**  
 10 **what reason? What reason would we come up with**  
 11 **to say we're going to close this to fishing when**  
 12 **the community at large would say don't deprive us**  
 13 **of the economic benefit for no reason?**

14 **And there wouldn't be a reason for closing**  
 15 **that fishery because those oysters were not going**  
 16 **to make it to the next harvesting season. We --**  
 17 **those oysters in this bay typically live for two**  
 18 **summers. And the -- the primary time that we**  
 19 **lose oysters to natural mortality in that system**  
 20 **is usually July, August, and September. So if**  
 21 **you closed an area -- let's say you close an area**  
 22 **that has an oyster population on it. And then**  
 23 **you come back the next year, you know that that**  
 24 **oyster population that was there is not going to**  
 25 **be alive; and you also know that without**  
 THE REPORTING GROUP  
 Mason & Lockhart

1017

1 **recruitment, it's not going to be renewed or**  
 2 **regenerated or sustained. So a management by**  
 3 **closing an area to protect dead oysters is not a**  
 4 **sound management decision.**

5 **Q.** But we're not talking about dead oysters, sir.  
 6 We're talking about live oysters on Cat Point and  
 7 East Hole.

8 MR. ECHOLS: And can we put up JX-78,  
 9 please, the last page. And I don't know  
 10 which tab that is.

11 78, tab 11, your Honor, is the one we  
 12 had before. And I'm looking at the last page  
 13 of JX-78, tab 11.

14 **A. I have it.**

15 **Q.** Okay.

16 And we looked at this earlier. And I just  
 17 want to make sure it's clear. It's not the case  
 18 that the fishermen were just harvesting the same  
 19 amount as they had harvested previously.  
 20 Correct?

21 **A. According to the landing statistics, no. They**  
 22 **were harvesting more.**

23 **Q.** Right. So at this point in time when we have the  
 24 primary producing bars, and you're saying that  
 25 that's where the concentration is going, it's not

THE REPORTING GROUP  
 Mason & Lockhart

1018

1 that they took just the 160,000 pounds that they  
 2 did in 2011, but Fish and Wildlife allowed them  
 3 to take double that in January of 2012, almost  
 4 double that the next month. And every single  
 5 month in the first -- the first five months of  
 6 2012 Florida Fish and Wildlife let the fishermen  
 7 take what's there. As you said, fishermen are  
 8 going to take what's there if Fish and Wildlife  
 9 doesn't regulate it.

10 **A. They could have regulated it. That's what I was**  
 11 **trying to have a discussion about. What would**  
 12 **you regulate for?**

13 **For one thing, they wouldn't know what these**  
 14 **landings were for 60 days or so after.**

15 **Q.** So they don't have enough information even to  
 16 regulate the fishery?

17 **A. They don't get the landing statistics; they don't**  
 18 **get the trip tickets completed for 30 to 60 days.**  
 19 **There is a lag period for turning those in.**

20 **That's not my point. My point is you're**  
 21 **talking about should FWC allocate that resource?**  
 22 **And the danger in allocating that resource is**  
 23 **that it may not survive until the end. And if**  
 24 **you look at the data that you're showing me, you**  
 25 **can tell it's not going to last through the whole**

THE REPORTING GROUP  
Mason & Lockhart

1019

1 **season.**

2 **When you look at the other part of this data,**  
 3 **when it's there, you will see, as we predicted,**  
 4 **that those mortalities did occur. They fished**  
 5 **those stocks down. There would have been no**  
 6 **point in saving them.**

7 **I just -- I don't know how else to make that**  
 8 **point that closing -- stopping fishing for what**  
 9 **point? I mean, management -- to make management**  
 10 **decisions, you have to look at the effect on the**  
 11 **fishing stocks. You want to look at the**  
 12 **economics. You want to look at the future of**  
 13 **these things. When you do all of those things**  
 14 **and understand the ecology and the situation of**  
 15 **oysters in that case, it would not make sense to**  
 16 **have a closure.**

17 MR. ECHOLS: Can we go one page earlier  
 18 here, please, in JX-78.

19 BY MR. ECHOLS:

20 **Q.** We didn't look at this page before, but this has  
 21 the annual landings. But please do note at the  
 22 bottom it says that the 2012 data -- you recall  
 23 we only have it complete through June. Right?

24 Do you remember that was the discussion?

25 **A. I understand what that asterisk means.**

THE REPORTING GROUP  
Mason & Lockhart

1020

1 **Q.** Right. And so if you look at the data -- and  
 2 this is the second to last page here on JX-78 --  
 3 for 2012 where we only have half of the year,  
 4 half of the harvesting year, for Franklin  
 5 County -- that's where Apalachicola Bay is.  
 6 Correct?

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

8 **Q.** So up at this point in time by June 2012, half  
 9 the year, we have already got 1,737,222 pounds of  
 10 oysters harvested. Right?

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

12 **Q.** And if you look, just for a comparison's sake,  
 13 you know, at 2010, Franklin County here -- you  
 14 know we have got the entire year of data because  
 15 we're in 2012 -- the entirety of 2010 in Franklin  
 16 County was harvested was 1,947,201.

17 **A. Would you like to know the reason why?**

18 **Q.** No.

19 **A. Okay.**

20 **Q.** But -- so it's the case, is it not, that you had  
 21 almost the same amount the entire year of 2010 of  
 22 harvesting just in this first half of 2012.  
 23 Correct?

24 **A. That's what the statistics indicate.**

25 MR. ECHOLS: Could we put the last slide

THE REPORTING GROUP  
Mason & Lockhart

1021

1 number up -- 8 up, please.

2 BY MR. ECHOLS:

3 **Q.** Now, we looked at this before. It isn't the  
 4 case -- strike that, sir.

5 Now, there have been droughts before; and the  
 6 fishery has not collapsed. Right?

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

8 **Q.** I don't know if you recall -- I looked it up; but  
 9 there was a state-wide drought in the '89 to '92  
 10 period. Do you recall that?

11 **A. Yes, I do.**

12 **Q.** Okay. And the fishery didn't collapse. Correct?

13 **A. Yes. But there were -- we did -- I think there**  
 14 **was a study done at that time. And they did show**  
 15 **some correlation with river flow and a two-year**  
 16 **lag period that was typical of what we see**  
 17 **because, again, you're always talking about how**  
 18 **the effect is on recruitment. It's not the end**  
 19 **product that you're looking at. It is the**  
 20 **beginning product. You have to look at the early**  
 21 **recruitment to tell what it's going to be. And**  
 22 **typically that's two years.**

23 **So drought has a negative effect on**  
 24 **recruitment. It's not going to show up during**  
 25 **the drought; it's going to show up two years**

THE REPORTING GROUP  
Mason & Lockhart

1022

1 **after the drought.**

2 **Q.** Okay. So we had the drought here, and we didn't

3 have a fishery collapse here or here or here or

4 here or here or here at any of these points?

5 **A. I would suggest to you that in 1995 and '96 on**

6 **here that it shows significant decline after that**

7 **drought.**

8 **Q.** Okay. Well, how about 1998? You had a drought

9 in 1998, too; do you recall that?

10 **A. Not specifically.**

11 **Q.** Okay. I looked it up. After 1998 we had a

12 drought, and we didn't have a fishery collapse.

13 You know, we had plenty of landings. There were

14 even more then. Right?

15 **A. That's what it indicates.**

16 **Q.** Now, let's talk about what was different about

17 this drought here. Now, the thing that is

18 different -- or multiple things that are

19 different, in the two years prior to this

20 collapse here, that's the only time I have been

21 able to find -- and you can confirm for me --

22 reports that you wrote -- resource assessment

23 reports talking about a "use it or lose it"

24 attitude. Would you confirm that?

25 **A. I can't confirm what you just said, but I brought**

THE REPORTING GROUP  
Mason & Lockhart

1023

1 **up many times "use it or lose it". I have tried**

2 **my best to explain that approach.**

3 **Q.** And that was after 2010 with the BP oil spill.

4 Correct?

5 **A. That approach was brought up, yes.**

6 **Q.** And in the same two-year time period, we had

7 reports in 2011 and in 2012 where you warned that

8 Florida Fish and Wildlife was not enforcing size

9 limits. Correct?

10 **A. I reported that I had heard or had information**

11 **that size limits were not being enforced.**

12 **Q.** And you also reported in these same two years

13 prior to the collapse that overharvesting was

14 taking place of sub-legal oysters which was

15 detrimental to recruitment. Right?

16 **A. Detrimental to recruitment and to market size;**

17 **that's correct.**

18 **Q.** And then we also have in these two years the

19 highest -- the largest -- the highest amount of

20 pounds of oysters landed in Apalachicola Bay in

21 the prior 25 years. Right?

22 **A. That is correct. Highest demand, highest price,**

23 **more fishermen.**

24 MR. ECHOLS: No further questions.

25 MS. WINE: Your Honor, briefly, I just

THE REPORTING GROUP  
Mason & Lockhart

1024

1 have one question as a follow-up.

2 SPECIAL MASTER LANCASTER: One.

3 MS. WINE: It's only because he invited

4 it, sir. I can't leave it hanging.

5 REDIRECT EXAMINATION

6 BY MS. WINE:

7 **Q.** If you -- I don't know if you're still on tab 11,

8 JX-78. We were looking at the landings

9 information on page -- what's titled page 1 at

10 the bottom, although it's the third page of the

11 exhibit. And Georgia's counsel pointed out the

12 numbers for 2010 in Franklin County.

13 MS. WINE: The 1-nine number,

14 Mr. Walton, and then the 2012 number, the

15 1-seven number for Franklin County.

16 BY MS. WINE:

17 **Q.** And I think you asked or indicated that you had

18 an explanation for those numbers; so I'm asking

19 you, sir, what that is?

20 **A. Yes, I do. In 2010 that was the year of the**

21 **Deepwater Horizon oil spill. Demand for Gulf**

22 **seafood disappeared. We're lucky we harvested**

23 **that much of it. We probably harvested what you**

24 **see there prior to the spill or prior to all the**

25 **media coverage of what was happening.**

THE REPORTING GROUP  
Mason & Lockhart

1025

1 **The large increase in 2011-2012 that we're**

2 **talking about is during a period of greatest**

3 **demand, because the other Gulf states were not**

4 **producing because they were still suffering from**

5 **various catastrophic events, and the highest**

6 **price, which brings oystermen to work. That's**

7 **going to bring them out.**

8 **Plus, during this period of time, there --**

9 **there's not a lot of other job opportunities.**

10 **And people will quit their other jobs to oyster**

11 **when there is that much money to be gained.**

12 MS. WINE: Your Honor, I'm done with my

13 exam.

14 I did remember that I forgot at the

15 start of my exam to introduce my colleague

16 Natalie Rao, who has been assisting me today

17 at counsel table. And I just wanted to make

18 sure to introduce her to your Honor.

19 SPECIAL MASTER LANCASTER: Welcome.

20 MS. RAO: Good afternoon, your Honor.

21 MR. ECHOLS: No further questions, your

22 Honor.

23 SPECIAL MASTER LANCASTER: Mr. Berrigan,

24 of all the people involved in this, I'm the

25 least informed. So forgive me if I don't ask

THE REPORTING GROUP  
Mason & Lockhart

1026

1 the question properly. But in your -- one of  
 2 your reports you refer to oysters as sessile  
 3 animals.  
 4 THE WITNESS: Sessile.  
 5 SPECIAL MASTER LANCASTER: Would you  
 6 tell me what the heck a sessile animal is?  
 7 THE WITNESS: That -- oysters cement  
 8 themselves to their substrates, so they're  
 9 immobile. Oysters cement themselves to the  
 10 substrate and essentially become immobile.  
 11 They can't swim. They can't walk. They  
 12 can't crawl. Wherever they set, for the most  
 13 part that's where they're going to live their  
 14 life out.  
 15 SPECIAL MASTER LANCASTER: Why were  
 16 managed reefs performing better for some  
 17 portions of 2012 than the other reefs?  
 18 THE WITNESS: I would like to take  
 19 credit for our group saying that we put them  
 20 in the right places, because we put them in  
 21 areas where we had the most stable  
 22 environment for their -- them to grow. They  
 23 were all somewhat proximal to the river and  
 24 freshwater discharge.  
 25 We had really learned in our process not  
 THE REPORTING GROUP  
 Mason & Lockhart

1027

1 to construct reefs in the far reaches of  
 2 Apalachicola Bay or in areas that were too  
 3 far away from the river because favorable  
 4 conditions were just not predictable.  
 5 SPECIAL MASTER LANCASTER: Does the  
 6 success that you had in reshelling some reefs  
 7 up through 2012 indicate that increased  
 8 salinity was the primary cause of the oyster  
 9 collapse?  
 10 THE WITNESS: In the areas that we're  
 11 talking about on Green Point, North Spur, and  
 12 on East Hole, all of those bars, as we saw in  
 13 these photographs, started off very good. We  
 14 had good recruitment on them, good survival,  
 15 and good growth. Throughout the progress of  
 16 this depletion event, all of those planted  
 17 reefs were adversely affected and had --  
 18 experienced extensive mortality, probably in  
 19 some places reaching as much as 100 percent.  
 20 But they were the last ones to go.  
 21 I dove on the East Hole plant site, I  
 22 think, in November of 2012, really kind of in  
 23 response to this one note, and it still  
 24 looked pretty good at that time. Of course,  
 25 it was right beside the Intracoastal  
 THE REPORTING GROUP  
 Mason & Lockhart

1028

1 Waterway, which is a conveyance for what  
 2 little fresh water there was through the bay.  
 3 SPECIAL MASTER LANCASTER: I realize  
 4 that you were not employed at the time, but  
 5 has Florida engaged in reshelling since 2012?  
 6 THE WITNESS: I'm not certain of this  
 7 answer; but I believe that there has been  
 8 almost a continuous reshelling program  
 9 ongoing. And that reshelling program has  
 10 primarily been for employment of oystermen  
 11 that otherwise wouldn't be able to make a  
 12 living right now.  
 13 SPECIAL MASTER LANCASTER: And do you  
 14 know what the result was?  
 15 THE WITNESS: I do not. And I actually  
 16 want -- one of my clients has asked me  
 17 several times to try to find that information  
 18 out, and I haven't got it. I have tried.  
 19 SPECIAL MASTER LANCASTER: Are you at  
 20 all familiar with the ACF Stakeholders  
 21 Sustainable Water Implementation Plan?  
 22 THE WITNESS: No, I'm not.  
 23 SPECIAL MASTER LANCASTER: And then,  
 24 finally -- and this one is just because of  
 25 the way I read things. Would you go to  
 THE REPORTING GROUP  
 Mason & Lockhart

1029

1 volume 1 and tab 3, JX-150, Joint Exhibit 150.  
 2 Do you have that?  
 3 THE WITNESS: Yes, I do.  
 4 SPECIAL MASTER LANCASTER: It's -- I  
 5 understand that you told both counsel that  
 6 these were your notes. And, yet, the heading  
 7 says Input For Mark's Report. Did you write  
 8 that?  
 9 THE WITNESS: In reading this and  
 10 reading some of these sentences are not mine.  
 11 I'm not certain as to what this was. And  
 12 I -- I may have conceded that these were my  
 13 notes; but I -- I am somewhat confused by  
 14 them. Most of the statements in there are --  
 15 I agree with.  
 16 SPECIAL MASTER LANCASTER: Thank you.  
 17 You have clarified that for me and made me  
 18 feel a lot better.  
 19 Counsel?  
 20  
 21 MR. ECHOLS: Nothing, your Honor.  
 22 MS. WINE: Nothing further, your Honor.  
 23 SPECIAL MASTER LANCASTER: We will  
 24 recess for the weekend.  
 25 Alec has furnished counsel with a list  
 THE REPORTING GROUP  
 Mason & Lockhart

1030

1 of good restaurants, and that's one of the  
 2 things that Portland does have. I suggest  
 3 that you try them out. I'm sure you're all  
 4 aware of the fact that this is a daylight  
 5 savings time change, so there will be an hour  
 6 change this weekend. You may not be aware  
 7 that this building will be closed on the 11th  
 8 on Veteran's Day, so you're going to have a  
 9 long weekend. You're going to have another  
 10 chance to sample Portland's restaurants.

11 We'll be in recess. Thank you.

12 MR. ECHOLS: Thank you, your Honor.

13 THE WITNESS: Thank you.

14 (Time Noted: 3:22 p.m.)

15 (Proceeding adjourned to Monday,  
16 November 7, 2016, at 9:00 a.m.)

17 (End of day)

18 - - - - -

19  
20  
21  
22  
23  
24  
25

THE REPORTING GROUP  
Mason & Lockhart

1031

CERTIFICATE

1 I, Claudette G. Mason, a Notary Public  
 2 in and for the State of Maine, hereby certify  
 3 that the foregoing pages are a correct  
 4 transcript of my stenographic notes of the  
 5 Proceedings.  
 6

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 28th day of November, 2016.

12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

15 /s/ Claudette G. Mason  
 Claudette G. Mason, RMR, CRR  
 Court Reporter

17 My Commission Expires  
 June 9, 2019.

THE REPORTING GROUP  
Mason & Lockhart

	<p><b>160,768</b> [1] - 952:5  <b>17</b> [2] - 865:8, 903:11  <b>18</b> [1] - 839:6  <b>19</b> [1] - 965:23  <b>1980's</b> [1] - 963:10  <b>1985</b> [1] - 964:2  <b>1989</b> [1] - 956:3  <b>199,000</b> [1] - 953:4  <b>1990</b> [1] - 947:8  <b>1991</b> [2] - 947:9, 947:10  <b>1995</b> [1] - 1022:5  <b>1998</b> [3] - 1022:8, 1022:9, 1022:11  <b>1:00</b> [1] - 940:3</p>	<p>856:20, 857:10, 858:9, 869:22, 871:18, 913:17, 916:20, 922:15, 922:17, 922:20, 923:22, 925:5, 926:19, 941:16, 949:18, 949:20, 951:3, 951:21, 952:4, 953:4, 953:16, 956:7, 956:12, 956:22, 959:18, 962:3, 970:7, 970:23, 974:8, 988:19, 992:4, 992:21, 993:15, 994:13, 995:5, 1018:2, 1023:7</p>	<p>976:17, 978:1, 979:6, 995:21, 1004:4, 1006:2, 1006:10, 1006:13, 1007:3, 1009:18, 1013:3, 1013:4, 1018:3, 1018:6, 1019:22, 1020:3, 1020:8, 1020:15, 1020:22, 1023:7, 1024:14, 1026:17, 1027:7, 1027:22, 1028:5</p>	<p><b>30-plus</b> [1] - 905:9  <b>307</b> [1] - 920:18  <b>312</b> [1] - 920:8  <b>313</b> [1] - 920:3  <b>332,556</b> [1] - 952:1  <b>3:22</b> [1] - 1030:14</p>
<p><b>'08</b> [1] - 921:15  <b>'09</b> [1] - 921:15  <b>'10</b> [1] - 921:15  <b>'85</b> [1] - 909:17  <b>'89</b> [1] - 1021:9  <b>'92</b> [1] - 1021:9  <b>'96</b> [1] - 1022:5</p>				
<p><b>/</b></p>				
<p><b>/s</b> [1] - 1031:15</p>				
<p><b>1</b></p>				
<p><b>1</b> [17] - 819:20, 819:25, 874:20, 913:21, 938:4, 941:10, 941:17, 951:12, 951:21, 958:10, 967:20, 988:18, 995:20, 1000:8, 1004:3, 1024:9, 1029:1  <b>1,000</b> [1] - 915:13  <b>1,737,222</b> [1] - 1020:9  <b>1,947,201</b> [1] - 1020:16  <b>1-nine</b> [1] - 1024:13  <b>1-seven</b> [1] - 1024:15  <b>10</b> [4] - 889:7, 889:10, 912:6, 945:11  <b>10-year</b> [1] - 942:19  <b>100</b> [6] - 880:17, 946:5, 959:15, 978:11, 978:12, 1027:19  <b>100,000</b> [1] - 953:6  <b>1006</b> [1] - 815:11  <b>1009</b> [1] - 815:9  <b>1013</b> [1] - 815:3  <b>1017</b> [1] - 815:12  <b>1024</b> [2] - 815:3, 815:12  <b>10:21</b> [1] - 878:8  <b>10:37</b> [1] - 878:10  <b>11</b> [6] - 903:7, 948:18, 948:22, 1017:11, 1017:13, 1024:7  <b>11-year</b> [1] - 942:19  <b>11th</b> [1] - 1030:7  <b>1296</b> [1] - 931:6  <b>12:00</b> [1] - 940:1  <b>13</b> [2] - 912:7, 1000:10  <b>142</b> [1] - 814:1  <b>148</b> [1] - 903:5  <b>15</b> [2] - 839:7, 852:17  <b>150</b> [1] - 1029:1  <b>16</b> [1] - 852:17  <b>160,000</b> [1] - 1018:1</p>	<p><b>2</b></p> <p><b>2</b> [15] - 846:13, 880:4, 896:25, 913:21, 913:22, 941:13, 945:12, 951:13, 970:19, 991:25, 1000:9, 1006:19, 1006:22  <b>2,000</b> [2] - 918:3, 918:8  <b>20</b> [4] - 828:17, 829:1, 895:17, 974:18  <b>200</b> [1] - 910:9  <b>2002</b> [1] - 1004:4  <b>2007</b> [1] - 949:15  <b>2008</b> [3] - 915:12, 918:15, 1009:10  <b>2009</b> [3] - 846:24, 918:15, 1009:10  <b>2010</b> [28] - 828:15, 829:13, 830:6, 832:5, 832:6, 832:22, 834:5, 834:18, 836:11, 842:17, 842:18, 848:7, 849:18, 858:10, 860:4, 869:21, 871:7, 918:15, 942:17, 962:18, 974:4, 1009:10, 1020:13, 1020:15, 1020:21, 1023:3, 1024:12, 1024:20  <b>2011</b> [56] - 828:14, 829:13, 836:4, 844:5, 844:6, 844:8, 844:15, 844:25, 845:7, 845:19, 846:11, 846:16, 846:24, 847:3, 847:9, 848:11, 849:3, 849:18,</p>	<p><b>2011-2012</b> [2] - 850:8, 1025:1  <b>2011/12</b> [1] - 844:11  <b>2012</b> [105] - 816:16, 817:4, 822:17, 822:20, 822:23, 828:4, 834:6, 834:7, 835:22, 835:24, 836:4, 836:11, 843:2, 843:23, 844:1, 844:22, 845:9, 845:20, 848:12, 853:21, 854:9, 854:16, 857:10, 859:5, 859:19, 861:10, 861:11, 863:21, 865:15, 866:18, 867:2, 867:6, 867:20, 868:7, 868:18, 868:25, 870:19, 872:3, 877:5, 877:7, 877:20, 913:17, 929:17, 929:23, 930:8, 930:20, 931:8, 931:17, 932:22, 932:25, 934:21, 935:8, 941:11, 945:16, 947:11, 949:15, 949:17, 949:19, 949:21, 950:16, 951:4, 951:16, 951:22, 951:25, 952:8, 952:25, 953:14, 954:1, 954:7, 956:3, 956:7, 956:12, 959:18, 962:3, 967:4,</p>	<p><b>2012-2013</b> [3] - 956:21, 957:18, 967:5  <b>2012/2013</b> [1] - 836:15  <b>2013</b> [11] - 900:5, 900:16, 912:15, 912:17, 912:23, 957:17, 962:15, 962:18, 965:13, 965:15, 967:4  <b>2014</b> [2] - 919:2, 921:14  <b>2016</b> [5] - 814:13, 954:2, 965:23, 1030:16, 1031:11  <b>2019</b> [1] - 1031:17  <b>219,000</b> [1] - 953:11  <b>22</b> [1] - 932:8  <b>220</b> [1] - 944:4  <b>24</b> [5] - 839:6, 839:8, 945:21, 946:8, 986:7  <b>240</b> [2] - 965:20, 966:1  <b>25</b> [5] - 889:20, 903:8, 955:16, 956:9, 1023:21  <b>283,896</b> [1] - 953:11  <b>289,000-and-change</b> [1] - 952:25  <b>28th</b> [1] - 1031:11  <b>2:42</b> [1] - 1011:8  <b>2:56</b> [1] - 1011:10</p>	<p><b>4</b></p> <p><b>4</b> [11] - 814:13, 847:15, 867:3, 867:15, 867:17, 891:9, 945:16, 978:2, 992:7, 998:17  <b>40</b> [1] - 939:20  <b>49</b> [2] - 873:9, 874:8</p>
<p><b>1</b></p>				
<p><b>1</b> [17] - 819:20, 819:25, 874:20, 913:21, 938:4, 941:10, 941:17, 951:12, 951:21, 958:10, 967:20, 988:18, 995:20, 1000:8, 1004:3, 1024:9, 1029:1  <b>1,000</b> [1] - 915:13  <b>1,737,222</b> [1] - 1020:9  <b>1,947,201</b> [1] - 1020:16  <b>1-nine</b> [1] - 1024:13  <b>1-seven</b> [1] - 1024:15  <b>10</b> [4] - 889:7, 889:10, 912:6, 945:11  <b>10-year</b> [1] - 942:19  <b>100</b> [6] - 880:17, 946:5, 959:15, 978:11, 978:12, 1027:19  <b>100,000</b> [1] - 953:6  <b>1006</b> [1] - 815:11  <b>1009</b> [1] - 815:9  <b>1013</b> [1] - 815:3  <b>1017</b> [1] - 815:12  <b>1024</b> [2] - 815:3, 815:12  <b>10:21</b> [1] - 878:8  <b>10:37</b> [1] - 878:10  <b>11</b> [6] - 903:7, 948:18, 948:22, 1017:11, 1017:13, 1024:7  <b>11-year</b> [1] - 942:19  <b>11th</b> [1] - 1030:7  <b>1296</b> [1] - 931:6  <b>12:00</b> [1] - 940:1  <b>13</b> [2] - 912:7, 1000:10  <b>142</b> [1] - 814:1  <b>148</b> [1] - 903:5  <b>15</b> [2] - 839:7, 852:17  <b>150</b> [1] - 1029:1  <b>16</b> [1] - 852:17  <b>160,000</b> [1] - 1018:1</p>	<p><b>2</b></p> <p><b>2</b> [15] - 846:13, 880:4, 896:25, 913:21, 913:22, 941:13, 945:12, 951:13, 970:19, 991:25, 1000:9, 1006:19, 1006:22  <b>2,000</b> [2] - 918:3, 918:8  <b>20</b> [4] - 828:17, 829:1, 895:17, 974:18  <b>200</b> [1] - 910:9  <b>2002</b> [1] - 1004:4  <b>2007</b> [1] - 949:15  <b>2008</b> [3] - 915:12, 918:15, 1009:10  <b>2009</b> [3] - 846:24, 918:15, 1009:10  <b>2010</b> [28] - 828:15, 829:13, 830:6, 832:5, 832:6, 832:22, 834:5, 834:18, 836:11, 842:17, 842:18, 848:7, 849:18, 858:10, 860:4, 869:21, 871:7, 918:15, 942:17, 962:18, 974:4, 1009:10, 1020:13, 1020:15, 1020:21, 1023:3, 1024:12, 1024:20  <b>2011</b> [56] - 828:14, 829:13, 836:4, 844:5, 844:6, 844:8, 844:15, 844:25, 845:7, 845:19, 846:11, 846:16, 846:24, 847:3, 847:9, 848:11, 849:3, 849:18,</p>	<p><b>2011-2012</b> [2] - 850:8, 1025:1  <b>2011/12</b> [1] - 844:11  <b>2012</b> [105] - 816:16, 817:4, 822:17, 822:20, 822:23, 828:4, 834:6, 834:7, 835:22, 835:24, 836:4, 836:11, 843:2, 843:23, 844:1, 844:22, 845:9, 845:20, 848:12, 853:21, 854:9, 854:16, 857:10, 859:5, 859:19, 861:10, 861:11, 863:21, 865:15, 866:18, 867:2, 867:6, 867:20, 868:7, 868:18, 868:25, 870:19, 872:3, 877:5, 877:7, 877:20, 913:17, 929:17, 929:23, 930:8, 930:20, 931:8, 931:17, 932:22, 932:25, 934:21, 935:8, 941:11, 945:16, 947:11, 949:15, 949:17, 949:19, 949:21, 950:16, 951:4, 951:16, 951:22, 951:25, 952:8, 952:25, 953:14, 954:1, 954:7, 956:3, 956:7, 956:12, 959:18, 962:3, 967:4,</p>	<p><b>2012-2013</b> [3] - 956:21, 957:18, 967:5  <b>2012/2013</b> [1] - 836:15  <b>2013</b> [11] - 900:5, 900:16, 912:15, 912:17, 912:23, 957:17, 962:15, 962:18, 965:13, 965:15, 967:4  <b>2014</b> [2] - 919:2, 921:14  <b>2016</b> [5] - 814:13, 954:2, 965:23, 1030:16, 1031:11  <b>2019</b> [1] - 1031:17  <b>219,000</b> [1] - 953:11  <b>22</b> [1] - 932:8  <b>220</b> [1] - 944:4  <b>24</b> [5] - 839:6, 839:8, 945:21, 946:8, 986:7  <b>240</b> [2] - 965:20, 966:1  <b>25</b> [5] - 889:20, 903:8, 955:16, 956:9, 1023:21  <b>283,896</b> [1] - 953:11  <b>289,000-and-change</b> [1] - 952:25  <b>28th</b> [1] - 1031:11  <b>2:42</b> [1] - 1011:8  <b>2:56</b> [1] - 1011:10</p>	<p><b>5</b></p> <p><b>5</b> [12] - 848:21, 868:17, 868:19, 891:12, 929:25, 934:11, 940:24, 944:5, 970:3, 1002:3, 1004:2, 1006:8  <b>5/21/10</b> [1] - 860:12  <b>50</b> [2] - 1012:9, 1012:10  <b>52</b> [1] - 914:3  <b>525</b> [1] - 990:11  <b>537</b> [1] - 814:12  <b>56</b> [1] - 982:25  <b>59</b> [2] - 865:5, 865:13</p>
<p><b>1</b></p>				
<p><b>1</b></p>				
<p><b>1</b></p>				
<p><b>1</b></p>				
<p><b>1</b></p>				
<p><b>1</b></p>				
<p><b>1</b></p>				
<p><b>1</b></p>				
<p><b>1</b></p>				



<b>8</b>	<p>991:10, 1005:23, 1010:12, 1014:18, 1015:22, 1022:21, 1028:11</p> <p><b>abnormal</b> [1] - 979:21</p> <p><b>above-entitled</b> [1] - 814:10</p> <p><b>above-named</b> [1] - 1031:9</p> <p><b>absence</b> [1] - 997:20</p> <p><b>absolutely</b> [2] - 889:18, 923:4</p> <p><b>abundance</b> [5] - 848:1, 869:17, 894:24, 956:13, 991:13</p> <p><b>abundances</b> [1] - 829:9</p> <p><b>abundant</b> [3] - 894:22, 1004:23, 1005:20</p> <p><b>accelerate</b> [4] - 963:23, 965:4, 965:6, 966:19</p> <p><b>accelerated</b> [1] - 964:16</p> <p><b>accept</b> [3] - 834:10, 861:15, 947:19</p> <p><b>access</b> [1] - 955:3</p> <p><b>accommodate</b> [1] - 860:10</p> <p><b>accommodations</b> [1] - 829:18</p> <p><b>accomplish</b> [1] - 997:23</p> <p><b>according</b> [4] - 837:15, 951:25, 957:11, 1017:21</p> <p><b>accurate</b> [20] - 831:15, 834:7, 858:24, 870:21, 870:24, 871:22, 873:10, 873:13, 874:11, 874:12, 875:9, 885:2, 893:9, 903:4, 904:1, 905:5, 914:8, 959:1, 959:8, 962:16</p> <p><b>ACF</b> [2] - 861:24, 1028:20</p> <p><b>achieved</b> [1] - 916:10</p> <p><b>acknowledged</b> [3] - 842:18, 866:8, 887:23</p> <p><b>acre</b> [6] - 837:24, 839:22, 850:20, 918:3, 918:8, 918:9</p> <p><b>acreage</b> [1] - 910:13</p> <p><b>acres</b> [2] - 910:9, 989:18</p> <p><b>act</b> [2] - 908:1, 997:17</p> <p><b>acting</b> [2] - 902:12</p>	<p>903:15</p> <p><b>action</b> [5] - 818:23, 826:13, 973:19, 982:1, 1031:9</p> <p><b>actions</b> [2] - 854:23, 909:24</p> <p><b>actively</b> [2] - 882:6, 980:21</p> <p><b>activities</b> [2] - 931:7, 932:2</p> <p><b>activity</b> [1] - 830:5</p> <p><b>acts</b> [1] - 902:1</p> <p><b>actual</b> [5] - 886:22, 910:13, 946:2, 946:6, 956:1</p> <p><b>add</b> [2] - 928:24, 983:12</p> <p><b>added</b> [1] - 966:7</p> <p><b>adding</b> [1] - 908:7</p> <p><b>additional</b> [7] - 833:1, 888:5, 912:25, 930:16, 934:5, 994:8</p> <p><b>address</b> [1] - 906:7</p> <p><b>adjourned</b> [1] - 1030:15</p> <p><b>adopted</b> [1] - 964:3</p> <p><b>adult</b> [8] - 827:8, 838:19, 839:20, 880:25, 974:10, 1005:19, 1005:20</p> <p><b>adult-size</b> [1] - 839:20</p> <p><b>adults</b> [4] - 876:18, 935:13, 979:9, 984:17</p> <p><b>advantage</b> [1] - 962:9</p> <p><b>adverse</b> [2] - 890:14, 985:15</p> <p><b>adversely</b> [2] - 823:7, 1027:17</p> <p><b>advise</b> [2] - 1010:10, 1010:11</p> <p><b>affect</b> [2] - 851:1, 868:13</p> <p><b>affected</b> [15] - 821:14, 821:23, 822:1, 822:3, 823:8, 834:4, 840:2, 979:9, 979:10, 986:1, 991:20, 1001:15, 1014:14, 1015:14, 1027:17</p> <p><b>affecting</b> [1] - 1013:17</p> <p><b>affinities</b> [1] - 980:11</p> <p><b>afternoon</b> [8] - 940:4, 940:6, 968:13, 968:14, 1010:8, 1010:13, 1010:25, 1025:20</p> <p><b>age</b> [1] - 984:21</p>	<p><b>agency</b> [2] - 855:10, 911:25</p> <p><b>aggregated</b> [1] - 893:25</p> <p><b>ago</b> [2] - 836:20, 837:6</p> <p><b>agree</b> [38] - 830:15, 831:16, 831:18, 831:23, 857:20, 861:13, 884:11, 887:6, 901:17, 901:19, 901:21, 903:23, 904:2, 905:16, 908:19, 909:7, 926:18, 935:15, 943:11, 943:17, 951:14, 952:19, 953:8, 953:9, 953:12, 953:17, 955:20, 956:6, 956:10, 959:16, 960:15, 960:20, 964:15, 965:2, 994:6, 995:3, 995:4, 1029:15</p> <p><b>agreeable</b> [1] - 926:8</p> <p><b>agreed</b> [1] - 954:22</p> <p><b>agreeing</b> [1] - 902:16</p> <p><b>agreement</b> [1] - 1013:13</p> <p><b>agrees</b> [1] - 886:17</p> <p><b>Agriculture</b> [3] - 911:7, 912:8, 931:12</p> <p><b>ahead</b> [4] - 858:6, 936:20, 960:19, 1006:9</p> <p><b>aid</b> [1] - 997:17</p> <p><b>aim</b> [1] - 974:12</p> <p><b>alec</b> [1] - 1029:25</p> <p><b>alive</b> [5] - 883:5, 899:22, 915:17, 930:2, 1016:25</p> <p><b>allocate</b> [1] - 1018:21</p> <p><b>allocated</b> [1] - 913:1</p> <p><b>allocating</b> [1] - 1018:22</p> <p><b>allocation</b> [4] - 840:4, 845:24, 851:10, 984:8</p> <p><b>allow</b> [7] - 819:5, 832:4, 832:21, 857:24, 877:15, 938:24, 971:16</p> <p><b>allowed</b> [3] - 843:11, 979:18, 1018:2</p> <p><b>allows</b> [1] - 833:13</p> <p><b>almost</b> [1] - 825:6, 827:15, 840:21, 840:23, 845:21, 858:5, 899:19,</p>	<p>1020:21, 1028:8</p> <p><b>alter</b> [1] - 844:14</p> <p><b>altering</b> [1] - 1011:25</p> <p><b>amending</b> [1] - 864:2</p> <p><b>amount</b> [15] - 854:11, 855:24, 883:1, 912:18, 943:12, 944:18, 949:22, 952:8, 952:11, 952:15, 955:25, 957:15, 1017:19, 1020:21, 1023:19</p> <p><b>amounts</b> [2] - 956:8, 957:12</p> <p><b>analyses</b> [3] - 818:5, 820:25, 1002:14</p> <p><b>analyzing</b> [1] - 850:13</p> <p><b>animal</b> [2] - 894:10, 1026:6</p> <p><b>animals</b> [4] - 926:23, 927:20, 980:10, 1026:3</p> <p><b>annoying</b> [1] - 888:18</p> <p><b>annual</b> [4] - 912:1, 953:23, 992:12, 1019:21</p> <p><b>answer</b> [10] - 842:3, 853:25, 854:2, 906:6, 944:16, 944:20, 966:4, 966:14, 1010:14, 1028:7</p> <p><b>answers</b> [1] - 944:9</p> <p><b>anticipate</b> [1] - 1010:17</p> <p><b>Apalachicola</b> [60] - 817:4, 818:21, 822:2, 822:6, 822:8, 824:21, 833:10, 840:20, 842:19, 844:7, 852:21, 860:9, 865:15, 867:5, 868:24, 875:8, 876:12, 879:3, 879:22, 884:4, 904:1, 909:13, 915:6, 922:16, 924:2, 926:7, 934:7, 934:17, 936:24, 941:19, 972:21, 972:23, 972:25, 973:1, 973:16, 985:16, 985:17, 985:24, 986:5, 988:18, 989:17, 989:19, 991:3, 991:19, 992:9, 994:3, 994:24, 999:2, 1000:22,</p>
<b>9</b>	<p>9 [6] - 930:25, 931:2, 931:4, 968:9, 1031:17</p> <p><b>914</b> [1] - 815:9</p> <p><b>918</b> [1] - 815:18</p> <p><b>922</b> [1] - 815:10</p> <p><b>931</b> [1] - 815:17</p> <p><b>941</b> [1] - 815:11</p> <p><b>945</b> [1] - 815:16</p> <p><b>948</b> [1] - 815:12</p> <p><b>95</b> [2] - 940:20, 976:10</p> <p><b>954</b> [1] - 815:17</p> <p><b>958</b> [1] - 815:12</p> <p><b>968</b> [1] - 815:3</p> <p><b>969</b> [1] - 815:14</p> <p><b>987</b> [1] - 815:12</p> <p><b>993</b> [1] - 815:10</p> <p><b>995</b> [1] - 815:11</p> <p><b>9:00</b> [1] - 1030:16</p>	<p>903:15</p> <p><b>action</b> [5] - 818:23, 826:13, 973:19, 982:1, 1031:9</p> <p><b>actions</b> [2] - 854:23, 909:24</p> <p><b>actively</b> [2] - 882:6, 980:21</p> <p><b>activities</b> [2] - 931:7, 932:2</p> <p><b>activity</b> [1] - 830:5</p> <p><b>acts</b> [1] - 902:1</p> <p><b>actual</b> [5] - 886:22, 910:13, 946:2, 946:6, 956:1</p> <p><b>add</b> [2] - 928:24, 983:12</p> <p><b>added</b> [1] - 966:7</p> <p><b>adding</b> [1] - 908:7</p> <p><b>additional</b> [7] - 833:1, 888:5, 912:25, 930:16, 934:5, 994:8</p> <p><b>address</b> [1] - 906:7</p> <p><b>adjourned</b> [1] - 1030:15</p> <p><b>adopted</b> [1] - 964:3</p> <p><b>adult</b> [8] - 827:8, 838:19, 839:20, 880:25, 974:10, 1005:19, 1005:20</p> <p><b>adult-size</b> [1] - 839:20</p> <p><b>adults</b> [4] - 876:18, 935:13, 979:9, 984:17</p> <p><b>advantage</b> [1] - 962:9</p> <p><b>adverse</b> [2] - 890:14, 985:15</p> <p><b>adversely</b> [2] - 823:7, 1027:17</p> <p><b>advise</b> [2] - 1010:10, 1010:11</p> <p><b>affect</b> [2] - 851:1, 868:13</p> <p><b>affected</b> [15] - 821:14, 821:23, 822:1, 822:3, 823:8, 834:4, 840:2, 979:9, 979:10, 986:1, 991:20, 1001:15, 1014:14, 1015:14, 1027:17</p> <p><b>affecting</b> [1] - 1013:17</p> <p><b>affinities</b> [1] - 980:11</p> <p><b>afternoon</b> [8] - 940:4, 940:6, 968:13, 968:14, 1010:8, 1010:13, 1010:25, 1025:20</p> <p><b>age</b> [1] - 984:21</p>	<p><b>agency</b> [2] - 855:10, 911:25</p> <p><b>aggregated</b> [1] - 893:25</p> <p><b>ago</b> [2] - 836:20, 837:6</p> <p><b>agree</b> [38] - 830:15, 831:16, 831:18, 831:23, 857:20, 861:13, 884:11, 887:6, 901:17, 901:19, 901:21, 903:23, 904:2, 905:16, 908:19, 909:7, 926:18, 935:15, 943:11, 943:17, 951:14, 952:19, 953:8, 953:9, 953:12, 953:17, 955:20, 956:6, 956:10, 959:16, 960:15, 960:20, 964:15, 965:2, 994:6, 995:3, 995:4, 1029:15</p> <p><b>agreeable</b> [1] - 926:8</p> <p><b>agreed</b> [1] - 954:22</p> <p><b>agreeing</b> [1] - 902:16</p> <p><b>agreement</b> [1] - 1013:13</p> <p><b>agrees</b> [1] - 886:17</p> <p><b>Agriculture</b> [3] - 911:7, 912:8, 931:12</p> <p><b>ahead</b> [4] - 858:6, 936:20, 960:19, 1006:9</p> <p><b>aid</b> [1] - 997:17</p> <p><b>aim</b> [1] - 974:12</p> <p><b>alec</b> [1] - 1029:25</p> <p><b>alive</b> [5] - 883:5, 899:22, 915:17, 930:2, 1016:25</p> <p><b>allocate</b> [1] - 1018:21</p> <p><b>allocated</b> [1] - 913:1</p> <p><b>allocating</b> [1] - 1018:22</p> <p><b>allocation</b> [4] - 840:4, 845:24, 851:10, 984:8</p> <p><b>allow</b> [7] - 819:5, 832:4, 832:21, 857:24, 877:15, 938:24, 971:16</p> <p><b>allowed</b> [3] - 843:11, 979:18, 1018:2</p> <p><b>allows</b> [1] - 833:13</p> <p><b>almost</b> [1] - 825:6, 827:15, 840:21, 840:23, 845:21, 858:5, 899:19,</p>	<p>1020:21, 1028:8</p> <p><b>alter</b> [1] - 844:14</p> <p><b>altering</b> [1] - 1011:25</p> <p><b>amending</b> [1] - 864:2</p> <p><b>amount</b> [15] - 854:11, 855:24, 883:1, 912:18, 943:12, 944:18, 949:22, 952:8, 952:11, 952:15, 955:25, 957:15, 1017:19, 1020:21, 1023:19</p> <p><b>amounts</b> [2] - 956:8, 957:12</p> <p><b>analyses</b> [3] - 818:5, 820:25, 1002:14</p> <p><b>analyzing</b> [1] - 850:13</p> <p><b>animal</b> [2] - 894:10, 1026:6</p> <p><b>animals</b> [4] - 926:23, 927:20, 980:10, 1026:3</p> <p><b>annoying</b> [1] - 888:18</p> <p><b>annual</b> [4] - 912:1, 953:23, 992:12, 1019:21</p> <p><b>answer</b> [10] - 842:3, 853:25, 854:2, 906:6, 944:16, 944:20, 966:4, 966:14, 1010:14, 1028:7</p> <p><b>answers</b> [1] - 944:9</p> <p><b>anticipate</b> [1] - 1010:17</p> <p><b>Apalachicola</b> [60] - 817:4, 818:21, 822:2, 822:6, 822:8, 824:21, 833:10, 840:20, 842:19, 844:7, 852:21, 860:9, 865:15, 867:5, 868:24, 875:8, 876:12, 879:3, 879:22, 884:4, 904:1, 909:13, 915:6, 922:16, 924:2, 926:7, 934:7, 934:17, 936:24, 941:19, 972:21, 972:23, 972:25, 973:1, 973:16, 985:16, 985:17, 985:24, 986:5, 988:18, 989:17, 989:19, 991:3, 991:19, 992:9, 994:3, 994:24, 999:2, 1000:22,</p>
<b>A</b>	<p><b>a.m</b> [4] - 814:14, 878:8, 878:10, 1030:16</p> <p><b>aberrations</b> [1] - 884:18</p> <p><b>ABID</b> [1] - 814:18</p> <p><b>ability</b> [1] - 955:9</p> <p><b>able</b> [30] - 837:1, 840:25, 841:3, 846:5, 850:14, 876:14, 876:17, 876:18, 879:22, 882:23, 882:24, 898:10, 910:23, 911:22, 913:4, 924:16, 939:19, 940:8, 940:17, 954:11, 957:3, 971:18, 976:25,</p>	<p>903:15</p> <p><b>action</b> [5] - 818:23, 826:13, 973:19, 982:1, 1031:9</p> <p><b>actions</b> [2] - 854:23, 909:24</p> <p><b>actively</b> [2] - 882:6, 980:21</p> <p><b>activities</b> [2] - 931:7, 932:2</p> <p><b>activity</b> [1] - 830:5</p> <p><b>acts</b> [1] - 902:1</p> <p><b>actual</b> [5] - 886:22, 910:13, 946:2, 946:6, 956:1</p> <p><b>add</b> [2] - 928:24, 983:12</p> <p><b>added</b> [1] - 966:7</p> <p><b>adding</b> [1] - 908:7</p> <p><b>additional</b> [7] - 833:1, 888:5, 912:25, 930:16, 934:5, 994:8</p> <p><b>address</b> [1] - 906:7</p> <p><b>adjourned</b> [1] - 1030:15</p> <p><b>adopted</b> [1] - 964:3</p> <p><b>adult</b> [8] - 827:8, 838:19, 839:20, 880:25, 974:10, 1005:19, 1005:20</p> <p><b>adult-size</b> [1] - 839:20</p> <p><b>adults</b> [4] - 876:18, 935:13, 979:9, 984:17</p> <p><b>advantage</b> [1] - 962:9</p> <p><b>adverse</b> [2] - 890:14, 985:15</p> <p><b>adversely</b> [2] - 823:7, 1027:17</p> <p><b>advise</b> [2] - 1010:10, 1010:11</p> <p><b>affect</b> [2] - 851:1, 868:13</p> <p><b>affected</b> [15] - 821:14, 821:23, 822:1, 822:3, 823:8, 834:4, 840:2, 979:9, 979:10, 986:1, 991:20, 1001:15, 1014:14, 1015:14, 1027:17</p> <p><b>affecting</b> [1] - 1013:17</p> <p><b>affinities</b> [1] - 980:11</p> <p><b>afternoon</b> [8] - 940:4, 940:6, 968:13, 968:14, 1010:8, 1010:13, 1010:25, 1025:20</p> <p><b>age</b> [1] - 984:21</p>	<p><b>agency</b> [2] - 855:10, 911:25</p> <p><b>aggregated</b> [1] - 893:25</p> <p><b>ago</b> [2] - 836:20, 837:6</p> <p><b>agree</b> [38] - 830:15, 831:16, 831:18, 831:23, 857:20, 861:13, 884:11, 887:6, 901:17, 901:19, 901:21, 903:23, 904:2, 905:16, 908:19, 909:7, 926:18, 935:15, 943:11, 943:17, 951:14, 952:19, 953:8, 953:9, 953:12, 953:17, 955:20, 956:6, 956:10, 959:16, 960:15, 960:20, 964:15, 965:2, 994:6, 995:3, 995:4, 1029:15</p> <p><b>agreeable</b> [1] - 926:8</p> <p><b>agreed</b> [1] - 954:22</p> <p><b>agreeing</b> [1] - 902:16</p> <p><b>agreement</b> [1] - 1013:13</p> <p><b>agrees</b> [1] - 886:17</p> <p><b>Agriculture</b> [3] - 911:7, 912:8, 931:12</p> <p><b>ahead</b> [4] - 858:6, 936:20, 960:19, 1006:9</p> <p><b>aid</b> [1] - 997:17</p> <p><b>aim</b> [1] - 974:12</p> <p><b>alec</b> [1] - 1029:25</p> <p><b>alive</b> [5] - 883:5, 899:22, 915:17, 930:2, 1016:25</p> <p><b>allocate</b> [1] - 1018:21</p> <p><b>allocated</b> [1] - 913:1</p> <p><b>allocating</b> [1] - 1018:22</p> <p><b>allocation</b> [4] - 840:4, 845:24, 851:10, 984:8</p> <p><b>allow</b> [7] - 819:5, 832:4, 832:21, 857:24, 877:15, 938:24, 971:16</p> <p><b>allowed</b> [3] - 843:11, 979:18, 1018:2</p> <p><b>allows</b> [1] - 833:13</p> <p><b>almost</b> [1] - 825:6, 827:15, 840:21, 840:23, 845:21, 858:5, 899:19,</p>	<p>1020:21, 1028:8</p> <p><b>alter</b> [1] - 844:14</p> <p><b>altering</b> [1] - 1011:25</p> <p><b>amending</b> [1] - 864:2</p> <p><b>amount</b> [15] - 854:11, 855:24, 883:1, 912:18, 943:12, 944:18, 949:22, 952:8, 952:11, 952:15, 955:25, 957:15, 1017:19, 1020:21, 1023:19</p> <p><b>amounts</b> [2] - 956:8, 957:12</p> <p><b>analyses</b> [3] - 818:5, 820:25, 1002:14</p> <p><b>analyzing</b> [1] - 850:13</p> <p><b>animal</b> [2] - 894:10, 1026:6</p> <p><b>animals</b> [4] - 926:23, 927:20, 980:10, 1026:3</p> <p><b>annoying</b> [1] - 888:18</p> <p><b>annual</b> [4] - 912:1, 953:23, 992:12, 1019:21</p> <p><b>answer</b> [10] - 842:3, 853:25, 854:2, 906:6, 944:16, 944:20, 966:4, 966:14, 1010:14, 1028:7</p> <p><b>answers</b> [1] - 944:9</p> <p><b>anticipate</b> [1] - 1010:17</p> <p><b>Apalachicola</b> [60] - 817:4, 818:21, 822:2, 822:6, 822:8, 824:21, 833:10, 840:20, 842:19, 844:7, 852:21, 860:9, 865:15, 867:5, 868:24, 875:8, 876:12, 879:3, 879:22, 884:4, 904:1, 909:13, 915:6, 922:16, 924:2, 926:7, 934:7, 934:17, 936:24, 941:19, 972:21, 972:23, 972:25, 973:1, 973:16, 985:16, 985:17, 985:24, 986:5, 988:18, 989:17, 989:19, 991:3, 991:19, 992:9, 994:3, 994:24, 999:2, 1000:22,</p>

1003:1, 1003:3,  
 1004:20, 1008:3,  
 1008:8, 1012:6,  
 1012:18, 1012:21,  
 1020:5, 1023:20,  
 1027:2  
**apologies** [2] - 940:8,  
 940:16  
**apologize** [2] -  
 819:19, 914:18  
**appear** [6] - 820:12,  
 881:23, 882:20,  
 919:17, 933:17,  
 949:21  
**appearance** [4] -  
 878:23, 924:5,  
 926:24, 927:21  
**APPEARANCES** [1] -  
 814:16  
**appeared** [2] - 907:5,  
 933:18  
**apply** [2] - 852:10,  
 911:18  
**approach** [7] - 856:18,  
 857:21, 861:8,  
 875:3, 961:14,  
 1023:2, 1023:5  
**April** [12] - 832:6,  
 836:4, 842:17,  
 851:18, 858:10,  
 860:4, 912:15,  
 912:17, 919:2,  
 953:12, 962:15,  
 962:18  
**Aquaculture** [3] -  
 844:8, 846:23,  
 931:11  
**area** [35] - 823:10,  
 833:17, 853:11,  
 885:3, 896:6, 903:7,  
 915:5, 915:20,  
 915:21, 925:5,  
 925:6, 926:16,  
 928:21, 938:3,  
 964:23, 973:1,  
 973:2, 973:15,  
 974:20, 974:22,  
 975:8, 975:17,  
 976:21, 977:14,  
 981:24, 983:10,  
 983:11, 990:3,  
 991:14, 991:16,  
 997:7, 998:12,  
 1016:21, 1017:3  
**areas** [30] - 817:6,  
 826:12, 829:22,  
 858:1, 894:19,  
 913:16, 924:3,  
 934:23, 934:25,  
 935:1, 935:4, 938:1,

963:5, 963:7,  
 964:23, 971:22,  
 975:5, 983:8,  
 985:20, 991:1,  
 991:5, 991:7,  
 991:20, 1005:8,  
 1009:1, 1009:25,  
 1010:2, 1026:21,  
 1027:2, 1027:10  
**arguing** [2] - 862:24,  
 864:18  
**articulated** [2] - 882:1,  
 927:25  
**aspect** [1] - 909:8  
**assess** [2] - 922:25,  
 955:9  
**assessed** [1] - 923:3  
**Assessment** [2] -  
 867:5, 922:15  
**assessment** [20] -  
 816:16, 844:7,  
 849:4, 861:12,  
 879:7, 892:19,  
 915:10, 916:20,  
 919:4, 923:6, 924:1,  
 929:18, 956:12,  
 959:20, 970:24,  
 992:4, 995:22,  
 1004:5, 1006:11,  
 1022:22  
**assessments** [5] -  
 914:5, 918:3,  
 922:24, 932:7,  
 932:20  
**assist** [3] - 879:25,  
 898:9, 963:16  
**assistant** [2] - 950:4,  
 950:5  
**assisted** [1] - 966:10  
**assisting** [1] -  
 1025:16  
**assistants** [1] - 861:17  
**associated** [7] -  
 827:4, 828:10,  
 890:15, 988:22,  
 994:2, 998:4, 1003:6  
**Association** [3] -  
 860:8, 860:18, 967:2  
**assume** [4] - 883:24,  
 948:2, 964:12,  
 986:17  
**assuming** [2] -  
 880:18, 927:14  
**assumption** [2] -  
 948:2, 948:5  
**assure** [1] - 1011:12  
**assured** [1] - 991:7  
**asterisk** [1] - 1019:25  
**asterisks** [1] - 953:25  
**ate** [1] - 894:10

**attach** [1] - 826:20  
**attached** [4] - 920:22,  
 921:6, 949:14, 968:9  
**attachment** [2] -  
 949:12, 950:22  
**attacking** [1] - 980:17  
**attended** [2] - 930:18,  
 934:2  
**attention** [2] - 940:12,  
 1003:18  
**attitude** [4] - 842:16,  
 848:8, 858:20,  
 1022:24  
**attorneys** [1] - 862:4  
**attributed** [10] -  
 834:17, 848:5,  
 856:10, 861:3,  
 871:6, 987:24,  
 992:23, 1002:8,  
 1002:18, 1007:15  
**audience** [1] - 937:3  
**August** [29] - 816:16,  
 820:3, 822:17,  
 822:23, 828:4,  
 835:23, 843:2,  
 843:23, 844:1,  
 844:22, 845:9,  
 853:21, 854:9,  
 857:10, 859:5,  
 861:11, 863:21,  
 867:2, 868:23,  
 871:19, 915:12,  
 929:17, 941:11,  
 949:22, 951:16,  
 995:21, 1004:4,  
 1007:3, 1016:20  
**availability** [6] -  
 849:22, 850:3,  
 851:7, 860:19,  
 956:14, 987:23  
**available** [10] - 830:1,  
 842:21, 843:8,  
 856:17, 906:12,  
 908:3, 952:13,  
 960:9, 960:22,  
 961:25  
**avoid** [1] - 1008:21  
**awarded** [1] - 910:23  
**aware** [6] - 855:13,  
 900:3, 1012:19,  
 1012:23, 1030:4,  
 1030:6  
**awhile** [1] - 1010:6

---

**B**

---

**babies** [1] - 831:6  
**baby** [2] - 826:2, 826:3  
**background** [1] -

**bad** [5] - 897:11,  
 900:12, 929:2,  
 929:5, 986:12  
**BAD** [2] - 931:8,  
 931:10  
**bag** [22] - 854:7,  
 863:15, 864:22,  
 866:16, 896:23,  
 897:1, 897:3, 897:4,  
 897:17, 898:11,  
 898:14, 898:22,  
 898:23, 899:8,  
 899:12, 899:13,  
 899:14, 947:6,  
 947:7, 986:20  
**bags** [8] - 819:14,  
 828:15, 849:23,  
 849:24, 850:4,  
 850:19, 898:14,  
 942:13  
**balance** [2] - 844:15,  
 867:25  
**ball** [1] - 910:8  
**Bankruptcy** [1] -  
 814:12  
**Bar** [39] - 823:1, 823:6,  
 829:8, 829:17,  
 891:16, 892:17,  
 893:12, 893:14,  
 915:10, 915:11,  
 917:4, 927:9,  
 927:10, 927:17,  
 973:5, 973:12,  
 974:4, 974:6,  
 974:20, 981:20,  
 982:16, 982:17,  
 982:19, 996:15,  
 996:19, 997:7,  
 997:8, 997:11,  
 997:25, 998:3,  
 1008:9, 1008:15,  
 1008:25, 1009:4  
**bar** [17] - 900:4,  
 905:22, 915:5,  
 917:5, 917:9,  
 928:14, 928:15,  
 932:6, 933:1,  
 935:14, 954:10,  
 954:19, 973:6,  
 974:9, 981:21,  
 981:23, 1008:13  
**Bar/St** [3] - 958:24,  
 959:10, 1014:22  
**BARACK** [1] - 814:21  
**barge** [1] - 908:10  
**barnacles** [1] - 920:22  
**bars** [51] - 822:2,  
 823:20, 829:21,  
 830:2, 830:3, 833:2,

833:22, 860:11,  
 860:13, 885:17,  
 914:7, 923:3, 924:1,  
 932:5, 932:22,  
 934:7, 935:24,  
 936:8, 936:11,  
 938:15, 959:10,  
 971:16, 971:19,  
 971:23, 975:7,  
 976:20, 981:15,  
 981:18, 989:8,  
 999:19, 999:23,  
 999:24, 1000:21,  
 1001:18, 1005:9,  
 1008:3, 1008:8,  
 1014:12, 1014:13,  
 1014:24, 1015:3,  
 1015:9, 1015:11,  
 1015:14, 1015:16,  
 1015:20, 1015:23,  
 1017:24, 1027:12  
**Bars** [2] - 848:24,  
 922:16  
**base** [1] - 916:11  
**based** [19] - 851:17,  
 883:1, 891:23,  
 892:20, 902:12,  
 903:16, 904:17,  
 905:17, 905:21,  
 906:12, 915:15,  
 918:5, 919:8,  
 923:16, 944:10,  
 944:14, 956:6,  
 956:10, 977:15  
**basic** [1] - 824:23  
**basis** [2] - 893:4,  
 907:25  
**baskets** [1] - 819:14  
**Bates** [1] - 861:21  
**Bay** [50] - 817:4,  
 818:22, 822:2,  
 822:6, 822:8,  
 824:21, 833:10,  
 840:20, 842:19,  
 843:25, 844:7,  
 852:21, 860:9,  
 865:15, 867:5,  
 868:24, 879:3,  
 879:24, 904:1,  
 909:13, 915:6,  
 922:16, 924:2,  
 926:7, 941:19,  
 972:21, 972:23,  
 972:25, 973:1,  
 973:15, 985:16,  
 985:17, 985:24,  
 986:5, 989:17,  
 989:19, 991:3,  
 991:19, 992:9,  
 999:2, 1000:22,

<p>1003:1, 1004:20, 1008:4, 1012:6, 1012:18, 1012:22, 1020:5, 1023:20, 1027:2</p> <p><b>bay</b> [90] - 818:16, 820:20, 821:13, 821:14, 821:24, 826:18, 829:3, 832:25, 851:24, 852:11, 856:11, 860:21, 861:4, 866:1, 901:14, 901:23, 902:13, 903:13, 903:17, 904:5, 904:18, 904:21, 905:10, 905:19, 905:21, 909:20, 909:24, 912:19, 923:9, 925:2, 925:13, 925:22, 925:25, 928:18, 934:23, 940:23, 945:4, 946:23, 952:22, 957:13, 959:10, 962:4, 962:17, 962:23, 962:24, 963:13, 963:20, 964:5, 964:16, 965:3, 966:11, 966:18, 967:3, 971:12, 971:15, 972:13, 972:18, 972:21, 973:2, 973:7, 973:19, 977:13, 977:17, 978:6, 979:20, 979:23, 980:2, 982:17, 983:7, 984:14, 989:13, 994:1, 998:13, 1001:10, 1001:22, 1005:2, 1008:23, 1009:3, 1009:6, 1009:20, 1011:15, 1011:20, 1011:24, 1012:3, 1012:4, 1012:8, 1012:13, 1012:24, 1016:17, 1028:2</p> <p><b>bay-wide</b> [4] - 821:13, 821:14, 901:23, 903:13</p> <p><b>Bayou</b> [1] - 1009:5</p> <p><b>became</b> [1] - 984:2</p> <p><b>become</b> [7] - 825:21, 826:5, 837:1, 979:19, 981:21, 1004:20, 1026:10</p>	<p><b>becomes</b> [1] - 845:24</p> <p><b>becoming</b> [2] - 924:7, 1007:7</p> <p><b>bed</b> [1] - 979:7</p> <p><b>began</b> [2] - 970:24, 1005:6</p> <p><b>begin</b> [5] - 845:17, 882:11, 964:11, 974:2, 984:19</p> <p><b>beginning</b> [13] - 819:20, 832:1, 834:13, 839:14, 842:13, 844:5, 849:7, 916:7, 976:16, 981:19, 986:9, 998:20, 1021:20</p> <p><b>begins</b> [13] - 817:25, 822:25, 832:15, 847:17, 848:18, 849:11, 888:7, 925:3, 992:11, 994:3, 999:8, 1002:14, 1004:14</p> <p><b>begun</b> [1] - 926:1</p> <p><b>behind</b> [3] - 846:13, 859:12, 922:11</p> <p><b>belabor</b> [2] - 992:1, 1007:1</p> <p><b>belief</b> [2] - 948:5, 948:7</p> <p><b>below</b> [5] - 834:20, 844:16, 856:5, 860:23, 871:9</p> <p><b>beneficial</b> [3] - 831:14, 843:8, 856:16</p> <p><b>benefit</b> [3] - 858:7, 961:23, 1016:13</p> <p><b>bent</b> [2] - 877:8, 877:11</p> <p><b>benthic</b> [1] - 977:15</p> <p><b>Berrigan</b> [19] - 815:3, 816:9, 820:9, 861:24, 865:11, 878:13, 886:14, 905:8, 940:22, 943:21, 950:11, 955:13, 959:16, 968:13, 972:14, 1010:11, 1010:24, 1013:13, 1025:23</p> <p><b>Berrigan's</b> [2] - 940:13, 968:8</p> <p><b>beside</b> [1] - 1027:25</p> <p><b>best</b> [7] - 853:16, 854:19, 908:25, 909:2, 919:13, 972:17, 1023:2</p> <p><b>better</b> [8] - 895:5,</p>	<p>899:8, 914:21, 919:6, 962:8, 962:13, 1026:16, 1029:18</p> <p><b>between</b> [3] - 936:3, 979:1, 982:3</p> <p><b>beyond</b> [1] - 829:21</p> <p><b>big</b> [4] - 826:18, 837:1, 883:6, 954:24</p> <p><b>bigger</b> [1] - 918:16</p> <p><b>biggest</b> [1] - 977:24</p> <p><b>binder</b> [23] - 819:21, 819:22, 846:13, 859:12, 867:4, 888:6, 913:19, 913:21, 913:22, 922:6, 931:1, 941:10, 945:11, 945:12, 948:19, 958:8, 958:9, 958:10, 987:7, 991:24, 993:10, 995:18</p> <p><b>binders</b> [1] - 995:17</p> <p><b>biological</b> [7] - 838:7, 879:16, 984:14, 985:1, 985:7, 985:8, 985:12</p> <p><b>bit</b> [4] - 847:13, 857:11, 906:17, 981:13</p> <p><b>black</b> [3] - 914:20, 918:18, 926:11</p> <p><b>block</b> [1] - 842:8</p> <p><b>blow</b> [2] - 968:7, 987:20</p> <p><b>blow-up</b> [1] - 968:7</p> <p><b>Board</b> [11] - 853:5, 872:4, 874:17, 875:7, 877:2, 930:6, 934:1, 934:5, 934:16, 936:24, 964:8</p> <p><b>board</b> [5] - 819:4, 819:9, 819:11, 883:11, 920:12</p> <p><b>boat</b> [2] - 896:1, 920:15</p> <p><b>boats</b> [1] - 829:3</p> <p><b>bottom</b> [25] - 826:15, 847:16, 847:25, 861:8, 861:18, 861:19, 862:21, 869:2, 869:15, 880:17, 896:2, 897:23, 897:24, 918:1, 920:3, 920:18, 931:18, 931:22, 958:22,</p>	<p>989:14, 1007:12, 1019:22, 1024:10</p> <p><b>bounce</b> [2] - 826:15, 1012:24</p> <p><b>box</b> [2] - 881:24, 926:25</p> <p><b>boxes</b> [6] - 927:22, 928:1, 928:2, 928:11</p> <p><b>BP</b> [3] - 829:24, 832:24, 1023:3</p> <p><b>break</b> [13] - 841:14, 852:5, 878:4, 878:6, 939:6, 939:25, 981:12, 981:13, 982:1, 1010:8, 1010:14, 1011:1, 1011:3</p> <p><b>breaking</b> [1] - 939:17</p> <p><b>bridge</b> [1] - 973:8</p> <p><b>brief</b> [1] - 972:18</p> <p><b>briefly</b> [4] - 818:10, 989:5, 1006:8, 1023:25</p> <p><b>bring</b> [4] - 822:12, 857:18, 881:18, 1025:7</p> <p><b>brings</b> [1] - 1025:6</p> <p><b>broad</b> [4] - 834:9, 903:22, 925:15, 925:16</p> <p><b>broader</b> [1] - 938:7</p> <p><b>broadest</b> [2] - 824:22, 965:5</p> <p><b>broke</b> [2] - 877:11, 1008:20</p> <p><b>broken</b> [2] - 893:4, 982:2</p> <p><b>brought</b> [5] - 941:23, 943:4, 945:1, 1022:25, 1023:5</p> <p><b>Brown</b> [4] - 945:20, 949:2, 949:11, 950:1</p> <p><b>brown</b> [3] - 945:24, 946:12, 947:13</p> <p><b>brush</b> [1] - 834:9</p> <p><b>budget</b> [9] - 910:2, 910:18, 910:20, 911:3, 911:8, 911:23, 912:1, 912:21</p> <p><b>build</b> [2] - 823:22, 823:25</p> <p><b>building</b> [1] - 1030:7</p> <p><b>built</b> [1] - 885:11</p> <p><b>Bulkhead</b> [6] - 914:24, 915:4, 915:5, 915:10, 915:11, 1009:2</p> <p><b>bulkhead</b> [2] - 915:3,</p>	<p><b>bullet</b> [1] - 867:18</p> <p><b>bunch</b> [1] - 898:13</p> <p><b>Bureau</b> [1] - 931:11</p> <p><b>burrow</b> [2] - 894:7, 894:10</p> <p><b>burrows</b> [4] - 890:12, 891:3, 892:18, 893:25</p> <p><b>bushels</b> [3] - 918:3, 918:8, 918:9</p> <p><b>business</b> [2] - 987:1, 987:2</p> <p><b>buy</b> [4] - 960:12, 987:1, 987:3, 987:5</p> <p><b>BY</b> [55] - 816:8, 820:8, 860:1, 865:10, 866:11, 867:9, 867:16, 868:21, 872:1, 874:22, 875:5, 878:12, 880:6, 881:17, 887:4, 888:15, 892:7, 893:1, 895:23, 896:15, 898:8, 899:7, 900:2, 905:15, 914:1, 921:18, 930:15, 934:14, 935:20, 936:22, 937:21, 940:18, 944:13, 955:12, 958:6, 968:12, 969:22, 970:5, 970:21, 971:9, 978:4, 978:20, 987:21, 990:17, 993:24, 994:22, 997:1, 997:5, 999:11, 1013:12, 1014:21, 1019:19, 1021:2, 1024:6, 1024:16</p> <p><b>by-month</b> [3] - 950:17, 950:20, 951:6</p>
<p><b>C</b></p>				
				<p><b>Cabbage</b> [5] - 998:22, 999:2, 1000:23, 1001:4, 1009:5</p> <p><b>capable</b> [2] - 849:22, 850:3</p> <p><b>case</b> [24] - 821:13, 827:19, 829:17, 834:2, 837:4, 838:7, 845:9, 865:1, 877:4, 877:8, 886:12, 889:25, 890:1, 891:18, 904:17, 923:10, 928:5, 932:21, 951:9, 1017:17, 1019:15,</p>

1020:20, 1021:4  
**cases** [4] - 885:18, 921:12, 1005:19, 1006:3  
**Cat** [29] - 821:15, 822:4, 822:25, 823:6, 829:7, 829:17, 848:23, 887:21, 887:24, 890:7, 891:16, 893:12, 893:14, 894:1, 894:22, 900:20, 941:3, 958:23, 959:11, 959:14, 973:5, 980:3, 983:2, 996:9, 1008:9, 1008:15, 1014:23, 1014:25, 1017:6  
**catastrophic** [3] - 1012:14, 1014:7, 1025:5  
**categories** [1] - 979:8  
**categorize** [1] - 928:4  
**category** [2] - 818:11, 820:11  
**causal** [1] - 1012:11  
**caused** [13] - 860:5, 860:7, 890:23, 940:21, 940:24, 970:7, 978:16, 986:4, 986:6, 1003:14, 1007:23, 1012:17, 1012:21  
**causes** [1] - 979:4  
**causing** [2] - 1011:25, 1012:12  
**caveat** [2] - 844:12, 957:1  
**cement** [3] - 826:21, 1026:7, 1026:9  
**center** [2] - 881:24, 900:4  
**certain** [8] - 821:8, 829:18, 878:15, 894:5, 996:13, 1013:9, 1028:6, 1029:11  
**certainly** [10] - 821:22, 880:12, 897:22, 952:14, 966:15, 972:1, 985:19, 986:6, 986:8, 987:3  
**CERTIFICATE** [1] - 1031:1  
**certify** [2] - 1031:3, 1031:7  
**chance** [2] - 955:6, 1030:10  
**change** [10] - 830:6,

860:6, 877:14, 878:13, 885:16, 901:10, 938:23, 941:5, 1030:5, 1030:6  
**changed** [1] - 850:24  
**changes** [1] - 971:1  
**changing** [3] - 850:17, 907:11, 985:1  
**channel** [1] - 1000:10  
**characteristic** [2] - 863:12, 866:13  
**characteristics** [1] - 901:16  
**characterization** [4] - 886:17, 892:2, 892:15, 905:1  
**characterize** [2] - 928:14, 978:11  
**characterizing** [1] - 904:24  
**chart** [6] - 950:23, 954:10, 954:19, 955:8, 956:5, 956:10  
**check** [11] - 914:7, 923:13, 946:1, 946:2, 946:20, 946:22, 946:24, 947:9, 947:10, 947:21, 955:6  
**checking** [1] - 890:22  
**Chesapeake** [2] - 879:24, 985:20  
**chosen** [2] - 932:6, 932:13  
**CHRISTOPHER** [1] - 814:18  
**circulation** [1] - 1001:19  
**circumference** [1] - 894:5  
**circumstances** [10] - 821:8, 822:14, 829:20, 830:22, 857:23, 946:7, 1009:21, 1009:25, 1015:22, 1015:24  
**cite** [2] - 873:3, 873:7  
**cites** [1] - 955:6  
**clam** [1] - 897:10  
**clarified** [1] - 1029:17  
**class** [2] - 838:1, 839:2  
**classes** [3] - 836:13, 839:20, 926:23  
**Claudette** [4] - 814:14, 1031:2, 1031:15, 1031:15  
**clean** [4] - 887:15, 908:1, 908:2, 90

**clear** [10] - 820:23, 824:6, 844:18, 852:19, 873:22, 954:17, 979:6, 982:19, 1014:1, 1017:17  
**clearly** [2] - 817:22, 978:25  
**clients** [1] - 1028:16  
**clip** [5] - 970:3, 970:19, 971:7, 977:24, 978:2  
**clips** [2] - 930:16, 968:18  
**close** [8] - 963:7, 963:20, 966:11, 973:25, 975:1, 999:4, 1016:11, 1016:21  
**closed** [9] - 833:12, 833:16, 856:12, 861:5, 962:17, 962:24, 963:13, 1016:21, 1030:7  
**closely** [1] - 981:2  
**closer** [2] - 880:14, 900:13  
**closest** [1] - 884:2  
**closing** [10] - 962:22, 964:16, 965:3, 966:18, 1011:19, 1011:24, 1012:3, 1016:14, 1017:3, 1019:8  
**closure** [2] - 1011:15, 1019:16  
**closures** [4] - 963:23, 964:2, 964:23, 967:3  
**clustered** [3] - 881:5, 982:9, 1001:9  
**clusters** [3] - 881:1, 981:12, 982:10  
**Coast** [1] - 1004:19  
**collaborative** [2] - 876:5, 876:7  
**collapse** [11] - 838:4, 838:10, 865:14, 912:14, 912:20, 1021:12, 1022:3, 1022:12, 1022:20, 1023:13, 1027:9  
**collapsed** [1] - 1021:6  
**colleague** [1] - 1025:15  
**colleagues** [1] - 1010:5  
**collect** [2] - 895:8, 908:11  
**collected** [4] - 850:10,

**collecting** [1] - 930:23  
**collective** [1] - 876:3  
**collectively** [1] - 1000:12  
**collects** [1] - 941:22  
**colon** [1] - 844:12  
**color** [4] - 914:19, 914:22, 918:19, 922:10  
**column** [10] - 824:25, 826:11, 902:20, 942:2, 942:13, 942:16, 951:11, 951:22, 954:9  
**combination** [3] - 818:8, 821:2, 823:7  
**combine** [1] - 855:5  
**combined** [1] - 869:20  
**coming** [3] - 843:25, 916:25, 928:18  
**commencing** [1] - 814:13  
**comment** [2] - 905:2, 1005:21  
**commenting** [1] - 961:13  
**Commerce** [1] - 877:23  
**commercial** [1] - 957:22  
**Commission** [7] - 829:25, 843:16, 852:9, 873:12, 941:22, 977:25, 1031:17  
**Commissioner** [1] - 820:2  
**commissioner** [1] - 890:9  
**Commissioners** [12] - 853:6, 872:4, 874:18, 875:7, 877:3, 930:6, 934:1, 934:6, 934:17, 936:24, 964:8, 968:16  
**commissioners** [1] - 937:24  
**common** [11] - 834:22, 835:19, 837:11, 844:17, 856:8, 861:1, 871:11, 876:24, 876:25, 908:4, 989:16  
**commonly** [2] - 865:18, 976:3  
**commons** [1] - 846:10  
**community** [21] - 851:16, 854:17,

860:6, 872:8, 874:18, 875:8, 875:25, 877:3, 930:10, 930:19, 934:7, 934:18, 936:25, 937:23, 938:9, 938:21, 1008:12, 1008:19, 1016:12  
**compare** [1] - 932:4  
**compared** [4] - 849:20, 878:24, 949:18, 953:11  
**compares** [1] - 952:4  
**comparing** [1] - 934:8  
**comparison** [3] - 878:1, 882:13, 882:14  
**comparison's** [1] - 1020:12  
**comparisons** [2] - 950:17, 950:20  
**compiled** [1] - 955:7  
**complete** [5] - 903:4, 949:21, 979:20, 1005:23, 1019:23  
**completed** [1] - 1018:18  
**completely** [4] - 862:7, 953:23, 975:21, 981:21  
**completeness** [1] - 949:17  
**completing** [1] - 1005:18  
**complexes** [3] - 924:17, 988:2, 993:2  
**compliant** [1] - 947:1  
**compounding** [1] - 863:6  
**compressed** [4] - 976:19, 983:9, 983:11, 984:2  
**compressing** [1] - 983:8  
**conceded** [1] - 1029:12  
**concentrated** [6] - 848:24, 870:14, 890:11, 892:18, 960:4, 960:6  
**concentration** [1] - 1017:25  
**concern** [9] - 845:19, 845:21, 845:22, 848:13, 864:14, 865:24, 868:1, 871:18, 871:23  
**concerned** [2] - 877:15, 938:24

<p><b>concerns</b> [2] - 852:23, 960:23</p> <p><b>conchs</b> [3] - 976:1, 976:2, 991:13</p> <p><b>concluding</b> [1] - 994:12</p> <p><b>conclusion</b> [1] - 970:13</p> <p><b>conclusions</b> [4] - 904:21, 905:21, 906:23</p> <p><b>Conclusions</b> [1] - 994:12</p> <p><b>condition</b> [14] - 818:6, 818:7, 820:17, 820:20, 821:1, 821:4, 847:25, 848:3, 870:12, 887:17, 925:6, 925:11, 982:6</p> <p><b>conditions</b> [30] - 821:14, 829:13, 830:12, 830:16, 830:23, 831:20, 869:21, 869:25, 876:12, 880:8, 901:15, 902:13, 903:16, 904:18, 924:15, 929:2, 929:5, 932:4, 964:11, 982:22, 987:25, 992:24, 1002:9, 1002:19, 1011:17, 1011:25, 1013:5, 1013:7, 1013:15, 1027:4</p> <p><b>conducted</b> [2] - 846:23, 931:7</p> <p><b>confer</b> [2] - 1010:10, 1010:20</p> <p><b>conferred</b> [1] - 1010:23</p> <p><b>confident</b> [1] - 1010:24</p> <p><b>confirm</b> [16] - 832:19, 863:23, 863:24, 886:14, 895:18, 941:18, 942:17, 957:6, 957:7, 958:18, 997:20, 1005:5, 1022:21, 1022:24, 1022:25</p> <p><b>confirmation</b> [1] - 1005:24</p> <p><b>confirmed</b> [12] - 818:5, 820:25, 834:21, 835:18, 856:7, 860:25, 871:10, 953:23, 957:25, 1003:13,</p>	<p>1006:4, 1007:16</p> <p><b>confused</b> [2] - 864:7, 1029:13</p> <p><b>confusing</b> [1] - 855:6</p> <p><b>Congress</b> [1] - 814:12</p> <p><b>Congressional</b> [2] - 911:1, 911:5</p> <p><b>connection</b> [3] - 816:14, 883:12, 904:13</p> <p><b>consequence</b> [5] - 976:24, 983:6, 986:10, 988:7, 1014:12</p> <p><b>consequences</b> [1] - 986:10</p> <p><b>consider</b> [4] - 855:3, 880:24, 921:2, 921:3</p> <p><b>considered</b> [6] - 819:17, 824:5, 921:7, 998:1, 998:10, 1004:18</p> <p><b>consistent</b> [14] - 860:15, 884:20, 970:22, 971:11, 972:11, 978:15, 988:5, 988:25, 993:5, 995:11, 995:13, 1000:18, 1007:9, 1007:22</p> <p><b>consistently</b> [1] - 948:17</p> <p><b>consolidated</b> [1] - 824:4</p> <p><b>constantly</b> [1] - 851:14</p> <p><b>construct</b> [1] - 1027:1</p> <p><b>consultant</b> [4] - 967:11, 967:15, 967:19, 967:21</p> <p><b>consumer</b> [1] - 865:24</p> <p><b>Consumer</b> [1] - 931:12</p> <p><b>contained</b> [1] - 971:20</p> <p><b>container</b> [1] - 819:14</p> <p><b>contains</b> [1] - 973:3</p> <p><b>context</b> [11] - 821:10, 886:1, 886:24, 888:20, 936:1, 937:2, 945:18, 948:24, 949:13, 961:17, 969:10</p> <p><b>contiguous</b> [1] - 973:6</p> <p><b>continue</b> [9] - 829:6, 831:24, 841:8, 901:11, 925:3, 971:4, 987:3, 994:3, 994:24</p> <p><b>continued</b> [8] - 836:5, 843:10, 845:2,</p>	<p>858:21, 867:19, 867:21, 957:22, 998:1</p> <p><b>continues</b> [6] - 848:21, 932:11, 932:16, 957:2, 997:24, 1005:13</p> <p><b>continuing</b> [1] - 1013:7</p> <p><b>continuous</b> [11] - 829:11, 829:15, 870:14, 871:23, 887:24, 900:21, 960:4, 960:6, 960:7, 960:10, 1028:8</p> <p><b>continuously</b> [1] - 833:18</p> <p><b>contradictory</b> [1] - 906:24</p> <p><b>contrast</b> [1] - 932:4</p> <p><b>contribute</b> [1] - 984:20</p> <p><b>Contributing</b> [1] - 860:2</p> <p><b>contributing</b> [3] - 820:22, 832:3, 836:14</p> <p><b>controversial</b> [1] - 903:3</p> <p><b>conversation</b> [4] - 938:8, 966:25, 976:22, 986:24</p> <p><b>conversations</b> [2] - 966:5, 966:8</p> <p><b>convert</b> [1] - 954:10</p> <p><b>conveyance</b> [1] - 1028:1</p> <p><b>cool</b> [1] - 924:8</p> <p><b>copied</b> [1] - 919:1</p> <p><b>copies</b> [2] - 881:11, 895:15</p> <p><b>copy</b> [7] - 873:11, 874:4, 874:6, 874:13, 875:3, 885:25, 899:16</p> <p><b>coral</b> [2] - 879:13, 879:17</p> <p><b>corals</b> [1] - 980:9</p> <p><b>corner</b> [10] - 861:19, 861:20, 862:21, 869:2, 880:19, 920:3, 920:19, 931:19, 969:4, 990:7</p> <p><b>correct</b> [178] - 818:11, 818:17, 821:6, 822:4, 822:14, 827:24, 829:5, 829:19, 830:17, 830:18, 834:9,</p>	<p>835:20, 836:1, 836:2, 836:7, 838:3, 842:25, 843:1, 843:3, 843:16, 843:17, 844:3, 845:6, 848:14, 848:15, 849:5, 855:11, 855:16, 856:21, 857:8, 859:1, 860:14, 861:12, 866:2, 868:16, 870:4, 870:5, 872:9, 872:15, 874:1, 875:11, 875:16, 875:17, 876:9, 876:10, 877:5, 877:6, 877:10, 877:11, 877:12, 877:18, 879:2, 879:11, 883:8, 884:9, 886:16, 887:9, 888:23, 889:22, 890:20, 890:24, 891:3, 892:22, 894:18, 895:6, 895:9, 895:10, 896:17, 896:21, 897:17, 897:18, 898:20, 899:11, 899:20, 901:12, 901:25, 902:10, 903:18, 903:19, 907:14, 907:18, 909:15, 909:21, 911:19, 913:6, 913:7, 917:5, 917:6, 923:15, 923:22, 924:19, 924:23, 924:24, 925:17, 927:7, 935:2, 935:3, 935:9, 938:19, 938:25, 941:2, 941:24, 942:7, 942:8, 942:10, 942:11, 942:15, 943:6, 945:4, 945:5, 946:18, 946:21, 949:7, 949:9, 951:19, 951:20, 951:22, 951:23, 952:3, 952:7, 952:10, 952:23, 953:1, 956:16, 958:20, 959:13, 959:21, 960:1, 963:17, 963:18, 967:16, 968:22, 968:11, 978:7, 983:4, 983:5,</p>	<p>987:11, 987:12, 987:15, 989:8, 989:9, 992:5, 992:6, 995:7, 995:12, 996:12, 996:19, 1008:1, 1008:2, 1009:11, 1011:15, 1012:6, 1012:7, 1012:9, 1013:1, 1013:2, 1013:15, 1013:16, 1013:20, 1013:23, 1014:24, 1014:25, 1017:20, 1020:6, 1020:7, 1020:11, 1020:23, 1021:7, 1021:12, 1023:4, 1023:9, 1023:17, 1023:22, 1031:4</p> <p><b>correction</b> [1] - 995:10</p> <p><b>correctly</b> [1] - 967:23</p> <p><b>correlate</b> [1] - 1005:16</p> <p><b>correlation</b> [1] - 1021:15</p> <p><b>counsel</b> [27] - 816:5, 841:9, 881:10, 885:22, 887:2, 905:6, 939:8, 968:17, 969:17, 981:7, 986:3, 987:7, 987:13, 991:23, 993:14, 995:19, 996:11, 1006:11, 1006:20, 1009:8, 1010:10, 1010:20, 1024:11, 1025:17, 1029:5, 1029:19, 1029:25</p> <p><b>counselor</b> [1] - 819:24</p> <p><b>count</b> [1] - 825:22</p> <p><b>counting</b> [1] - 961:10</p> <p><b>counts</b> [1] - 832:15</p> <p><b>County</b> [20] - 828:14, 853:4, 853:5, 860:7, 872:4, 874:17, 875:7, 877:2, 930:6, 934:16, 937:23, 949:16, 964:8, 968:16, 977:25, 1020:5, 1020:13, 1020:16, 1024:12, 1024:15</p> <p><b>couple</b> [15] - 818:4, 822:22, 823:4, 823:5, 832:23, 833:2, 846:1, 866:24, 891:21, 909:11, 913:13, 913:17, 950:21, 995:20, 1014:10</p>
---	--	--	---	---

**course** [4] - 839:23, 862:5, 976:25, 1027:24  
**court** [2] - 856:3, 967:13  
**COURT** [1] - 814:1  
**Court** [26] - 814:12, 818:20, 823:15, 836:20, 842:11, 850:1, 868:9, 874:11, 878:17, 879:25, 880:22, 880:23, 881:19, 886:10, 895:4, 900:3, 907:21, 915:8, 918:1, 918:22, 919:9, 919:10, 919:13, 920:20, 941:7, 1031:16  
**Court's** [2] - 927:22, 940:12  
**cover** [1] - 847:11  
**coverage** [1] - 1024:25  
**covered** [1] - 937:13  
**crab** [8] - 890:12, 891:3, 891:13, 892:18, 893:25, 894:7, 894:10, 940:25  
**crabs** [10] - 891:5, 891:9, 891:22, 892:12, 893:24, 894:3, 894:22, 940:10, 980:2, 1007:18  
**CRAIG** [1] - 814:20  
**crawl** [1] - 1026:12  
**creating** [4] - 850:6, 882:7, 908:7, 908:15  
**credit** [1] - 1026:19  
**crew** [1] - 819:12  
**critical** [3] - 841:6, 971:2, 1007:5  
**crop** [5] - 839:24, 961:19, 984:9, 986:1, 986:11  
**cross** [1] - 1009:6  
**Cross** [1] - 815:2  
**CROSS** [1] - 816:7  
**CROSS-EXAMINATION** [1] - 816:7  
**cross-section** [1] - 1009:6  
**CRR** [2] - 814:14, 1031:15  
**cubic** [2] - 915:13, 918:16

**cull** [2] - 818:15, 837:8  
**culled** [1] - 836:17  
**culling** [19] - 818:18, 818:20, 819:4, 819:9, 819:17, 820:14, 820:16, 820:19, 820:22, 821:5, 821:6, 821:21, 822:3, 836:16, 856:10, 861:2, 883:11, 920:12, 986:2  
**culmination** [1] - 965:19  
**cultch** [4] - 863:16, 866:17, 922:2, 989:14  
**cultched** [1] - 959:15  
**cultching** [5] - 907:19, 907:20, 907:22, 958:24, 959:12  
**cultural** [2] - 863:12, 866:13  
**culture** [1] - 897:4  
**cup** [1] - 893:16  
**current** [3] - 849:23, 850:4, 851:21  
**currents** [1] - 826:14  
**customers** [1] - 987:2  
**cuts** [1] - 976:7  
**cutting** [1] - 965:18  
**cycle** [5] - 852:6, 907:25, 979:20, 1005:24, 1006:1  
**cycles** [2] - 1005:18, 1005:22

**D**

**DACS** [12] - 849:5, 852:8, 863:21, 884:13, 889:5, 907:12, 921:21, 922:18, 923:12, 926:21, 935:1, 962:15  
**damage** [3] - 838:17, 852:5, 890:23  
**damaged** [1] - 938:2  
**damaging** [5] - 830:12, 830:22, 831:15, 831:19, 869:24  
**danger** [1] - 1018:22  
**data** [42] - 845:11, 850:10, 850:13, 851:5, 852:3, 852:15, 927:15, 941:7, 941:8, 941:21, 942:22,

942:24, 943:8, 945:6, 949:20, 949:23, 951:7, 952:1, 953:18, 953:23, 953:25, 954:3, 954:19, 954:23, 955:2, 955:15, 955:17, 955:21, 956:7, 957:5, 957:8, 957:16, 958:1, 1002:14, 1018:24, 1019:2, 1019:22, 1020:1, 1020:14  
**date** [6] - 847:2, 847:5, 877:22, 900:15, 916:19, 930:20  
**date-wise** [1] - 916:19  
**dated** [3] - 867:6, 945:16, 993:15  
**dates** [3] - 910:22, 917:8, 918:14  
**David** [6] - 891:19, 949:2, 949:3, 949:5, 949:11, 949:14  
**daylight** [1] - 1030:4  
**days** [13] - 830:1, 830:9, 833:1, 833:21, 852:17, 853:10, 854:6, 854:11, 854:15, 854:18, 891:22, 1018:14, 1018:18  
**de** [1] - 891:12  
**dead** [39] - 823:21, 824:3, 825:8, 865:17, 881:22, 881:25, 882:18, 882:25, 883:5, 883:16, 894:8, 894:9, 898:19, 899:22, 900:10, 923:8, 927:23, 927:24, 928:1, 928:9, 928:10, 928:11, 963:4, 963:9, 976:11, 978:7, 978:14, 978:21, 981:4, 982:8, 982:11, 982:15, 987:5, 991:11, 997:12, 1017:3, 1017:5  
**deal** [2] - 885:5, 910:12  
**dealers** [6] - 846:4, 857:14, 946:9, 947:15, 966:16, 986:25

**dealing** [3] - 821:19, 857:22, 904:2  
**Debby** [2] - 890:16, 890:21  
**debilitating** [2] - 887:14, 977:9  
**debilitation** [1] - 867:22  
**decade** [2] - 958:25, 959:12  
**deceive** [1] - 865:23  
**December** [2] - 945:16, 947:11  
**decide** [1] - 855:20  
**decides** [1] - 853:16  
**decimated** [4] - 909:19, 963:11, 963:17, 998:3  
**decimation** [1] - 909:22  
**decision** [7] - 832:3, 832:21, 855:22, 857:24, 962:25, 963:7, 1017:4  
**decisions** [1] - 1019:10  
**declaration** [5] - 877:24, 900:19, 930:21, 934:22, 965:17  
**decline** [8] - 834:13, 834:16, 848:4, 871:5, 956:20, 957:19, 994:25, 1022:6  
**declined** [3] - 848:3, 849:24, 870:12  
**declining** [11] - 828:9, 828:21, 836:14, 849:12, 849:14, 956:15, 956:24, 957:11, 957:24, 1002:8, 1002:18  
**decreased** [3] - 988:17, 988:19, 1003:2  
**decreasing** [1] - 855:16  
**deep** [1] - 895:17  
**Deepwater** [3] - 860:4, 928:22, 1024:21  
**Defendants** [1] - 814:7  
**defined** [2] - 821:5, 827:12  
**definitely** [4] - 840:17, 892:14, 901:19, 1010:17  
**definition** [1] - 893:7  
**ded** [9] - 823:11,

823:18, 823:19, 824:16, 824:17, 865:22, 868:2, 868:13, 884:17  
**degree** [3] - 831:13, 850:24, 955:22  
**demand** [5] - 977:5, 983:14, 1023:22, 1024:21, 1025:3  
**demonstrate** [1] - 932:7  
**demonstrated** [1] - 929:6  
**demonstrative** [3] - 897:8, 898:7, 899:6  
**demonstratives** [2] - 879:20, 881:11  
**densities** [1] - 992:15  
**density** [1] - 850:19  
**deny** [1] - 886:15  
**Department** [6] - 860:9, 860:11, 877:23, 911:6, 912:8, 931:12  
**department** [1] - 931:14  
**Department's** [1] - 872:12  
**dependent** [4] - 824:21, 902:18, 941:7, 941:20  
**depicted** [3] - 969:16, 969:25, 991:15  
**depleted** [16] - 817:5, 817:11, 817:14, 817:17, 823:10, 853:23, 854:11, 963:5, 963:20, 975:18, 975:21, 979:3, 998:1, 1005:2, 1010:4  
**depletion** [56] - 817:21, 821:12, 821:23, 838:13, 841:22, 867:21, 894:21, 929:11, 963:2, 964:1, 965:6, 965:10, 965:13, 970:7, 970:25, 971:12, 971:21, 976:1, 977:12, 977:16, 978:23, 979:23, 981:16, 983:3, 983:7, 983:19, 983:21, 983:23, 983:24, 986:4, 986:6, 986:8, 988:7, 988:8, 988:9, 989:3, 989:6, 991:2, 993:7, 995:6,

<p>997:20, 1003:12, 1005:6, 1007:10, 1007:23, 1009:18, 1011:18, 1011:20, 1012:1, 1012:13, 1012:18, 1012:21, 1012:25, 1014:5, 1014:6, 1027:16  <b>deploy</b> [2] - 908:10, 908:16  <b>Depo</b> [1] - 896:25  <b>deposition</b> [17] - 859:8, 862:10, 886:5, 886:9, 886:13, 886:19, 892:5, 903:1, 903:5, 943:22, 944:7, 948:9, 965:21, 967:1, 967:8, 967:9, 967:18  <b>depressed</b> [4] - 829:10, 847:23, 869:18, 1003:4  <b>deprive</b> [1] - 1016:12  <b>describe</b> [7] - 880:21, 880:22, 884:1, 887:16, 895:7, 907:21, 1002:1  <b>described</b> [6] - 883:9, 888:1, 891:1, 907:1, 909:5, 920:13  <b>describing</b> [3] - 881:19, 900:20, 1001:24  <b>description</b> [3] - 923:18, 928:13, 972:18  <b>designated</b> [4] - 846:14, 859:15, 886:5, 886:10  <b>destructive</b> [1] - 1007:7  <b>detailed</b> [2] - 817:25, 818:5  <b>determination</b> [1] - 919:16  <b>determine</b> [2] - 974:13, 974:15  <b>determined</b> [1] - 965:17  <b>determining</b> [2] - 883:20, 949:17  <b>detrimental</b> [3] - 870:8, 1023:15, 1023:16  <b>develop</b> [2] - 840:25, 921:5  <b>developing</b> [1] - 923:1  <b>Development</b> [1] - 931:11</p>	<p><b>development</b> [1] - 921:10  <b>develops</b> [2] - 825:2, 921:5  <b>devoid</b> [1] - 894:20  <b>devoted</b> [1] - 912:19  <b>die</b> [2] - 962:8, 981:25  <b>difference</b> [5] - 838:21, 840:9, 930:3, 937:24, 945:21  <b>differences</b> [1] - 932:7  <b>different</b> [23] - 847:13, 855:10, 871:17, 878:23, 879:14, 879:15, 880:8, 895:2, 899:13, 901:13, 901:20, 907:2, 914:9, 914:12, 933:11, 956:1, 965:9, 1013:3, 1022:16, 1022:18, 1022:19  <b>difficult</b> [3] - 898:25, 902:15, 903:24  <b>diminish</b> [1] - 984:17  <b>dire</b> [1] - 838:18  <b>direct</b> [31] - 834:12, 864:25, 865:3, 865:5, 865:8, 865:14, 872:2, 872:21, 873:4, 873:9, 874:3, 878:21, 888:21, 889:6, 895:7, 895:25, 919:12, 920:17, 940:12, 940:13, 940:19, 944:4, 967:14, 967:20, 967:22, 968:8, 968:10, 971:21, 983:1, 1003:17, 1006:21  <b>Direct</b> [1] - 815:2  <b>directed</b> [6] - 842:20, 843:6, 843:13, 856:14, 861:7, 1006:20  <b>directly</b> [3] - 900:18, 910:15, 1007:15  <b>director</b> [2] - 950:4, 950:5  <b>disagree</b> [1] - 884:12  <b>disappeared</b> [1] - 1024:22  <b>disaster</b> [6] - 816:15, 877:24, 900:18, 930:21, 934:22, 965:17  <b>Discharge</b> [1] -</p>	<p>1006:23  <b>discharge</b> [2] - 1002:20, 1026:24  <b>discrepancy</b> [4] - 946:6, 946:8, 947:18, 947:19  <b>discussed</b> [5] - 827:14, 830:5, 833:6, 872:11, 963:23  <b>discussing</b> [1] - 966:23  <b>discussion</b> [7] - 821:10, 852:12, 866:25, 976:23, 978:24, 1018:11, 1019:24  <b>Discussion</b> [3] - 898:5, 944:12, 1010:22  <b>discussions</b> [8] - 854:17, 857:21, 962:7, 962:12, 966:14, 966:16, 967:7  <b>disease</b> [3] - 988:21, 998:4, 1003:6  <b>disinterested</b> [1] - 1031:8  <b>dispersant</b> [1] - 937:6  <b>dispersed</b> [1] - 1001:22  <b>dispute</b> [1] - 864:9  <b>disrupted</b> [4] - 823:13, 824:10, 824:18, 868:3  <b>disruptive</b> [1] - 884:6  <b>distant</b> [1] - 983:8  <b>distinguish</b> [2] - 917:13, 978:25  <b>distribute</b> [1] - 930:24  <b>distribution</b> [1] - 935:12  <b>disturbing</b> [1] - 1005:17  <b>dive</b> [4] - 897:3, 899:14, 918:3, 933:1  <b>diver</b> [3] - 896:10, 896:11, 899:1  <b>divers</b> [1] - 1003:13  <b>divers'</b> [1] - 1002:25  <b>dives</b> [3] - 889:17, 889:19, 892:20  <b>diving</b> [3] - 900:6, 932:7, 1006:2  <b>division</b> [1] - 950:5  <b>Division</b> [2] - 844:7, 846:23  <b>Division's</b> [2] - 844:5,</p>	<p><b>dock</b> [4] - 822:12, 941:24, 943:5, 945:2  <b>document</b> [35] - 853:1, 859:14, 859:18, 861:22, 864:12, 867:8, 868:22, 869:8, 872:23, 914:3, 914:20, 931:3, 932:1, 950:24, 958:10, 958:16, 987:14, 987:18, 992:3, 992:21, 993:15, 994:11, 994:19, 996:1, 996:6, 997:19, 998:17, 1002:4, 1003:10, 1003:17, 1003:21, 1003:22, 1006:7, 1006:19, 1009:9  <b>documents</b> [9] - 862:3, 862:11, 862:16, 862:22, 869:10, 878:18, 931:19, 987:7, 991:23  <b>dollars</b> [1] - 911:5  <b>done</b> [24] - 838:17, 892:20, 900:14, 904:10, 904:11, 904:21, 905:20, 907:16, 908:9, 909:13, 916:20, 918:6, 926:16, 926:21, 927:12, 927:14, 939:4, 939:19, 966:12, 1006:7, 1009:20, 1009:22, 1021:14, 1025:12  <b>double</b> [6] - 911:13, 911:16, 952:8, 952:11, 1018:3, 1018:4  <b>dove</b> [4] - 890:6, 890:25, 893:21, 1027:21  <b>down</b> [29] - 817:25, 827:1, 831:24, 831:25, 844:4, 847:16, 849:10, 852:1, 861:18, 863:5, 863:19, 863:24, 871:25, 884:25, 892:25, 896:10, 898:13, 914:15, 922:2, 942:1, 951:3, 952:24,</p>	<p>958:12, 977:1, 990:7, 996:14, 1004:13, 1019:5  <b>downs</b> [1] - 973:11  <b>downward</b> [2] - 987:22, 992:23  <b>Dr</b> [11] - 879:23, 880:8, 891:19, 891:21, 897:11, 900:5, 904:17, 905:5, 940:10, 940:13, 940:19  <b>drafted</b> [1] - 816:17  <b>drafts</b> [1] - 864:3  <b>drag</b> [1] - 894:6  <b>draw</b> [1] - 905:20  <b>drawn</b> [1] - 973:9  <b>drier</b> [1] - 924:22  <b>drill</b> [8] - 924:15, 924:16, 925:1, 926:25, 979:25, 994:15, 994:21, 1004:24  <b>drills</b> [9] - 924:22, 928:12, 940:11, 994:1, 1004:17, 1004:23, 1005:14, 1005:18, 1007:19  <b>driving</b> [2] - 839:13, 1007:6  <b>drop</b> [2] - 839:23, 839:24  <b>dropped</b> [1] - 943:24  <b>drought</b> [21] - 830:16, 923:22, 924:15, 924:22, 926:20, 932:25, 988:17, 1002:20, 1013:17, 1015:13, 1016:1, 1016:2, 1021:9, 1021:23, 1021:25, 1022:1, 1022:2, 1022:7, 1022:8, 1022:12, 1022:17  <b>Drought</b> [1] - 1006:23  <b>droughts</b> [2] - 1013:21, 1021:5  <b>Dry</b> [12] - 927:9, 927:10, 927:17, 958:24, 959:10, 974:20, 982:16, 996:15, 996:19, 997:7, 997:25, 1014:22  <b>due</b> [1] - 923:6  <b>DUNLAP</b> [1] - 814:23  <b>duration</b> [3] - 826:25, 889:11, 912:12  <b>during</b> [38] - 817:4, 829:3, 832:4,</p>
---	---	--	---	--

832:22, 833:12,  
833:13, 834:22,  
835:19, 837:12,  
842:16, 843:11,  
848:6, 849:18,  
856:8, 858:14,  
861:1, 871:12,  
873:14, 913:17,  
924:15, 932:7,  
932:20, 932:25,  
946:15, 953:13,  
965:6, 967:3,  
967:17, 973:20,  
979:23, 983:12,  
985:5, 1011:18,  
1016:2, 1021:24,  
1025:2, 1025:8  
**duties** [1] - 870:25  
**DWH** [4] - 834:22,  
856:8, 861:1, 871:12  
**dying** [1] - 923:8  
**dynamic** [1] - 840:19  
**dysfunctional** [1] -  
981:21

**E**

**e-mail** [9] - 888:24,  
889:24, 945:15,  
945:19, 948:16,  
949:1, 950:3,  
950:10, 953:19  
**e-mailing** [2] - 949:11,  
950:12  
**e-mails** [2] - 888:17,  
948:25  
**earliest** [1] - 888:24  
**early** [8] - 826:9,  
860:12, 860:13,  
903:11, 984:6,  
984:21, 986:11,  
1021:20  
**easier** [2] - 895:11,  
972:6  
**easily** [2] - 897:7,  
918:2  
**east** [3] - 973:12,  
973:19, 973:23  
**East** [33] - 821:15,  
822:5, 823:1, 823:6,  
829:8, 829:17,  
848:23, 890:7,  
890:10, 891:2,  
892:16, 900:4,  
900:21, 901:3,  
901:4, 931:23,  
932:2, 932:12,  
933:1, 933:16,  
933:21, 935:22,  
936:12, 936:17,  
973:5, 973:15,

980:3, 983:3,  
996:10, 1008:24,  
1017:7, 1027:12,  
1027:21  
**eastern** [5] - 915:6,  
972:24, 999:3,  
1000:22, 1008:23  
**easy** [3] - 845:11,  
894:8, 947:19  
**easy-to-accept** [1] -  
947:19  
**eat** [2] - 999:22,  
999:23  
**eaten** [1] - 941:24  
**echinoderms** [1] -  
980:10  
**ECHOLS** [101] -  
814:21, 816:6,  
816:8, 819:19,  
819:25, 820:5,  
820:8, 859:22,  
859:25, 860:1,  
865:7, 865:10,  
866:9, 866:11,  
867:7, 867:9,  
867:14, 867:16,  
868:19, 868:21,  
871:25, 872:1,  
874:20, 874:22,  
875:2, 875:5, 878:2,  
878:12, 880:4,  
880:6, 881:15,  
881:17, 886:4,  
886:8, 887:3, 887:4,  
888:13, 888:15,  
892:5, 892:7,  
892:25, 893:1,  
895:15, 895:21,  
895:23, 896:13,  
896:15, 898:4,  
898:6, 898:8, 899:5,  
899:7, 899:25,  
900:2, 905:3,  
905:14, 905:15,  
913:22, 913:24,  
914:1, 921:16,  
921:18, 930:13,  
930:15, 934:11,  
934:14, 935:17,  
935:20, 936:19,  
936:22, 937:18,  
937:21, 939:5,  
939:15, 939:23,  
940:4, 940:7,  
940:18, 944:13,  
954:8, 954:15,  
955:12, 958:4,  
958:6, 971:24,  
972:4, 972:8,  
978:17, 990:17,

1013:12, 1014:17,  
1014:21, 1017:8,  
1019:17, 1019:19,  
1020:25, 1021:2,  
1023:24, 1025:21,  
1029:21, 1030:12  
**eco** [1] - 902:8  
**ecological** [1] - 842:5  
**ecology** [3] - 977:15,  
1013:24, 1019:14  
**economic** [5] - 858:7,  
860:6, 961:23,  
962:9, 1016:13  
**economics** [1] -  
1019:12  
**ecosystem** [2] - 902:2,  
902:4  
**ecosystems** [4] -  
902:7, 902:12,  
903:15, 903:21  
**edge** [1] - 976:9  
**edges** [1] - 885:10  
**EDRP** [1] - 912:21  
**effect** [11] - 838:23,  
840:15, 906:18,  
977:9, 984:14,  
985:8, 985:13,  
1019:10, 1021:18,  
1021:23  
**effectively** [2] -  
984:17, 985:1  
**effects** [7] - 829:10,  
869:19, 890:15,  
972:12, 974:13,  
988:16, 1003:2  
**efficiency** [1] - 978:13  
**efficient** [1] - 842:1  
**effort** [14] - 827:6,  
827:13, 832:7,  
833:5, 843:6,  
843:13, 848:25,  
852:21, 856:14,  
861:6, 947:18,  
970:15, 1006:15,  
1008:7  
**efforts** [2] - 876:8,  
1009:10  
**egg** [3] - 825:2,  
1005:19, 1006:3  
**either** [8] - 819:9,  
885:18, 912:11,  
956:15, 972:7,  
985:13, 998:25,  
1010:14  
**elaborate** [2] - 841:7,  
841:11  
**Elena** [6] - 884:5,  
885:14, 887:21,  
909:17, 946:15,

**elevation** [8] - 823:25,  
824:4, 868:11,  
884:8, 885:11,  
885:19, 907:5  
**elevations** [1] - 867:25  
**eliminated** [1] - 974:9  
**embed** [1] - 924:16  
**employed** [1] - 1028:4  
**employment** [1] -  
1028:10  
**encompassed** [1] -  
975:14  
**encourage** [1] -  
906:20  
**encouraged** [3] -  
919:16, 920:5, 927:4  
**end** [22] - 838:16,  
839:13, 841:5,  
845:17, 848:16,  
888:19, 912:23,  
923:8, 924:2, 925:5,  
925:13, 925:22,  
957:17, 965:11,  
974:7, 986:1, 997:4,  
1000:11, 1004:5,  
1018:23, 1021:18  
**End** [2] - 922:16,  
1030:17  
**ends** [1] - 920:3  
**energy** [1] - 981:24  
**enforced** [3] - 856:24,  
961:2, 1023:11  
**enforcing** [6] - 843:6,  
843:13, 856:15,  
857:2, 861:7, 1023:8  
**engaged** [1] - 1028:5  
**enhancing** [1] -  
908:21  
**enlarged** [1] - 920:10  
**entered** [5] - 859:15,  
862:25, 863:2,  
863:4, 962:22  
**entire** [14] - 819:16,  
860:21, 874:18,  
904:21, 905:21,  
909:19, 911:6,  
930:10, 963:13,  
972:21, 973:7,  
975:17, 1020:14,  
1020:21  
**entirely** [3] - 962:17,  
962:20, 963:21  
**entirety** [3] - 860:10,  
953:20, 1020:15  
**entitled** [3] - 814:10,  
994:11, 1003:19  
**environment** [3] -  
982:21, 1007:16,  
1026:22  
**environmental** [21] -

818:8, 821:2,  
821:13, 828:11,  
828:18, 829:12,  
830:12, 830:16,  
830:23, 831:20,  
838:14, 869:21,  
869:25, 987:24,  
992:24, 1002:9,  
1002:19, 1009:23,  
1009:24, 1011:17,  
1013:14  
**epizootic** [1] - 979:3  
**equipment** [1] -  
1008:12  
**especially** [2] - 934:8,  
985:24  
**ESQ** [9] - 814:17,  
814:17, 814:18,  
814:18, 814:19,  
814:20, 814:21,  
814:21, 814:23  
**essentially** [12] -  
902:10, 929:15,  
965:11, 974:17,  
975:18, 976:17,  
980:22, 982:7,  
999:22, 1000:6,  
1016:6, 1026:10  
**establish** [1] - 841:3  
**established** [3] -  
979:19, 1004:20,  
1007:8  
**establishing** [1] -  
833:10  
**establishment** [1] -  
1005:16  
**Estes** [3] - 950:2,  
950:3  
**estimate** [4] - 910:12,  
939:8, 939:9, 943:14  
**estimated** [3] -  
836:14, 915:13,  
943:15  
**estimates** [4] - 844:9,  
849:15, 849:20,  
992:16  
**estuary** [2] - 1004:25,  
1005:19  
**evaluate** [1] - 914:7  
**evaluating** [2] -  
852:10, 905:9  
**event** [67] - 817:21,  
821:12, 821:13,  
821:23, 832:6,  
832:23, 834:23,  
835:20, 838:13,  
841:23, 856:9,  
860:5, 861:1,  
871:12, 883:4,  
883:22, 894:21,



<p>921:9, 921:19, 963:3, 964:1, 965:7, 965:10, 965:13, 970:7, 970:25, 971:12, 971:21, 974:2, 975:13, 976:1, 977:16, 979:2, 979:23, 980:24, 980:25, 982:16, 983:3, 983:19, 983:21, 983:23, 983:24, 986:4, 986:7, 986:8, 988:7, 988:8, 988:9, 989:3, 989:7, 991:2, 991:21, 993:7, 995:6, 1003:12, 1003:14, 1005:6, 1007:10, 1007:23, 1009:19, 1011:18, 1011:21, 1012:18, 1012:21, 1016:5, 1027:16, 1031:8 <b>events</b> [10] - 821:15, 841:22, 866:19, 925:12, 981:16, 989:6, 1012:13, 1012:14, 1012:25, 1025:5 <b>eventually</b> [1] - 838:1 <b>everywhere</b> [1] - 932:14 <b>evidence</b> [3] - 859:15, 981:11, 985:14 <b>evident</b> [2] - 981:14, 1002:25 <b>exacerbating</b> [2] - 863:9, 863:11 <b>exact</b> [1] - 910:22 <b>exactly</b> [6] - 898:11, 906:15, 929:12, 957:21, 969:24, 987:11 <b>exaggerated</b> [1] - 885:18 <b>exam</b> [2] - 1025:13, 1025:15 <b>EXAMINATION</b> [4] - 816:7, 968:11, 1013:11, 1024:5 <b>examination</b> [1] - 939:12 <b>examined</b> [2] - 946:25, 979:5 <b>example</b> [4] - 846:10, 888:4, 922:5, 932:18 <b>examples</b> [2] - 880:7, 913:13 <b>exceeds</b> [1] - 946:8 <b>Excel</b> [3] - 950:22,</p>	<p>954:9, 954:25 <b>excellent</b> [1] - 918:2 <b>except</b> [4] - 840:9, 843:19, 903:20, 982:7 <b>exception</b> [1] - 924:3 <b>excerpt</b> [2] - 936:15, 1003:16 <b>excessive</b> [7] - 834:17, 836:10, 836:22, 848:6, 870:16, 871:6, 887:23 <b>exclusively</b> [1] - 821:16 <b>excuse</b> [4] - 881:10, 988:7, 993:17, 1004:4 <b>Executive</b> [2] - 854:5, 962:22 <b>executive</b> [3] - 816:21, 820:7, 1006:16 <b>exempt</b> [1] - 1015:9 <b>Exhibit</b> [8] - 872:23, 873:12, 875:4, 914:3, 922:12, 922:14, 948:22, 1029:1 <b>exhibit</b> [10] - 846:14, 867:8, 868:20, 872:21, 872:22, 954:16, 955:4, 969:21, 995:21, 1024:11 <b>exhibited</b> [1] - 924:3 <b>EXHIBITS</b> [1] - 815:7 <b>exhibits</b> [1] - 888:5 <b>existed</b> [1] - 858:20 <b>existing</b> [1] - 825:12 <b>expand</b> [2] - 854:18, 860:18 <b>expanded</b> [2] - 854:11, 854:15 <b>expansion</b> [1] - 833:21 <b>expect</b> [11] - 850:22, 851:5, 857:6, 901:23, 903:13, 929:1, 929:4, 947:14, 980:15, 980:19, 981:8 <b>expectation</b> [1] - 851:6 <b>expected</b> [2] - 956:15, 1001:13 <b>experience</b> [9] - 892:13, 905:9, 905:18, 919:8, 921:9, 921:19, 940:23, 941:1,</p>	<p>944:14 <b>experienced</b> [1] - 1027:18 <b>experiments</b> [2] - 891:23, 940:20 <b>expert</b> [5] - 879:23, 891:18, 904:14, 904:25, 906:4 <b>experts</b> [1] - 904:13 <b>Expires</b> [1] - 1031:17 <b>explain</b> [26] - 817:10, 818:20, 823:18, 824:11, 824:19, 833:8, 842:10, 850:1, 878:15, 884:15, 884:24, 887:20, 893:2, 915:8, 917:25, 918:22, 919:9, 920:19, 939:2, 941:6, 945:20, 947:18, 977:22, 989:10, 1006:12, 1023:2 <b>explained</b> [10] - 836:12, 836:20, 837:5, 875:12, 882:3, 895:8, 904:8, 907:24, 964:7, 970:11 <b>explaining</b> [5] - 868:9, 914:13, 917:11, 938:16, 947:13 <b>explains</b> [1] - 919:14 <b>explanation</b> [3] - 922:7, 937:8, 1024:18 <b>explanatory</b> [1] - 876:16 <b>exposed</b> [1] - 901:16 <b>expressed</b> [1] - 960:23 <b>expressing</b> [1] - 848:13 <b>extended</b> [5] - 829:21, 829:25, 854:5, 890:13, 892:21 <b>extending</b> [2] - 852:16, 997:25 <b>extension</b> [4] - 830:9, 841:23, 842:15, 853:10 <b>extensive</b> [9] - 817:13, 849:7, 926:2, 988:1, 989:15, 991:6, 993:1, 993:6, 1027:18 <b>extent</b> [4] - 886:18, 887:5, 904:16</p>	<p>937:9, 1015:16 <b>extra</b> [1] - 895:15 <b>extreme</b> [2] - 891:8, 977:8 <b>extremely</b> [7] - 884:6, 894:22, 918:10, 977:4, 978:13, 985:17, 985:25 <b>extrude</b> [1] - 824:24</p> <hr/> <p style="text-align: center;"><b>F</b></p> <hr/> <p><b>face</b> [1] - 842:21 <b>fact</b> [24] - 847:22, 872:20, 884:3, 889:19, 893:14, 904:8, 904:9, 905:24, 906:3, 909:11, 913:14, 919:18, 928:18, 937:11, 937:25, 943:11, 961:5, 967:19, 968:24, 985:3, 1005:23, 1006:4, 1013:25, 1030:4 <b>factor</b> [6] - 820:22, 832:3, 839:13, 883:18, 887:14, 1007:5 <b>factors</b> [4] - 818:8, 821:3, 823:7, 1012:12 <b>Factors</b> [1] - 860:2 <b>factual</b> [1] - 986:18 <b>failure</b> [2] - 826:1, 946:6 <b>fair</b> [2] - 912:13, 949:22 <b>fairly</b> [4] - 882:12, 927:3, 979:21, 981:14 <b>fall</b> [8] - 819:6, 825:11, 825:13, 825:14, 842:16, 848:7, 872:3, 995:5 <b>familiar</b> [5] - 880:10, 894:15, 913:3, 1005:25, 1028:20 <b>family</b> [1] - 986:13 <b>far</b> [21] - 823:15, 877:8, 877:14, 879:25, 880:10, 891:6, 891:13, 891:16, 892:12, 902:17, 938:23, 945:3, 949:19, 950:16, 956:11, 963:3, 964:18, 970:12, 981:10, 1027:3</p>	<p><b>farm</b> [1] - 897:10 <b>farming</b> [1] - 989:15 <b>fashion</b> [1] - 819:1 <b>fast</b> [1] - 852:4 <b>fatter</b> [1] - 924:7 <b>favor</b> [1] - 967:3 <b>favorable</b> [5] - 822:14, 826:20, 826:24, 982:22, 1027:3 <b>FAWAL</b> [1] - 814:18 <b>FCSWA</b> [1] - 860:8 <b>FDACS</b> [2] - 875:25, 949:6 <b>feature</b> [3] - 823:25, 881:24, 885:5 <b>features</b> [1] - 879:16 <b>February</b> [8] - 916:20, 948:10, 951:13, 952:24, 953:3, 965:23, 967:9 <b>federal</b> [10] - 816:13, 816:14, 822:18, 842:25, 859:6, 911:5, 911:21, 912:9, 912:25, 930:22 <b>feds</b> [1] - 912:23 <b>feed</b> [1] - 986:13 <b>feeding</b> [1] - 980:23 <b>feed</b> [1] - 895:17 <b>felt</b> [1] - 1008:19 <b>female</b> [1] - 825:1 <b>females</b> [2] - 824:24, 984:24 <b>fertilized</b> [2] - 825:1, 825:2 <b>few</b> [8] - 816:22, 828:3, 840:12, 935:2, 984:22, 996:4, 1000:2, 1011:12 <b>fewer</b> [1] - 817:19 <b>figure</b> [3] - 875:21, 925:19, 938:10 <b>file</b> [2] - 954:9 <b>files</b> [2] - 869:4, 869:5 <b>fill</b> [1] - 947:23 <b>filled</b> [1] - 947:24 <b>final</b> [3] - 954:2, 956:20, 965:19 <b>finally</b> [2] - 1010:4, 1028:24 <b>findings</b> [2] - 872:11, 872:12 <b>fine</b> [5] - 864:11, 893:3, 905:7, 935:25, 936:9 <b>finer</b> [1] - 893:8 <b>finger nail</b> [1] - 825:20 <b>finish</b> [4] - 842:7,</p>
---	--	---	--	--

866:24, 933:15, 1010:12  
**finished** [1] - 939:12  
**firmness** [1] - 824:4  
**first** [51] - 816:20, 817:1, 820:13, 823:3, 823:16, 828:8, 832:20, 841:13, 842:7, 843:12, 845:15, 845:25, 846:21, 851:13, 863:7, 867:13, 867:17, 869:16, 889:20, 890:4, 907:3, 914:18, 915:1, 948:25, 950:13, 951:25, 952:18, 953:13, 954:13, 955:19, 958:11, 970:24, 971:14, 975:17, 979:13, 987:6, 991:24, 992:11, 992:17, 995:6, 995:18, 998:17, 1000:9, 1004:6, 1006:12, 1007:4, 1014:18, 1018:5, 1020:22  
**fiscal** [1] - 912:23  
**Fish** [17] - 829:25, 830:7, 832:25, 843:16, 852:9, 941:21, 944:25, 954:5, 954:18, 955:14, 1015:10, 1015:15, 1015:18, 1018:2, 1018:6, 1018:8, 1023:8  
**fish** [7] - 827:18, 876:14, 876:15, 976:25, 977:1, 1015:16, 1015:22  
**fished** [7] - 833:17, 834:1, 933:17, 933:22, 975:19, 1014:13, 1019:4  
**fisheries** [7] - 818:18, 822:1, 838:8, 855:2, 855:4, 857:22, 984:16  
**Fisheries** [1] - 950:6  
**fishermen** [19] - 836:17, 837:7, 856:10, 860:5, 861:3, 863:13, 864:21, 866:14, 876:1, 893:13, 944:15, 963:4, 974:17, 984:10,

997:18, 1017:18, 1018:6, 1018:7, 1023:23  
**Fishery** [1] - 992:8  
**fishery** [43] - 818:8, 818:11, 818:13, 818:17, 820:10, 820:12, 821:3, 821:4, 823:9, 830:7, 838:4, 838:11, 843:5, 850:7, 850:16, 852:24, 854:21, 854:24, 855:7, 855:19, 856:12, 856:14, 861:5, 865:15, 869:10, 877:17, 877:19, 877:24, 912:14, 941:7, 941:20, 943:2, 946:17, 961:25, 962:1, 1015:5, 1016:2, 1016:15, 1018:16, 1021:6, 1021:12, 1022:3, 1022:12  
**fishings** [14] - 827:6, 827:13, 870:15, 936:13, 976:14, 976:15, 976:19, 976:21, 983:11, 984:1, 1008:11, 1016:11, 1019:8, 1019:11  
**fits** [3] - 864:7, 903:25, 904:20  
**five** [9] - 849:11, 849:25, 852:16, 871:16, 912:11, 953:13, 953:16, 961:13, 1018:5  
**fixture** [1] - 994:24  
**FL** [1] - 861:24  
**FL-ACF-Berrigan** [1] - 861:24  
**flashing** [1] - 881:13  
**Flats** [2] - 1009:5  
**flattened** [1] - 885:3  
**fleet** [2] - 870:15, 976:15  
**flip** [3] - 899:25, 950:14, 958:4  
**flipping** [1] - 995:17  
**FLORIDA** [1] - 814:3  
**Florida** [25] - 814:17, 829:24, 832:25, 843:15, 846:15, 859:14, 862:15, 872:22, 875:4, 891:18, 910:15,

910:24, 912:18, 946:19, 967:10, 967:15, 979:25, 985:24, 1007:18, 1008:4, 1009:19, 1013:19, 1018:6, 1023:8, 1028:5  
**Florida's** [3] - 862:4, 904:13, 1004:19  
**flow** [3] - 988:17, 1003:2, 1021:15  
**flows** [3] - 1001:18, 1001:19, 1011:19  
**fluctuating** [2] - 979:17, 980:8  
**fluctuation** [1] - 999:20  
**fluctuations** [4] - 987:23, 992:14, 992:23, 1007:6  
**flushed** [1] - 1006:5  
**folks** [3] - 879:8, 921:20, 923:11  
**follow** [4] - 840:24, 862:7, 965:15, 1024:1  
**follow-up** [1] - 1024:1  
**followed** [1] - 956:17  
**following** [5] - 842:17, 858:18, 858:20, 910:21, 953:24  
**food** [1] - 1005:12  
**foot** [1] - 988:18  
**forage** [1] - 894:3  
**foragers** [1] - 894:4  
**foregoing** [1] - 1031:4  
**forget** [1] - 906:15  
**forgive** [1] - 1025:25  
**forgot** [1] - 1025:14  
**format** [1] - 868:23  
**forth** [2] - 820:17, 915:9  
**forward** [3] - 859:4, 867:2, 888:20  
**forwarded** [1] - 950:1  
**four** [5] - 849:10, 939:22, 939:23, 961:12, 974:5  
**four-zero** [2] - 939:22, 939:23  
**fragments** [1] - 819:6  
**Franklin** [20] - 828:14, 853:4, 860:7, 872:4, 874:17, 875:7, 877:2, 930:5, 934:16, 936:23, 937:23, 949:16, 964:7, 968:16, 977:25, 1020:4

1024:12, 1024:15  
**frankly** [1] - 855:13  
**free** [1] - 826:10  
**frequencies** [1] - 935:12  
**fresh** [25] - 924:13, 926:22, 926:25, 927:20, 928:9, 928:11, 970:8, 970:25, 973:14, 973:17, 973:20, 973:21, 973:25, 975:9, 977:23, 989:2, 994:8, 999:19, 1001:12, 1001:20, 1007:5, 1010:2, 1012:14, 1012:15, 1028:2  
**freshet** [1] - 890:15  
**freshly** [1] - 981:4  
**freshwater** [8] - 971:2, 973:14, 975:21, 988:17, 1003:2, 1006:6, 1013:6, 1026:24  
**front** [6] - 853:5, 865:3, 879:21, 916:19, 969:6, 991:25  
**fruit** [1] - 858:5  
**full** [5] - 898:23, 898:25, 960:16, 969:14, 998:17  
**function** [2] - 890:13, 892:21  
**functional** [6] - 823:20, 824:2, 880:25, 909:5, 916:11, 918:11  
**functionality** [4] - 839:4, 839:9, 839:11, 909:9  
**functioning** [3] - 882:5, 937:10, 982:12  
**funded** [1] - 965:17  
**funding** [7] - 910:15, 911:1, 911:11, 911:12, 911:14, 911:16, 912:9  
**funds** [5] - 911:2, 911:12, 912:3, 912:18, 913:5  
**furnished** [1] - 1029:25  
**future** [2] - 886:22, 1019:12  
**FWC** [34] - 852:14, 852:24, 852:25, 853:12,

853:15, 853:23, 854:11, 854:18, 854:20, 855:14, 855:18, 856:23, 857:1, 857:6, 860:16, 875:25, 942:24, 943:2, 949:9, 950:4, 950:8, 950:9, 951:17, 952:1, 957:9, 960:22, 962:16, 962:19, 962:22, 963:13, 963:20, 1016:1, 1018:21  
**FX-608** [1] - 815:14  
**FX-875** [2] - 815:14, 969:21  
**FYI** [1] - 950:15

**G**

**gained** [1] - 1025:11  
**gametes** [4] - 824:24, 824:25, 825:1, 985:23  
**gap** [2] - 912:5, 912:10  
**gaped** [1] - 981:1  
**gapers** [2] - 928:6, 928:8  
**gears** [2] - 878:13, 901:10  
**general** [4] - 880:9, 913:8, 990:3, 1003:12  
**generalize** [1] - 1008:5  
**generally** [6] - 825:17, 847:2, 849:16, 897:1, 907:21, 955:20  
**generation** [3] - 916:4, 916:8, 916:9  
**George** [2] - 973:3, 980:3  
**GEORGIA** [1] - 814:6  
**Georgia** [6] - 814:20, 846:15, 859:14, 862:9, 896:25, 1013:19  
**Georgia's** [14] - 968:17, 969:17, 981:7, 986:3, 987:7, 987:13, 991:23, 993:14, 995:18, 996:11, 1006:11, 1006:19, 1009:8, 1024:11  
**given** [10] - 832:24, 833:20, 857:19, 895:1, 905:7,

<p>909:22, 939:16, 986:18, 1007:2, 1015:3 <b>glance</b> [1] - 952:18 <b>government</b> [7] - 816:13, 822:18, 842:25, 859:6, 911:21, 930:22, 957:9 <b>Governor</b> [5] - 820:1, 822:18, 842:24, 859:5, 930:20 <b>Governor's</b> [3] - 816:13, 877:22, 934:21 <b>grab</b> [1] - 944:1 <b>gradients</b> [1] - 826:13 <b>graduate</b> [1] - 900:5 <b>grant</b> [1] - 911:20 <b>grants</b> [4] - 910:23, 911:18, 912:10 <b>great</b> [5] - 839:10, 885:5, 897:8, 919:22, 972:9 <b>greater</b> [2] - 830:25, 894:25 <b>greatest</b> [1] - 1025:2 <b>Green</b> [8] - 975:4, 998:21, 999:1, 1000:23, 1001:6, 1001:8, 1009:3, 1027:11 <b>group</b> [7] - 865:21, 889:5, 931:15, 931:16, 931:17, 932:2, 1026:19 <b>grouping</b> [1] - 999:4 <b>groups</b> [1] - 888:3 <b>grow</b> [7] - 836:18, 837:1, 840:6, 887:13, 985:12, 989:12, 1026:22 <b>growing</b> [4] - 837:4, 842:21, 920:23, 932:17 <b>grown</b> [1] - 825:18 <b>growth</b> [7] - 831:5, 915:19, 916:4, 924:4, 926:23, 927:20, 1027:15 <b>guess</b> [7] - 836:3, 840:4, 856:2, 860:17, 876:15, 948:23, 953:11 <b>guided</b> [1] - 826:12 <b>Gulf</b> [6] - 910:25, 949:16, 989:17, 1004:19, 1024:21, 1025:3 <b>Gully</b> [4] - 927:6,</p>	<p>927:8, 927:16, 997:7 <b>Gunter</b> [4] - 879:9, 883:13, 914:6, 925:19 <b>guy</b> [1] - 936:4 <b>GX-1248</b> [2] - 815:17, 954:11 <b>GX-1296</b> [2] - 815:17, 931:2 <b>GX-1297</b> [2] - 815:18, 888:14 <b>GX-1305</b> [2] - 815:18, 918:23 <b>GX-2</b> [1] - 815:16 <b>GX-498</b> [2] - 815:16, 945:13</p>	<p>851:12, 856:7, 856:17, 858:6, 860:25, 871:11, 876:22, 916:1, 946:24, 946:25, 949:19, 955:21, 955:24, 961:19, 962:9, 984:6, 1015:19 <b>harvestable</b> [4] - 837:24, 838:9, 839:22, 997:16 <b>harvested</b> [33] - 818:21, 822:10, 822:11, 833:14, 838:6, 840:13, 840:14, 842:8, 881:4, 882:17, 883:21, 884:25, 885:3, 941:23, 942:25, 945:4, 950:16, 952:2, 952:6, 952:12, 953:1, 953:15, 955:25, 962:5, 979:1, 981:6, 981:10, 1015:2, 1017:19, 1020:10, 1020:16, 1024:22, 1024:23 <b>harvester</b> [2] - 863:13, 866:14 <b>harvesters</b> [3] - 865:16, 915:22, 986:12 <b>Harvesting</b> [2] - 828:6, 869:15 <b>harvesting</b> [145] - 818:14, 821:17, 822:3, 822:19, 828:10, 828:16, 828:22, 829:11, 829:14, 829:16, 829:21, 829:22, 830:1, 830:2, 830:9, 830:25, 832:4, 832:7, 832:21, 833:1, 833:5, 833:11, 833:15, 833:21, 834:17, 834:19, 836:6, 836:10, 836:16, 836:22, 838:15, 838:19, 841:25, 842:1, 842:14, 842:20, 843:10, 844:2, 844:10, 844:12, 844:13, 844:14, 844:20,</p>	<p>847:21, 848:6, 848:24, 848:25, 849:7, 849:20, 849:23, 850:4, 850:8, 851:9, 851:15, 851:22, 852:11, 852:16, 853:11, 854:5, 854:12, 856:5, 856:9, 858:1, 860:19, 860:22, 860:23, 861:2, 863:11, 865:18, 865:22, 865:24, 869:11, 869:19, 869:20, 870:7, 870:15, 870:16, 871:7, 871:9, 881:8, 887:24, 890:14, 892:22, 900:22, 900:23, 915:5, 915:19, 915:21, 917:10, 917:15, 926:25, 942:16, 942:18, 956:19, 957:2, 957:22, 957:23, 957:24, 959:21, 959:22, 959:23, 959:24, 960:1, 960:4, 960:5, 960:6, 960:11, 960:23, 961:2, 961:4, 961:14, 962:17, 962:23, 962:24, 963:14, 967:5, 972:25, 974:8, 976:16, 976:24, 977:8, 977:11, 978:16, 983:2, 983:16, 983:18, 986:15, 988:2, 990:19, 990:24, 991:8, 993:1, 993:6, 996:1, 1006:21, 1012:17, 1016:16, 1017:18, 1017:22, 1020:4, 1020:22 <b>harvests</b> [1] - 957:25 <b>hash</b> [7] - 893:2, 893:3, 893:9, 893:11, 893:15, 893:18, 920:21 <b>hauling</b> [1] - 865:25 <b>heading</b> [8] - 828:6, 931:23, 992:8, 1003:24, 1004:10, 1006:22, 1007:4, 1029:6 <b>heads</b> [3] - 818:23,</p>	<p>819:5, 878:17 <b>health</b> [8] - 837:17, 837:20, 838:21, 838:24, 840:15, 872:12, 924:4, 924:18 <b>healthier</b> [1] - 924:7 <b>healthy</b> [12] - 840:16, 840:17, 840:18, 841:4, 898:22, 907:4, 918:11, 918:13, 926:24, 927:21, 937:13 <b>hear</b> [2] - 960:14, 986:21 <b>heard</b> [6] - 887:16, 887:18, 888:2, 893:18, 928:6, 1023:10 <b>HEARING</b> [1] - 814:10 <b>hearing</b> [1] - 885:8 <b>heavily</b> [1] - 884:25 <b>heavy</b> [1] - 1008:12 <b>heck</b> [1] - 1026:6 <b>height</b> [1] - 988:19 <b>Heil</b> [6] - 949:2, 949:3, 949:5, 949:11, 950:2, 951:7 <b>held</b> [2] - 814:11, 989:19 <b>help</b> [7] - 823:14, 824:7, 827:3, 862:2, 878:15, 963:23, 970:16 <b>helped</b> [1] - 879:23 <b>helper</b> [1] - 819:11 <b>hereby</b> [1] - 1031:3 <b>high</b> [43] - 825:23, 827:5, 827:12, 830:14, 831:22, 839:2, 851:7, 870:2, 918:8, 918:10, 924:5, 929:4, 959:21, 972:12, 977:4, 977:14, 978:13, 979:14, 979:18, 981:24, 983:14, 985:25, 988:22, 991:20, 998:4, 998:12, 998:13, 998:14, 999:14, 1002:21, 1003:6, 1005:8, 1005:13, 1005:17, 1005:25, 1007:15, 1009:24, 1011:19, 1012:15, 1013:5 <b>higher</b> [4] - 831:13, 945:2, 1005:7, 1013:22</p>
<b>H</b>				
<p><b>habitat</b> [6] - 823:8, 826:16, 887:7, 908:7, 909:7 <b>habitats</b> [2] - 867:23, 908:21 <b>haemastoma</b> [1] - 980:1 <b>half</b> [4] - 1020:3, 1020:4, 1020:8, 1020:22 <b>hand</b> [17] - 818:22, 837:7, 846:6, 861:19, 861:20, 862:21, 869:2, 880:19, 882:24, 914:14, 920:3, 920:18, 931:19, 954:24, 969:4, 969:18, 1031:10 <b>handed</b> [3] - 968:25, 969:17, 995:19 <b>handled</b> [1] - 818:25 <b>handles</b> [1] - 883:6 <b>hands</b> [1] - 930:25 <b>hanging</b> [1] - 1024:4 <b>haphazard</b> [1] - 885:9 <b>happy</b> [1] - 917:18 <b>hard</b> [5] - 876:14, 876:15, 881:11, 899:16, 980:9 <b>HARDWICK</b> [1] - 814:19 <b>harmed</b> [1] - 822:19 <b>harsh</b> [1] - 982:21 <b>harvest</b> [31] - 829:3, 834:21, 835:18, 840:7, 840:18, 843:8, 844:16, 845:14, 846:1, 846:8, 851:1, 851:5, 851:6, 851:11,</p>	<p><b>THE REPORTING GROUP</b></p>	<p><b>Mason &amp; Lockhart</b></p>	<p><b>REPORTING GROUP</b></p>	<p><b>REPORTING GROUP</b></p>

<p><b>highest</b> [12] - 929:1, 942:18, 956:8, 957:15, 974:1, 977:5, 977:6, 1023:19, 1023:22, 1025:5</p> <p><b>highlight</b> [4] - 994:20, 997:3, 999:9, 1002:11</p> <p><b>highlighted</b> [1] - 866:12</p> <p><b>highly</b> [1] - 1008:17</p> <p><b>hired</b> [1] - 967:19</p> <p><b>historically</b> [1] - 822:7</p> <p><b>history</b> [1] - 1012:11</p> <p><b>hold</b> [3] - 818:24, 873:5, 1011:6</p> <p><b>Hole</b> [35] - 821:16, 822:5, 823:1, 823:6, 829:8, 829:17, 848:24, 890:7, 890:10, 891:2, 892:17, 900:4, 900:21, 901:3, 901:4, 931:23, 932:3, 932:12, 933:1, 933:16, 933:21, 935:22, 936:12, 936:17, 958:23, 959:11, 973:5, 980:3, 983:3, 996:10, 1008:24, 1014:23, 1017:7, 1027:12, 1027:21</p> <p><b>homes</b> [1] - 894:6</p> <p><b>Honor</b> [36] - 816:6, 819:20, 865:7, 875:3, 878:3, 885:21, 886:4, 886:20, 887:3, 895:21, 904:23, 905:25, 906:4, 913:22, 939:5, 940:4, 954:9, 954:12, 954:17, 955:5, 967:25, 968:5, 969:13, 969:18, 971:24, 978:17, 1010:16, 1017:11, 1023:25, 1025:12, 1025:18, 1025:20, 1025:22, 1029:21, 1029:22, 1030:12</p> <p><b>Horizon</b> [2] - 860:5, 1024:21</p> <p><b>Hotel</b> [4] - 917:3, 917:4, 973:11, 1009:2</p> <p><b>hotel</b> [1] - 917:5</p>	<p><b>hour</b> [1] - 1030:5</p> <p><b>hundreds</b> [2] - 885:12, 1006:3</p> <p><b>Hurricane</b> [6] - 884:5, 885:14, 887:21, 909:17, 946:15, 963:11</p> <p><b>hurricane</b> [1] - 884:6</p> <p><b>hurricanes</b> [1] - 910:21</p> <p><b>hypothetical</b> [3] - 841:20, 905:24, 906:3</p> <p style="text-align: center;"><b>I</b></p> <p><b>idea</b> [1] - 955:7</p> <p><b>identified</b> [6] - 820:10, 891:1, 891:2, 953:18, 970:25, 977:23</p> <p><b>identify</b> [8] - 824:1, 869:3, 889:24, 896:25, 914:4, 917:7, 920:19, 940:9</p> <p><b>identifying</b> [1] - 937:23</p> <p><b>ignore</b> [1] - 926:10</p> <p><b>ignoring</b> [2] - 863:14, 866:15</p> <p><b>Ill</b> [1] - 888:25</p> <p><b>imagine</b> [1] - 890:9</p> <p><b>immobile</b> [2] - 1026:9, 1026:10</p> <p><b>impact</b> [13] - 817:15, 821:17, 821:22, 831:7, 839:9, 839:10, 870:8, 891:13, 924:17, 971:22, 984:18, 985:15</p> <p><b>impacts</b> [1] - 830:24</p> <p><b>impaired</b> [1] - 908:17</p> <p><b>impairment</b> [3] - 852:5, 867:24, 868:12</p> <p><b>Implementation</b> [1] - 1028:21</p> <p><b>implemented</b> [2] - 964:24, 965:1</p> <p><b>importance</b> [2] - 958:19, 977:22</p> <p><b>important</b> [11] - 821:9, 839:15, 875:15, 883:18, 908:19, 908:22, 908:23, 908:24, 909:8, 916:9, 938:17</p> <p><b>imposed</b> [1] - 853:23</p> <p><b>impossible</b> [2] -</p>	<p>904:9, 904:19</p> <p><b>improper</b> [2] - 821:6, 886:2</p> <p><b>improved</b> [2] - 1013:5, 1013:8</p> <p><b>improving</b> [1] - 924:6</p> <p><b>IN</b> [1] - 1031:10</p> <p><b>inaccurate</b> [4] - 873:24, 874:3, 911:10, 933:8</p> <p><b>inappropriate</b> [1] - 905:20</p> <p><b>inch</b> [1] - 921:2</p> <p><b>inches</b> [5] - 835:7, 835:8, 843:18, 983:20, 984:13</p> <p><b>include</b> [10] - 819:7, 830:4, 835:8, 835:9, 859:10, 911:3, 958:23, 1003:10, 1005:3, 1005:21</p> <p><b>included</b> [4] - 820:11, 886:11, 964:23, 968:7</p> <p><b>includes</b> [2] - 972:21, 972:22</p> <p><b>including</b> [7] - 975:18, 980:8, 988:19, 1000:23, 1003:4, 1013:18, 1013:19</p> <p><b>inconsistent</b> [1] - 941:1</p> <p><b>increase</b> [3] - 828:25, 830:20, 1025:1</p> <p><b>increased</b> [10] - 828:14, 828:17, 844:13, 844:25, 984:5, 987:25, 988:20, 992:24, 1003:5, 1027:7</p> <p><b>indeed</b> [2] - 889:25, 963:12</p> <p><b>index</b> [2] - 850:7, 997:15</p> <p><b>INDEX</b> [1] - 815:1</p> <p><b>indicate</b> [6] - 831:5, 945:7, 952:14, 979:12, 1020:24, 1027:7</p> <p><b>indicated</b> [6] - 817:4, 844:9, 849:16, 940:23, 956:13, 1024:17</p> <p><b>indicates</b> [2] - 979:14, 1022:15</p> <p><b>indicating</b> [1] - 985:6</p> <p><b>indicator</b> [1] - 946:2</p> <p><b>indicators</b> [1] - 956:23</p> <p><b>indices</b> [1] - 852:3</p>	<p>902:2, 902:12, 903:15, 903:21, 968:25, 1016:6</p> <p><b>individuals</b> [1] - 989:12</p> <p><b>indulge</b> [2] - 969:23, 977:20</p> <p><b>industry</b> [7] - 850:15, 851:20, 851:23, 857:18, 875:8, 923:7, 923:11</p> <p><b>inevitable</b> [5] - 831:10, 976:24, 977:2, 983:6, 1014:11</p> <p><b>inevitably</b> [1] - 861:4</p> <p><b>influence</b> [4] - 851:15, 975:9, 1001:12, 1010:2</p> <p><b>influenced</b> [1] - 1001:17</p> <p><b>influences</b> [2] - 828:11, 828:18</p> <p><b>information</b> [18] - 852:8, 853:7, 853:19, 855:18, 855:21, 856:23, 857:14, 857:19, 859:9, 877:2, 906:13, 933:8, 986:17, 1006:16, 1018:15, 1023:10, 1024:9, 1028:17</p> <p><b>informative</b> [1] - 919:9</p> <p><b>informed</b> [1] - 1025:25</p> <p><b>initial</b> [1] - 932:11</p> <p><b>inner</b> [2] - 975:22, 1000:1</p> <p><b>Input</b> [3] - 859:19, 958:11, 1029:7</p> <p><b>input</b> [3] - 971:2, 1006:6, 1013:6</p> <p><b>inside</b> [1] - 981:5</p> <p><b>instance</b> [4] - 823:16, 833:20, 898:12, 956:2</p> <p><b>instances</b> [1] - 991:12</p> <p><b>instructing</b> [1] - 823:15</p> <p><b>intact</b> [1] - 981:11</p> <p><b>intend</b> [1] - 820:11</p> <p><b>intended</b> [2] - 875:9, 985:12</p> <p><b>intense</b> [12] - 821:19, 832:6, 833:5, 847:21, 957:21, 983:2, 983:18, 984:2, 988:6, 990:23, 999:13,</p>	<p><b>intensely</b> [1] - 981:6</p> <p><b>intensive</b> [12] - 827:6, 827:13, 869:19, 870:14, 887:24, 900:22, 956:19, 959:22, 960:1, 976:23, 978:15, 1012:17</p> <p><b>interchangeable</b> [1] - 835:11</p> <p><b>interchangeably</b> [1] - 835:16</p> <p><b>interesting</b> [1] - 950:15</p> <p><b>internal</b> [1] - 871:19</p> <p><b>internet</b> [1] - 874:25</p> <p><b>interpret</b> [1] - 881:20</p> <p><b>interpretation</b> [3] - 845:12, 851:4, 882:17</p> <p><b>interpreting</b> [1] - 850:13</p> <p><b>interrupted</b> [1] - 936:4</p> <p><b>interruption</b> [1] - 936:6</p> <p><b>Intracoastal</b> [5] - 973:10, 976:7, 976:9, 1000:7, 1027:25</p> <p><b>intro</b> [1] - 941:8</p> <p><b>introduce</b> [2] - 1025:15, 1025:18</p> <p><b>introduced</b> [1] - 964:3</p> <p><b>introduction</b> [1] - 846:20</p> <p><b>invited</b> [2] - 872:8, 1024:3</p> <p><b>involve</b> [2] - 818:13, 907:23</p> <p><b>involved</b> [6] - 904:12, 909:3, 912:22, 974:18, 983:16, 1025:24</p> <p><b>involves</b> [1] - 976:13</p> <p><b>inward</b> [1] - 983:8</p> <p><b>isolated</b> [6] - 821:15, 902:7, 902:16, 902:19, 983:10, 984:3</p> <p><b>issue</b> [7] - 845:24, 875:16, 891:10, 891:23, 892:12, 971:2, 978:16</p> <p><b>issued</b> [1] - 942:10</p> <p><b>issues</b> [1] - 906:7</p> <p><b>it"</b> [1] - 1023:1</p> <p><b>item</b> [3] - 895:13, 910:18, 911:24</p> <p><b>itself</b> [2] - 895:12, 957:9</p>
--	---	--	--	--

<p><b>IV</b> [1] - 814:5</p>	<p>859:18, 866:7, 958:4, 958:7, 987:8, 992:20, 1029:1</p>	<p>993:18</p>	<p><b>large</b> [16] - 822:10, 894:20, 908:9, 909:12, 910:6, 912:18, 923:7, 926:23, 932:14, 954:23, 976:1, 991:12, 1015:2, 1015:4, 1016:12, 1025:1</p>	<p><b>learners</b> [1] - 816:4 <b>lease</b> [11] - 975:20, 989:20, 990:10, 990:11, 990:13, 990:14, 990:15</p>
<p><b>J</b></p>	<p><b>JX-50</b> [2] - 815:9, 846:15</p>	<p><b>lack</b> [5] - 890:13, 892:21, 970:8, 970:25, 989:2</p>	<p>912:18, 923:7, 926:23, 932:14, 954:23, 976:1, 991:12, 1015:2, 1015:4, 1016:12, 1025:1</p>	<p><b>leased</b> [5] - 989:8, 989:11, 991:1, 991:5, 991:6</p>
<p><b>James</b> [2] - 917:23, 917:24 <b>JAMIE</b> [1] - 814:17 <b>January</b> [10] - 900:4, 900:16, 948:10, 951:13, 951:21, 951:25, 952:4, 952:8, 953:14, 1018:3 <b>jetties</b> [2] - 976:6, 976:8 <b>job</b> [5] - 857:7, 875:23, 911:17, 916:2, 1025:9 <b>jobs</b> [2] - 983:15, 1025:10 <b>Joe</b> [6] - 879:9, 888:25, 889:3, 933:5, 933:7, 950:12 <b>John</b> [1] - 879:8 <b>Joint</b> [5] - 914:3, 922:11, 922:14, 948:22, 1029:1 <b>joint</b> [3] - 846:14, 867:8, 868:20 <b>JOSH</b> [1] - 814:21 <b>JOSHUA</b> [1] - 814:23 <b>judge</b> [4] - 866:10, 905:3, 939:15, 954:15 <b>judgment</b> [1] - 883:1 <b>July</b> [11] - 817:4, 859:19, 861:10, 871:18, 890:2, 915:12, 929:22, 949:22, 974:23, 982:4, 1016:20 <b>June</b> [4] - 949:20, 1019:23, 1020:8, 1031:17 <b>juvenile</b> [19] - 819:7, 827:7, 831:6, 835:9, 835:10, 838:22, 839:17, 840:14, 841:17, 843:20, 844:19, 845:3, 848:1, 870:10, 920:21, 921:4, 921:11, 1005:19, 1012:20 <b>juveniles</b> [4] - 835:14, 845:15, 881:3, 935:12 <b>JX</b> [1] - 859:13 <b>JX-150</b> [11] - 815:12, 859:13, 859:16,</p>	<p><b>JX-52</b> [3] - 815:9, 914:3, 1009:9 <b>JX-60</b> [2] - 815:10, 993:11 <b>JX-74</b> [2] - 815:10, 867:8 <b>JX-75</b> [3] - 815:11, 868:20, 1006:10 <b>JX-77</b> [4] - 815:11, 816:12, 941:10, 995:20 <b>JX-78</b> [7] - 815:12, 948:22, 1017:8, 1017:13, 1019:18, 1020:2, 1024:8</p>	<p><b>lag</b> [2] - 1018:19, 1021:16 <b>laid</b> [1] - 988:12 <b>LANCASTER</b> [46] - 814:11, 816:2, 819:23, 820:4, 859:24, 878:5, 878:11, 886:7, 887:1, 892:4, 905:12, 906:1, 906:5, 913:20, 913:23, 939:7, 939:13, 939:22, 939:24, 940:5, 955:10, 968:4, 969:19, 972:1, 972:7, 972:14, 978:19, 990:6, 990:8, 1010:9, 1010:19, 1011:2, 1011:5, 1024:2, 1025:19, 1025:23, 1026:5, 1026:15, 1027:5, 1028:3, 1028:13, 1028:19, 1028:23, 1029:4, 1029:16, 1029:23 <b>land</b> [1] - 896:16 <b>landed</b> [7] - 896:6, 897:15, 897:19, 897:23, 952:21, 952:22, 1023:20 <b>landing</b> [2] - 1017:21, 1018:17 <b>landings</b> [33] - 828:13, 941:7, 941:19, 942:22, 942:24, 943:7, 944:15, 945:25, 946:3, 946:4, 946:7, 946:10, 947:16, 949:15, 949:17, 949:18, 950:17, 950:21, 951:7, 952:17, 954:18, 955:14, 956:1, 956:7, 956:8, 956:24, 957:8, 977:3, 1018:14, 1019:21, 1022:13, 1024:8 <b>lands</b> [3] - 897:14, 989:12, 989:18 <b>language</b> [4] - 987:14, 992:19, 1003:8,</p>	<p><b>larger</b> [5] - 897:6, 898:15, 902:5, 984:17, 984:23 <b>largest</b> [1] - 1023:19 <b>larvae</b> [7] - 825:2, 825:9, 825:11, 826:10, 826:15, 902:21, 902:22 <b>larval</b> [4] - 824:22, 825:3, 825:5, 826:10 <b>last</b> [46] - 820:12, 822:25, 830:10, 832:1, 832:11, 832:16, 846:2, 846:5, 846:21, 849:8, 851:7, 851:13, 863:8, 867:18, 870:6, 871:4, 911:5, 912:6, 912:7, 917:25, 925:9, 933:25, 935:2, 938:20, 941:5, 950:24, 969:3, 976:4, 977:24, 994:10, 994:18, 996:9, 1001:12, 1003:16, 1004:13, 1006:14, 1007:4, 1007:12, 1007:13, 1013:4, 1017:9, 1017:12, 1018:25, 1020:2, 1020:25, 1027:20 <b>lastly</b> [1] - 1007:12 <b>late</b> [4] - 834:5, 918:4, 982:5, 1016:6 <b>lawsuit</b> [2] - 862:11, 862:17 <b>lawyers</b> [1] - 862:14 <b>lay</b> [1] - 852:22 <b>layered</b> [1] - 890:17 <b>layman's</b> [1] - 826:2 <b>lead</b> [1] - 867:22 <b>leading</b> [2] - 978:18, 999:19 <b>leads</b> [1] - 986:11 <b>lean</b> [1] - 962:13 <b>learn</b> [1] - 816:4</p>	<p><b>leaseholders</b> [2] - 989:22, 991:7 <b>leases</b> [8] - 925:23, 926:6, 975:19, 989:25, 990:16, 990:18, 991:14, 1006:3 <b>least</b> [12] - 841:13, 871:16, 892:11, 895:12, 912:10, 912:13, 961:12, 962:17, 963:20, 1012:10, 1013:25, 1025:25 <b>leave</b> [3] - 919:7, 962:8, 1024:4 <b>leaving</b> [2] - 858:5, 961:24 <b>leeway</b> [1] - 885:23 <b>left</b> [12] - 816:11, 880:19, 899:10, 912:15, 912:17, 912:24, 918:21, 919:3, 951:12, 962:19, 965:13, 1013:7 <b>left-hand</b> [1] - 880:19 <b>legal</b> [42] - 819:13, 831:6, 834:16, 834:18, 834:20, 835:4, 835:9, 835:12, 835:13, 836:10, 836:13, 836:17, 838:5, 838:15, 838:16, 839:17, 839:19, 842:14, 844:14, 844:17, 845:2, 845:15, 848:1, 848:5, 848:6, 856:6, 860:23, 870:10, 870:16, 871:5, 871:7, 871:9, 876:23, 900:22, 960:23, 961:1, 961:4, 984:24, 985:14, 1023:14 <b>legal-size</b> [7] - 819:13, 834:16, 838:5, 844:17, 848:5,</p>
<p><b>Joe</b> [6] - 879:9, 888:25, 889:3, 933:5, 933:7, 950:12 <b>John</b> [1] - 879:8 <b>Joint</b> [5] - 914:3, 922:11, 922:14, 948:22, 1029:1 <b>joint</b> [3] - 846:14, 867:8, 868:20 <b>JOSH</b> [1] - 814:21 <b>JOSHUA</b> [1] - 814:23 <b>judge</b> [4] - 866:10, 905:3, 939:15, 954:15 <b>judgment</b> [1] - 883:1 <b>July</b> [11] - 817:4, 859:19, 861:10, 871:18, 890:2, 915:12, 929:22, 949:22, 974:23, 982:4, 1016:20 <b>June</b> [4] - 949:20, 1019:23, 1020:8, 1031:17 <b>juvenile</b> [19] - 819:7, 827:7, 831:6, 835:9, 835:10, 838:22, 839:17, 840:14, 841:17, 843:20, 844:19, 845:3, 848:1, 870:10, 920:21, 921:4, 921:11, 1005:19, 1012:20 <b>juveniles</b> [4] - 835:14, 845:15, 881:3, 935:12 <b>JX</b> [1] - 859:13 <b>JX-150</b> [11] - 815:12, 859:13, 859:16,</p>	<p><b>K</b> <b>Kal</b> [2] - 884:12, 886:9 <b>Kate</b> [2] - 909:18, 946:15 <b>keep</b> [7] - 844:10, 851:25, 882:8, 905:16, 916:18, 957:3, 972:15 <b>keeping</b> [1] - 960:17 <b>kidding</b> [1] - 897:13 <b>killed</b> [1] - 979:10 <b>Kimbro</b> [3] - 891:19, 891:21, 940:10 <b>Kimbro's</b> [3] - 900:5, 940:13, 940:19 <b>kind</b> [9] - 852:15, 864:4, 880:10, 888:17, 902:12, 903:15, 965:18, 986:22, 1027:22 <b>kinds</b> [1] - 884:18 <b>Knickerbocker</b> [6] - 884:13, 884:15, 886:9, 966:6, 966:9, 966:15 <b>Knickerbocker's</b> [1] - 886:15 <b>knocked</b> [1] - 884:25 <b>knowledge</b> [3] - 852:13, 854:19, 1013:8 <b>knowledgeable</b> [3] - 852:14, 852:20, 905:18 <b>known</b> [1] - 907:19</p>	<p><b>land</b> [1] - 896:16 <b>landed</b> [7] - 896:6, 897:15, 897:19, 897:23, 952:21, 952:22, 1023:20 <b>landing</b> [2] - 1017:21, 1018:17 <b>landings</b> [33] - 828:13, 941:7, 941:19, 942:22, 942:24, 943:7, 944:15, 945:25, 946:3, 946:4, 946:7, 946:10, 947:16, 949:15, 949:17, 949:18, 950:17, 950:21, 951:7, 952:17, 954:18, 955:14, 956:1, 956:7, 956:8, 956:24, 957:8, 977:3, 1018:14, 1019:21, 1022:13, 1024:8 <b>lands</b> [3] - 897:14, 989:12, 989:18 <b>language</b> [4] - 987:14, 992:19, 1003:8,</p>	<p><b>larger</b> [5] - 897:6, 898:15, 902:5, 984:17, 984:23 <b>largest</b> [1] - 1023:19 <b>larvae</b> [7] - 825:2, 825:9, 825:11, 826:10, 826:15, 902:21, 902:22 <b>larval</b> [4] - 824:22, 825:3, 825:5, 826:10 <b>last</b> [46] - 820:12, 822:25, 830:10, 832:1, 832:11, 832:16, 846:2, 846:5, 846:21, 849:8, 851:7, 851:13, 863:8, 867:18, 870:6, 871:4, 911:5, 912:6, 912:7, 917:25, 925:9, 933:25, 935:2, 938:20, 941:5, 950:24, 969:3, 976:4, 977:24, 994:10, 994:18, 996:9, 1001:12, 1003:16, 1004:13, 1006:14, 1007:4, 1007:12, 1007:13, 1013:4, 1017:9, 1017:12, 1018:25, 1020:2, 1020:25, 1027:20 <b>lastly</b> [1] - 1007:12 <b>late</b> [4] - 834:5, 918:4, 982:5, 1016:6 <b>lawsuit</b> [2] - 862:11, 862:17 <b>lawyers</b> [1] - 862:14 <b>lay</b> [1] - 852:22 <b>layered</b> [1] - 890:17 <b>layman's</b> [1] - 826:2 <b>lead</b> [1] - 867:22 <b>leading</b> [2] - 978:18, 999:19 <b>leads</b> [1] - 986:11 <b>lean</b> [1] - 962:13 <b>learn</b> [1] - 816:4</p>	<p><b>leaseholders</b> [2] - 989:22, 991:7 <b>leases</b> [8] - 925:23, 926:6, 975:19, 989:25, 990:16, 990:18, 991:14, 1006:3 <b>least</b> [12] - 841:13, 871:16, 892:11, 895:12, 912:10, 912:13, 961:12, 962:17, 963:20, 1012:10, 1013:25, 1025:25 <b>leave</b> [3] - 919:7, 962:8, 1024:4 <b>leaving</b> [2] - 858:5, 961:24 <b>leeway</b> [1] - 885:23 <b>left</b> [12] - 816:11, 880:19, 899:10, 912:15, 912:17, 912:24, 918:21, 919:3, 951:12, 962:19, 965:13, 1013:7 <b>left-hand</b> [1] - 880:19 <b>legal</b> [42] - 819:13, 831:6, 834:16, 834:18, 834:20, 835:4, 835:9, 835:12, 835:13, 836:10, 836:13, 836:17, 838:5, 838:15, 838:16, 839:17, 839:19, 842:14, 844:14, 844:17, 845:2, 845:15, 848:1, 848:5, 848:6, 856:6, 860:23, 870:10, 870:16, 871:5, 871:7, 871:9, 876:23, 900:22, 960:23, 961:1, 961:4, 984:24, 985:14, 1023:14 <b>legal-size</b> [7] - 819:13, 834:16, 838:5, 844:17, 848:5,</p>
<p><b>JX</b> [1] - 859:13 <b>JX-150</b> [11] - 815:12, 859:13, 859:16,</p>	<p><b>L</b> <b>labeled</b> [2] - 990:1</p>	<p><b>land</b> [1] - 896:16 <b>landed</b> [7] - 896:6, 897:15, 897:19, 897:23, 952:21, 952:22, 1023:20 <b>landing</b> [2] - 1017:21, 1018:17 <b>landings</b> [33] - 828:13, 941:7, 941:19, 942:22, 942:24, 943:7, 944:15, 945:25, 946:3, 946:4, 946:7, 946:10, 947:16, 949:15, 949:17, 949:18, 950:17, 950:21, 951:7, 952:17, 954:18, 955:14, 956:1, 956:7, 956:8, 956:24, 957:8, 977:3, 1018:14, 1019:21, 1022:13, 1024:8 <b>lands</b> [3] - 897:14, 989:12, 989:18 <b>language</b> [4] - 987:14, 992:19, 1003:8,</p>	<p><b>larger</b> [5] - 897:6, 898:15, 902:5, 984:17, 984:23 <b>largest</b> [1] - 1023:19 <b>larvae</b> [7] - 825:2, 825:9, 825:11, 826:10, 826:15, 902:21, 902:22 <b>larval</b> [4] - 824:22, 825:3, 825:5, 826:10 <b>last</b> [46] - 820:12, 822:25, 830:10, 832:1, 832:11, 832:16, 846:2, 846:5, 846:21, 849:8, 851:7, 851:13, 863:8, 867:18, 870:6, 871:4, 911:5, 912:6, 912:7, 917:25, 925:9, 933:25, 935:2, 938:20, 941:5, 950:24, 969:3, 976:4, 977:24, 994:10, 994:18, 996:9, 1001:12, 1003:16, 1004:13, 1006:14, 1007:4, 1007:12, 1007:13, 1013:4, 1017:9, 1017:12, 1018:25, 1020:2, 1020:25, 1027:20 <b>lastly</b> [1] - 1007:12 <b>late</b> [4] - 834:5, 918:4, 982:5, 1016:6 <b>lawsuit</b> [2] - 862:11, 862:17 <b>lawyers</b> [1] - 862:14 <b>lay</b> [1] - 852:22 <b>layered</b> [1] - 890:17 <b>layman's</b> [1] - 826:2 <b>lead</b> [1] - 867:22 <b>leading</b> [2] - 978:18, 999:19 <b>leads</b> [1] - 986:11 <b>lean</b> [1] - 962:13 <b>learn</b> [1] - 816:4</p>	<p><b>leaseholders</b> [2] - 989:22, 991:7 <b>leases</b> [8] - 925:23, 926:6, 975:19, 989:25, 990:16, 990:18, 991:14, 1006:3 <b>least</b> [12] - 841:13, 871:16, 892:11, 895:12, 912:10, 912:13, 961:12, 962:17, 963:20, 1012:10, 1013:25, 1025:25 <b>leave</b> [3] - 919:7, 962:8, 1024:4 <b>leaving</b> [2] - 858:5, 961:24 <b>leeway</b> [1] - 885:23 <b>left</b> [12] - 816:11, 880:19, 899:10, 912:15, 912:17, 912:24, 918:21, 919:3, 951:12, 962:19, 965:13, 1013:7 <b>left-hand</b> [1] - 880:19 <b>legal</b> [42] - 819:13, 831:6, 834:16, 834:18, 834:20, 835:4, 835:9, 835:12, 835:13, 836:10, 836:13, 836:17, 838:5, 838:15, 838:16, 839:17, 839:19, 842:14, 844:14, 844:17, 845:2, 845:15, 848:1, 848:5, 848:6, 856:6, 860:23, 870:10, 870:16, 871:5, 871:7, 871:9, 876:23, 900:22, 960:23, 961:1, 961:4, 984:24, 985:14, 1023:14 <b>legal-size</b> [7] - 819:13, 834:16, 838:5, 844:17, 848:5,</p>

<p>856:6, 871:5  <b>legals</b> [2] - 850:20, 850:21  <b>legislative</b> [2] - 910:17, 911:3  <b>legislatively</b> [2] - 854:22, 854:25  <b>Leslie</b> [1] - 950:12  <b>less</b> [30] - 817:15, 817:22, 829:12, 830:13, 830:17, 831:20, 835:7, 835:8, 843:6, 843:13, 856:14, 861:6, 869:20, 869:25, 884:22, 891:9, 891:12, 921:25, 946:4, 946:9, 948:1, 981:10, 984:13, 987:24, 988:18, 992:23, 1002:8, 1002:19, 1006:16, 1013:14  <b>letter</b> [4] - 816:13, 820:1, 820:2, 877:22  <b>level</b> [7] - 821:22, 839:23, 885:17, 957:2, 957:23, 959:21, 964:12  <b>levels</b> [8] - 849:23, 850:4, 851:9, 851:22, 908:17, 994:25, 999:14  <b>liberty</b> [1] - 969:14  <b>licenses</b> [3] - 942:9, 942:16, 942:19  <b>lick</b> [1] - 917:19  <b>life</b> [12] - 824:3, 826:9, 826:25, 839:14, 907:25, 979:20, 996:23, 1005:18, 1005:22, 1005:24, 1006:1, 1026:14  <b>lifeblood</b> [1] - 1008:14  <b>lifelong</b> [1] - 917:18  <b>lift</b> [1] - 899:1  <b>Lighthouse</b> [1] - 1009:2  <b>likely</b> [5] - 902:24, 943:8, 946:9, 998:3, 999:12  <b>limit</b> [7] - 835:1, 843:18, 844:17, 856:6, 860:24, 985:5, 985:7  <b>limitations</b> [1] - 906:11  <b>limits</b> [17] - 834:20, 843:7, 843:14,</p>	<p>852:10, 852:15, 853:15, 853:23, 854:7, 856:15, 856:24, 861:7, 871:9, 947:6, 947:7, 1023:9, 1023:11  <b>line</b> [9] - 866:24, 903:11, 910:2, 910:18, 911:23, 915:7, 944:5, 966:1  <b>lines</b> [2] - 816:22, 903:7  <b>Lipcius</b> [3] - 879:23, 880:8, 897:11  <b>list</b> [6] - 872:22, 942:9, 954:16, 954:20, 1000:2, 1029:25  <b>listed</b> [3] - 942:19, 954:16, 991:16  <b>listen</b> [1] - 872:8  <b>listened</b> [1] - 971:10  <b>listening</b> [1] - 937:3  <b>litigation</b> [1] - 862:6  <b>live</b> [20] - 826:24, 839:5, 882:16, 882:20, 894:5, 894:8, 894:20, 898:19, 899:22, 924:5, 943:3, 952:13, 975:23, 980:22, 997:7, 997:11, 997:13, 1016:17, 1017:6, 1026:13  <b>living</b> [17] - 823:21, 824:3, 825:8, 827:17, 827:19, 827:24, 878:23, 879:16, 882:6, 882:25, 916:11, 916:14, 916:16, 937:9, 983:10, 1016:7, 1028:12  <b>local</b> [2] - 819:18, 853:2  <b>locate</b> [1] - 940:17  <b>located</b> [8] - 926:7, 989:25, 991:20, 998:24, 998:25, 999:2, 1000:4, 1001:18  <b>location</b> [4] - 817:20, 927:9, 998:13, 1001:25  <b>locations</b> [2] - 924:23, 990:16  <b>long-handled</b> [1] - 818:25  <b>long-term</b> [2] - 867:24, 868:12</p>	<p><b>longest</b> [1] - 1001:14  <b>look</b> [61] - 816:20, 821:12, 821:15, 828:8, 831:2, 831:4, 837:23, 839:21, 845:11, 846:11, 846:19, 847:20, 857:12, 857:25, 859:11, 859:16, 861:18, 865:2, 867:12, 867:18, 869:2, 877:21, 879:10, 880:10, 883:23, 886:24, 888:4, 888:10, 890:3, 894:16, 895:13, 914:17, 922:5, 923:13, 923:18, 927:20, 931:18, 934:11, 948:23, 950:13, 951:10, 953:3, 953:10, 953:12, 976:5, 980:14, 980:18, 981:2, 981:5, 981:9, 991:22, 996:21, 1018:24, 1019:2, 1019:10, 1019:11, 1019:12, 1019:20, 1020:1, 1020:12, 1021:20  <b>looked</b> [27] - 855:25, 871:20, 884:4, 884:20, 887:21, 892:17, 895:1, 901:12, 907:3, 907:4, 922:24, 926:24, 929:7, 929:8, 937:11, 975:11, 981:19, 982:3, 982:5, 982:12, 985:4, 992:20, 1017:16, 1021:3, 1021:8, 1022:11, 1027:24  <b>looking</b> [33] - 816:12, 822:24, 841:2, 850:22, 851:17, 878:21, 881:21, 881:22, 881:23, 885:1, 887:6, 887:17, 898:23, 907:1, 909:4, 913:18, 915:15, 916:10, 917:14, 918:5, 919:15, 921:13, 928:23, 935:23, 942:16, 951:15, 955:20</p>	<p>1006:14, 1017:12, 1021:19, 1024:8  <b>looks</b> [13] - 879:19, 880:1, 895:22, 897:4, 899:21, 900:12, 907:8, 919:12, 919:22, 923:2, 933:5, 952:14, 956:5  <b>lose</b> [15] - 842:15, 848:8, 856:17, 857:20, 858:1, 858:24, 861:8, 961:14, 961:17, 962:2, 962:4, 962:13, 1016:19, 1022:23, 1023:1  <b>losing</b> [3] - 858:7, 961:19, 985:23  <b>loss</b> [4] - 817:12, 842:22, 863:16, 866:17  <b>lost</b> [6] - 824:8, 856:12, 861:5, 875:14, 938:16, 962:1  <b>love</b> [1] - 846:4  <b>low</b> [10] - 827:25, 830:13, 831:21, 839:23, 854:10, 870:1, 915:16, 956:3, 1011:19, 1013:6  <b>Lower</b> [1] - 1006:23  <b>lower</b> [1] - 828:1  <b>lowering</b> [1] - 1012:4  <b>luckily</b> [1] - 954:2  <b>lucky</b> [1] - 1024:22  <b>Lump</b> [1] - 1009:1  <b>Lumps</b> [4] - 998:22, 999:2, 1000:24, 1001:4  <b>lunch</b> [1] - 939:6</p>	<p><b>main</b> [2] - 907:15, 973:24  <b>Maine</b> [3] - 814:13, 814:15, 1031:3  <b>maintaining</b> [1] - 908:20  <b>major</b> [12] - 838:13, 884:4, 891:15, 891:16, 892:12, 971:1, 979:24, 988:2, 993:2, 1012:12, 1012:18, 1012:21  <b>majority</b> [1] - 870:15  <b>male</b> [2] - 825:1, 984:23  <b>males</b> [1] - 824:24  <b>man</b> [1] - 917:16  <b>manage</b> [3] - 1016:1, 1016:6, 1016:9  <b>Managed</b> [2] - 931:23, 932:3  <b>managed</b> [11] - 830:7, 932:6, 934:25, 938:1, 1012:5, 1012:9, 1015:5, 1015:7, 1015:9, 1015:11, 1026:16  <b>Management</b> [1] - 950:6  <b>management</b> [27] - 832:3, 832:20, 842:19, 855:2, 855:3, 855:4, 877:14, 877:16, 877:17, 877:19, 908:5, 908:20, 908:25, 909:2, 911:17, 913:15, 922:19, 938:24, 962:25, 963:6, 963:22, 964:21, 964:22, 1017:2, 1017:4, 1019:9  <b>manager</b> [8] - 852:20, 854:21, 855:4, 855:12, 855:19, 857:22, 870:25  <b>managers</b> [2] - 857:23, 890:22  <b>manages</b> [1] - 854:21  <b>manner</b> [1] - 901:11  <b>map</b> [9] - 968:1, 968:6, 968:7, 971:17, 971:20, 989:7, 989:24, 1001:11, 1014:17  <b>March</b> [1] - 953:10  <b>marginally</b> [1] - 828:14</p>
--	--	---	---	--

<p><b>Marine</b> [1] - 950:5  <b>marine</b> [9] - 979:15, 980:5, 980:6, 980:8, 980:9, 980:11, 1005:1, 1007:7, 1007:17  <b>Mark</b> [3] - 815:3, 890:6, 950:11  <b>Mark's</b> [4] - 859:19, 958:11, 973:16, 1029:7  <b>marked</b> [2] - 957:19, 969:20  <b>markedly</b> [5] - 827:7, 827:22, 827:23, 829:9, 869:18  <b>market</b> [10] - 837:2, 837:4, 838:5, 840:12, 841:17, 844:19, 845:3, 848:2, 870:11, 1023:16  <b>market-size</b> [8] - 837:2, 838:5, 840:12, 841:17, 844:19, 845:3, 848:2, 870:11  <b>marketable</b> [4] - 819:8, 836:18, 982:12, 998:2  <b>marketplace</b> [5] - 834:21, 835:18, 856:7, 860:24, 871:10  <b>Marshall</b> [3] - 914:6, 917:23, 917:24  <b>Mason</b> [4] - 814:14, 1031:2, 1031:15, 1031:15  <b>mass</b> [4] - 882:10, 937:6, 937:9, 977:12  <b>massive</b> [4] - 841:21, 882:3, 910:4  <b>MASTER</b> [46] - 814:11, 816:2, 819:23, 820:4, 859:24, 878:5, 878:11, 886:7, 887:1, 892:4, 905:12, 906:1, 906:5, 913:20, 913:23, 939:7, 939:13, 939:22, 939:24, 940:5, 955:10, 968:4, 969:19, 972:1, 972:7, 972:14, 978:19, 990:6, 990:8, 1010:9, 1010:19, 1011:2, 1011:5, 1024:2,</p>	<p>1025:19, 1025:23, 1026:5, 1026:15, 1027:5, 1028:3, 1028:13, 1028:19, 1028:23, 1029:4, 1029:16, 1029:23  <b>Master</b> [8] - 837:5, 971:16, 972:6, 977:18, 990:2, 991:15, 991:17, 1001:2  <b>material</b> [5] - 819:12, 819:15, 897:16, 922:3, 981:22  <b>materials</b> [2] - 885:19, 908:10  <b>math</b> [1] - 955:16  <b>matrix</b> [1] - 867:25  <b>matter</b> [8] - 814:10, 835:13, 858:25, 880:10, 904:8, 919:17, 939:19, 985:3  <b>mean</b> [36] - 817:18, 826:8, 829:16, 830:20, 834:9, 836:24, 841:21, 863:2, 864:1, 873:21, 874:12, 876:5, 876:11, 882:22, 902:4, 911:15, 912:9, 916:1, 916:2, 918:4, 926:15, 952:15, 955:22, 960:16, 961:24, 963:24, 984:5, 984:15, 986:12, 986:17, 997:9, 998:8, 999:17, 1008:15, 1016:7, 1019:9  <b>meaning</b> [2] - 822:9, 829:2  <b>means</b> [14] - 817:14, 823:19, 824:19, 837:4, 849:6, 859:13, 915:16, 915:21, 916:5, 918:5, 944:24, 961:17, 962:2, 1019:25  <b>meant</b> [7] - 817:10, 836:21, 865:23, 884:17, 936:2, 947:23, 962:4  <b>measured</b> [2] - 828:16, 942:2  <b>measuring</b> [1] - 961:9  <b>meat</b> [5] - 924:6, 942:3, 942:4, 94</p>	<p>945:1  <b>meats</b> [2] - 981:5, 982:14  <b>media</b> [1] - 1024:25  <b>meet</b> [2] - 853:3, 931:1  <b>meeting</b> [19] - 851:18, 872:3, 872:7, 872:25, 873:5, 873:7, 873:12, 873:14, 874:5, 874:19, 930:5, 930:18, 934:2, 968:16, 968:22, 969:15, 970:11, 977:25  <b>meetings</b> [1] - 876:3  <b>member</b> [2] - 819:12, 889:4  <b>members</b> [3] - 857:15, 872:7, 934:6  <b>memory</b> [4] - 970:17, 1004:24, 1009:13, 1009:15  <b>Menippe</b> [1] - 980:2  <b>mention</b> [2] - 871:24, 872:2  <b>mentioned</b> [6] - 821:18, 826:4, 833:6, 872:20, 909:16, 989:5  <b>mercenaria</b> [1] - 980:2  <b>mesh</b> [7] - 896:23, 897:1, 897:6, 897:17, 898:15, 899:12, 899:13  <b>met</b> [2] - 854:17, 902:25  <b>meter</b> [3] - 839:22, 894:23, 895:24  <b>method</b> [1] - 989:15  <b>methodology</b> [2] - 895:5, 914:12  <b>methods</b> [2] - 875:21, 938:10  <b>micro</b> [1] - 902:8  <b>microcurrents</b> [1] - 882:7  <b>microphone</b> [1] - 880:14  <b>microscopic</b> [1] - 825:19  <b>mid-'80's</b> [1] - 909:14  <b>mid-2012</b> [1] - 890:2  <b>middle</b> [14] - 828:5, 848:17, 860:3, 888:25, 906:16, 926:19, 941:17, 949:1, 993:20, 994:14, 996:23,</p>	<p>1014:19  <b>might</b> [20] - 818:13, 829:19, 835:8, 835:9, 839:24, 850:18, 850:19, 850:20, 850:21, 875:2, 889:10, 918:7, 919:18, 952:15, 961:19, 961:22, 983:12, 984:18  <b>mike</b> [1] - 885:7  <b>Mile</b> [3] - 1000:8, 1000:9, 1000:10  <b>mile</b> [2] - 1000:9, 1000:10  <b>miles</b> [2] - 902:21, 1000:7  <b>Miles</b> [5] - 1000:2, 1000:3, 1000:5, 1000:6, 1000:13  <b>million</b> [1] - 956:4  <b>mind</b> [10] - 822:24, 824:13, 874:23, 881:19, 888:10, 913:18, 941:9, 945:10, 948:18, 965:20  <b>mine</b> [1] - 1029:10  <b>minimal</b> [2] - 891:12, 924:13  <b>minimis</b> [1] - 891:13  <b>minor</b> [1] - 938:15  <b>Minor</b> [1] - 922:15  <b>minute</b> [1] - 968:1  <b>minutes</b> [1] - 939:20  <b>missing</b> [1] - 873:11  <b>misstatement</b> [1] - 873:17  <b>model</b> [1] - 904:17  <b>modeler</b> [1] - 906:10  <b>modeling</b> [3] - 906:10, 906:12, 906:21  <b>moderate</b> [1] - 992:14  <b>moment</b> [2] - 836:20, 837:6  <b>moments</b> [1] - 996:4  <b>Monday</b> [1] - 1030:15  <b>money</b> [7] - 846:7, 911:3, 911:9, 911:20, 911:22, 986:15, 1025:11  <b>moneys</b> [2] - 912:25, 913:1  <b>monitored</b> [1] - 946:11  <b>monitoring</b> [1] - 945:21  <b>month</b> [14] - 840:22,</p>	<p>847:6, 867:3, 950:17, 950:20, 951:6, 951:11, 952:24, 953:14, 1006:13, 1018:4, 1018:5  <b>monthly</b> [2] - 949:18, 949:19  <b>months</b> [21] - 833:12, 833:13, 833:16, 833:17, 835:13, 839:6, 839:7, 839:8, 845:16, 846:1, 850:25, 851:8, 851:11, 929:9, 953:13, 953:16, 953:24, 960:7, 984:22, 986:7, 1018:5  <b>morning</b> [5] - 816:6, 816:9, 816:10, 841:14, 890:7  <b>mortalities</b> [6] - 841:21, 925:2, 925:25, 993:21, 994:2, 1019:4  <b>Mortality</b> [3] - 1003:19, 1003:24, 1004:10  <b>mortality</b> [34] - 817:13, 827:5, 828:12, 828:19, 830:14, 830:20, 831:21, 839:1, 870:1, 879:1, 882:3, 882:10, 883:22, 915:16, 924:14, 925:12, 926:2, 926:22, 927:20, 935:13, 961:22, 975:13, 978:9, 979:2, 988:1, 988:21, 991:6, 991:10, 992:25, 998:15, 1000:17, 1003:5, 1016:19, 1027:18  <b>most</b> [48] - 817:5, 822:9, 824:20, 824:23, 825:7, 830:12, 830:21, 831:14, 831:19, 834:4, 838:12, 839:5, 852:13, 852:19, 869:24, 875:15, 879:3, 885:17, 889:19, 902:24, 905:18, 908:5, 908:16, 912:2, 916:9, 929:4,</p>
--	---	---	--	---

934:25, 937:3, 937:12, 938:17, 947:18, 949:21, 957:12, 963:2, 963:3, 973:4, 973:20, 979:5, 979:21, 984:23, 998:10, 1004:18, 1008:8, 1013:17, 1026:12, 1026:21, 1029:14

**mostly** [1] - 915:17

**mouth** [1] - 1001:19

**mouths** [1] - 973:21

**move** [11] - 826:23, 839:20, 859:3, 867:1, 878:2, 878:6, 880:13, 885:7, 902:21, 1001:20, 1009:14

**moved** [5] - 838:1, 976:15, 986:9, 1005:11

**movement** [4] - 885:19, 975:25, 981:25, 999:21

**moves** [1] - 973:19

**moving** [3] - 826:11, 985:10, 1004:25

**MR** [100] - 816:6, 816:8, 819:19, 819:25, 820:5, 820:8, 859:22, 859:25, 860:1, 865:7, 865:10, 866:9, 866:11, 867:7, 867:9, 867:14, 867:16, 868:19, 868:21, 871:25, 872:1, 874:20, 874:22, 875:2, 875:5, 878:2, 878:12, 880:4, 880:6, 881:15, 881:17, 886:4, 886:8, 887:3, 887:4, 888:13, 888:15, 892:5, 892:7, 892:25, 893:1, 895:15, 895:21, 895:23, 896:13, 896:15, 898:4, 898:6, 898:8, 899:5, 899:7, 899:25, 900:2, 905:3, 905:14, 905:15, 913:22, 913:24, 914:1, 921:16, 921:18, 930:13, 930:15, 934:11,

934:14, 935:17, 935:20, 936:19, 936:22, 937:18, 937:21, 939:5, 939:15, 939:23, 940:4, 940:7, 940:18, 944:13, 954:8, 954:15, 955:12, 958:4, 958:6, 971:24, 972:4, 972:8, 978:17, 990:17, 1013:12, 1014:17, 1014:21, 1017:8, 1019:17, 1019:19, 1020:25, 1021:2, 1023:24, 1025:21, 1029:21, 1030:12

**MS** [54] - 881:10, 885:21, 886:20, 892:1, 904:23, 905:23, 906:2, 921:13, 933:15, 939:11, 954:12, 955:5, 967:25, 968:5, 968:12, 969:13, 969:20, 969:22, 970:2, 970:5, 970:18, 970:21, 971:6, 971:9, 972:5, 978:2, 978:4, 978:20, 987:19, 987:21, 993:22, 993:24, 994:18, 994:22, 996:22, 997:1, 997:3, 997:5, 999:7, 999:11, 1010:5, 1010:16, 1010:21, 1010:23, 1011:4, 1011:11, 1023:25, 1024:3, 1024:6, 1024:13, 1024:16, 1025:12, 1025:20, 1029:22

**multiple** [1] - 1022:18

**must** [1] - 952:12

**N**

**name** [1] - 862:22

**named** [1] - 1031:9

**names** [1] - 971:19

**NATALIE** [1] - 814:19

**Natalie** [1] - 1025:16

**natural** [20] - 827:5, 828:11, 828:19, 830:14, 831:21, 839:1, 870:1, 883:21, 885:10, 932:5, 938:3,

961:21, 979:2, 987:25, 988:20, 992:25, 998:15, 1000:17, 1003:5, 1016:19

**Natural** [3] - 1003:19, 1003:24, 1004:10

**nature** [1] - 1006:17

**near** [1] - 925:4

**necessarily** [2] - 893:11, 902:23

**need** [10] - 846:7, 907:25, 928:24, 938:5, 938:12, 945:18, 964:5, 964:9, 971:1, 1008:20

**needed** [2] - 1008:14, 1008:18

**needs** [1] - 933:15

**negative** [4] - 985:8, 988:16, 1003:1, 1021:23

**neighborhood** [1] - 910:8

**never** [16] - 834:1, 841:25, 877:25, 906:13, 906:18, 943:14, 959:14, 962:11, 962:16, 962:19, 962:22, 962:24, 986:19, 1008:14, 1008:17

**new** [9] - 863:12, 866:13, 878:3, 924:4, 927:20, 928:2, 928:4, 969:21, 973:8

**next** [31] - 827:1, 829:6, 830:10, 831:25, 833:4, 834:11, 836:9, 842:12, 844:4, 850:25, 855:23, 858:3, 867:3, 870:6, 896:9, 898:7, 899:5, 899:25, 927:5, 932:16, 932:20, 937:18, 942:13, 950:23, 996:14, 998:16, 1002:24, 1004:17, 1016:16, 1016:23, 1018:4

**nice** [1] - 897:4

**nine** [9] - 833:16, 833:17, 845:14, 850:25, 851:8, 851:11, 929:9, 953:24, 960:7

845:14

**nobody** [2] - 816:3, 971:18

**none** [2] - 852:24, 964:24

**nonproductive** [1] - 989:13

**normal** [14] - 829:22, 833:9, 876:12, 878:24, 934:23, 934:24, 935:11, 935:13, 946:7, 979:17, 980:7, 997:10, 1015:21, 1015:24

**normally** [2] - 831:12, 884:18

**Norman's** [1] - 1009:1

**north** [2] - 973:6, 985:19

**North** [10] - 926:12, 926:20, 974:21, 975:3, 998:21, 998:25, 1000:23, 1001:4, 1009:3, 1027:11

**northern** [2] - 974:7, 1001:10

**northwestern** [1] - 1000:21

**Notary** [2] - 814:15, 1031:2

**notch** [1] - 950:3

**note** [8] - 835:17, 875:20, 885:23, 886:2, 916:22, 954:13, 1019:21, 1027:23

**Noted** [7] - 878:8, 878:10, 940:1, 940:3, 1011:8, 1011:10, 1030:14

**noted** [3] - 925:10, 961:1, 979:13

**notes** [15] - 859:8, 861:9, 863:19, 864:15, 864:19, 871:18, 916:23, 958:12, 958:22, 964:21, 987:9, 987:10, 1029:6, 1029:13, 1031:5

**nothing** [9] - 899:19, 974:12, 976:18, 977:12, 1009:21, 1011:24, 1012:3, 1029:21, 1029:22

**notice** [1] - 882:9

**noticeable** [2] -

**noticed** [1] - 981:16

**noticing** [2] - 995:6, 1005:7

**noting** [3] - 868:11, 903:9, 934:20

**November** [9] - 814:13, 852:17, 975:11, 976:4, 979:6, 982:6, 1027:22, 1030:16, 1031:11

**Number** [1] - 815:8

**number** [30] - 817:16, 831:9, 837:21, 838:2, 839:21, 845:22, 849:21, 849:24, 850:18, 853:10, 861:21, 861:22, 874:7, 923:7, 942:6, 942:9, 942:18, 952:16, 952:17, 954:23, 957:25, 965:25, 976:1, 978:14, 1005:13, 1021:1, 1024:13, 1024:14, 1024:15

**numbered** [2] - 862:23, 917:2

**numbering** [1] - 869:4

**numbers** [17] - 825:23, 831:3, 831:8, 844:19, 845:3, 850:23, 850:24, 924:5, 943:1, 944:24, 954:20, 957:19, 960:2, 965:15, 979:16, 1024:12, 1024:18

**numberous** [6] - 834:19, 856:4, 857:13, 858:23, 860:22, 871:8

**O**

**oath** [1] - 948:11

**object** [2] - 892:1, 904:23

**objection** [3] - 886:3, 966:13, 978:17

**objectionable** [1] - 906:17

**obscured** [1] - 885:19

**observation** [3] - 817:2, 835:24, 1013:4

**observations** [15] - 834:20, 835:17, 835:25, 836:5,



<p>856:6, 860:24, 865:19, 871:10, 929:16, 932:11, 988:10, 988:12, 1002:25, 1003:13, 1004:14</p> <p><b>observe</b> [4] - 979:22, 981:2, 991:5, 991:12</p> <p><b>observed</b> [14] - 906:24, 924:14, 925:6, 925:11, 932:13, 975:24, 977:15, 979:24, 980:24, 981:16, 991:6, 1005:15, 1011:18, 1012:12</p> <p><b>observing</b> [2] - 991:2, 1006:2</p> <p><b>obtained</b> [1] - 913:5</p> <p><b>obvious</b> [3] - 831:10, 882:15</p> <p><b>obviously</b> [2] - 830:17, 905:5</p> <p><b>occasion</b> [1] - 842:1</p> <p><b>occasions</b> [2] - 871:17, 961:13</p> <p><b>occur</b> [2] - 932:8, 1019:4</p> <p><b>occurred</b> [4] - 838:13, 873:14, 918:4, 986:7</p> <p><b>occurring</b> [10] - 830:25, 885:15, 916:4, 925:12, 926:25, 961:6, 961:9, 980:21, 984:1, 995:7</p> <p><b>occurs</b> [2] - 841:21, 959:22</p> <p><b>October</b> [19] - 922:15, 922:17, 922:20, 923:21, 926:19, 929:23, 931:1, 931:8, 931:17, 932:8, 932:22, 932:25, 933:2, 975:10, 979:6, 982:6, 992:21, 993:15, 994:13</p> <p><b>OF</b> [4] - 814:1, 814:3, 814:6, 814:9</p> <p><b>official</b> [21] - 834:15, 835:23, 842:23, 848:14, 849:3, 852:7, 856:19, 863:21, 870:24, 875:13, 942:24, 944:25, 945:6, 952:1, 954:18, 955:14, 956:7, 957:8, 959:19,</p>	<p>960:21, 962:11</p> <p><b>often</b> [1] - 908:11</p> <p><b>oftentimes</b> [1] - 910:25</p> <p><b>oil</b> [22] - 829:24, 832:5, 832:22, 832:24, 834:22, 835:19, 842:17, 843:4, 843:11, 843:24, 856:8, 856:13, 858:10, 858:14, 861:1, 871:12, 928:22, 937:5, 962:3, 962:18, 1023:3, 1024:21</p> <p><b>old</b> [5] - 839:7, 839:8, 928:2, 928:4, 984:22</p> <p><b>once</b> [8] - 823:14, 826:20, 892:8, 896:10, 902:19, 921:4, 938:4</p> <p><b>one</b> [87] - 817:24, 818:12, 818:17, 820:9, 827:2, 827:22, 828:20, 849:10, 849:11, 862:15, 862:18, 862:19, 863:19, 878:20, 880:17, 880:19, 882:8, 884:11, 884:24, 885:20, 888:4, 890:15, 893:13, 897:14, 901:22, 902:1, 903:12, 903:24, 904:3, 904:20, 905:18, 907:1, 907:15, 910:17, 910:21, 910:22, 914:4, 914:21, 918:14, 920:2, 920:4, 920:6, 920:9, 920:10, 920:11, 922:24, 925:22, 926:9, 926:24, 926:25, 928:20, 931:19, 932:12, 939:18, 940:7, 941:13, 955:19, 958:2, 960:18, 961:11, 965:3, 966:18, 969:3, 969:6, 974:5, 977:20, 979:3, 983:23, 989:22, 991:16, 996:14, 1001:6, 1003:16, 1004:18, 1006:20, 1014:9, 1015:1,</p>	<p>1017:11, 1018:13, 1019:17, 1024:1, 1024:2, 1026:1, 1027:23, 1028:16, 1028:24, 1030:1</p> <p><b>ones</b> [9] - 834:4, 837:8, 845:15, 855:19, 979:24, 981:4, 1000:25, 1001:3, 1027:20</p> <p><b>ongoing</b> [3] - 817:21, 965:14, 1028:9</p> <p><b>online</b> [1] - 900:7</p> <p><b>open</b> [4] - 860:9, 860:22, 990:18, 990:22</p> <p><b>opened</b> [4] - 832:25, 860:11, 860:12, 986:19</p> <p><b>opening</b> [1] - 850:10</p> <p><b>operating</b> [1] - 912:24</p> <p><b>opinion</b> [13] - 820:19, 839:1, 840:16, 858:25, 881:5, 905:17, 945:2, 945:5, 961:4, 961:8, 977:14, 988:10, 988:11</p> <p><b>opportunities</b> [1] - 1025:9</p> <p><b>opportunity</b> [1] - 895:4</p> <p><b>opposable</b> [1] - 818:23</p> <p><b>opposed</b> [4] - 906:23, 914:11, 914:14, 969:15</p> <p><b>opposite</b> [1] - 919:19</p> <p><b>optimal</b> [12] - 829:12, 830:13, 830:17, 831:20, 869:21, 869:25, 876:12, 987:24, 992:24, 1002:9, 1002:19, 1013:14</p> <p><b>option</b> [2] - 963:22, 963:24</p> <p><b>options</b> [2] - 964:22</p> <p><b>order</b> [6] - 860:10, 888:18, 930:13, 932:3, 954:10, 963:16</p> <p><b>Order</b> [2] - 854:5, 962:22</p> <p><b>orders</b> [1] - 851:18</p> <p><b>organisms</b> [1] - 980:6</p> <p><b>organizational</b> [1] - 853:3</p> <p><b>origin</b> [1] - 1014:4</p>	<p><b>otherwise</b> [4] - 911:15, 928:12, 954:20, 1028:11</p> <p><b>ourselves</b> [1] - 846:20</p> <p><b>outcome</b> [1] - 1031:8</p> <p><b>outlier</b> [1] - 933:20</p> <p><b>outlying</b> [1] - 1015:14</p> <p><b>outpaces</b> [1] - 949:20</p> <p><b>overall</b> [11] - 840:1, 847:18, 847:25, 848:2, 870:11, 918:2, 923:18, 924:4, 926:24, 927:21, 932:17</p> <p><b>Overall</b> [2] - 923:19, 993:18</p> <p><b>overharvested</b> [1] - 981:7</p> <p><b>overharvesting</b> [9] - 830:11, 830:21, 831:14, 831:19, 869:24, 983:2, 983:18, 988:6, 1023:13</p> <p><b>overview</b> [2] - 987:17, 987:20</p> <p><b>own</b> [4] - 853:13, 902:1, 911:23, 1008:18</p> <p><b>owned</b> [1] - 990:11</p> <p><b>oyster</b> [146] - 816:16, 817:2, 817:3, 817:5, 817:7, 818:6, 820:17, 822:1, 823:8, 823:9, 823:20, 824:2, 824:20, 826:2, 826:3, 827:25, 828:9, 828:13, 828:21, 829:7, 829:8, 834:2, 837:17, 837:20, 838:21, 838:24, 839:4, 840:10, 842:18, 843:5, 844:6, 844:8, 846:22, 848:23, 849:3, 849:16, 849:18, 850:15, 856:14, 860:5, 860:11, 860:13, 865:15, 867:21, 867:22, 867:23, 869:17, 870:8, 871:2, 872:13, 875:8, 876:9, 876:13, 877:19, 878:15, 879:17, 879:24, 880:11,</p>	<p>880:25, 881:25, 884:3, 884:9, 891:18, 893:4, 893:16, 894:9, 894:11, 900:4, 900:18, 905:22, 908:11, 908:21, 909:19, 909:23, 910:24, 912:14, 915:21, 920:15, 920:22, 921:1, 921:4, 924:6, 924:15, 924:16, 924:18, 924:22, 925:1, 930:10, 930:19, 934:7, 934:17, 934:24, 936:25, 940:11, 941:19, 946:17, 949:15, 957:10, 963:11, 966:16, 970:23, 971:16, 975:19, 979:25, 980:13, 980:17, 983:16, 984:3, 984:13, 985:21, 985:22, 988:20, 989:8, 990:16, 992:4, 992:12, 992:14, 994:1, 994:15, 994:21, 995:22, 997:15, 998:2, 999:25, 1003:5, 1004:4, 1004:17, 1004:18, 1005:1, 1005:9, 1005:14, 1005:20, 1006:11, 1007:18, 1012:5, 1016:22, 1016:24, 1025:10, 1027:8</p> <p><b>Oyster</b> [3] - 867:5, 868:24, 967:1</p> <p><b>oyster-producing</b> [1] - 817:3</p> <p><b>oystering</b> [1] - 1013:24</p> <p><b>oysterman</b> [4] - 883:5, 917:17, 917:18, 920:15</p> <p><b>oystermen</b> [29] - 818:14, 818:24, 822:12, 829:2, 834:19, 843:9, 846:6, 856:5, 857:15, 857:24, 860:23, 865:21, 865:25, 871:8, 874:19, 915:24, 917:12, 923:11,</p>
---	---	--	---	--

THE REPORTING GROUP 5, 880:18,

<p>943:13, 944:19, 946:23, 947:14, 947:20, 966:17, 1004:22, 1015:16, 1015:19, 1025:6, 1028:10 <b>oysters</b> [230] - 817:13, 817:16, 817:19, 817:22, 818:14, 818:15, 818:21, 819:1, 819:3, 819:6, 819:8, 819:13, 821:14, 822:10, 822:11, 823:21, 824:3, 824:23, 825:8, 827:8, 827:19, 831:7, 831:13, 834:16, 834:18, 834:19, 834:22, 835:2, 835:4, 835:5, 835:9, 835:19, 836:6, 836:11, 836:17, 836:22, 836:25, 837:2, 837:6, 837:21, 837:24, 837:25, 838:5, 838:10, 838:16, 838:19, 838:22, 839:5, 839:12, 839:14, 839:17, 839:19, 839:22, 839:24, 840:12, 840:14, 841:6, 841:7, 841:17, 842:2, 842:9, 842:14, 843:20, 844:16, 844:19, 845:4, 848:2, 848:5, 848:6, 850:22, 851:12, 851:23, 856:5, 856:8, 858:3, 860:23, 860:25, 865:17, 870:11, 870:17, 871:6, 871:7, 871:9, 871:11, 876:19, 876:23, 878:24, 880:25, 881:1, 881:5, 881:22, 882:4, 882:10, 882:18, 882:20, 882:23, 883:16, 887:8, 890:11, 892:17, 893:14, 894:5, 894:8, 894:20, 896:7, 898:19, 899:22, 900:11, 900:23, 900:25, 903:25, 907:25, 908:3,</p>	<p>908:8, 908:13, 913:16, 915:16, 915:19, 915:25, 916:5, 916:12, 916:14, 916:16, 917:14, 920:11, 921:11, 923:8, 924:5, 927:23, 927:24, 928:1, 928:9, 928:10, 928:11, 930:1, 932:14, 940:21, 941:23, 942:25, 943:3, 945:3, 950:16, 952:2, 952:9, 952:12, 952:13, 952:20, 952:25, 953:15, 956:9, 956:14, 957:13, 960:9, 961:15, 962:5, 962:7, 963:4, 963:8, 974:10, 974:15, 975:2, 975:18, 975:23, 976:10, 978:7, 978:14, 978:21, 979:8, 980:23, 980:25, 981:2, 981:11, 981:25, 982:3, 982:7, 982:8, 982:11, 982:13, 982:14, 983:20, 984:4, 984:19, 984:23, 984:24, 984:25, 985:11, 985:15, 986:20, 989:13, 989:15, 991:11, 997:8, 997:11, 997:13, 997:16, 997:20, 997:21, 997:22, 998:2, 998:11, 999:12, 999:23, 1012:20, 1015:2, 1015:19, 1015:23, 1016:9, 1016:15, 1016:17, 1016:19, 1017:3, 1017:5, 1017:6, 1019:15, 1020:10, 1023:14, 1023:20, 1026:2, 1026:7, 1026:9</p> <p style="text-align: center;"><b>P</b></p> <p><b>p.m</b> [5] - 940:1, 940:3, 1011:8, 1011:10, 1030:14 <b>pace</b> [1] - 844:10 <b>Page</b> [1] - 815:8</p>	<p><b>page</b> [74] - 816:19, 820:6, 822:23, 823:3, 828:3, 828:5, 834:11, 847:15, 847:17, 848:16, 848:21, 849:10, 855:23, 855:25, 856:1, 860:3, 865:8, 867:13, 867:17, 869:12, 869:15, 888:22, 888:25, 903:5, 914:18, 914:23, 914:25, 916:19, 916:22, 917:7, 919:21, 919:22, 920:2, 920:18, 926:9, 926:10, 927:5, 932:16, 941:13, 944:4, 948:25, 950:23, 950:24, 958:11, 958:15, 965:20, 966:1, 968:9, 969:3, 992:7, 994:10, 994:19, 996:8, 998:16, 998:17, 998:18, 1002:3, 1003:23, 1003:24, 1004:1, 1004:10, 1006:19, 1006:22, 1007:12, 1017:9, 1017:12, 1019:17, 1019:20, 1020:2, 1024:9, 1024:10 <b>pages</b> [8] - 822:22, 828:3, 888:16, 917:1, 950:22, 995:20, 1003:18, 1031:4 <b>paid</b> [4] - 967:10, 967:15, 967:21, 967:22 <b>Palmer</b> [1] - 950:12 <b>paper</b> [1] - 853:2 <b>papers</b> [2] - 909:12, 985:6 <b>Paradise</b> [1] - 1009:5 <b>paragraph</b> [57] - 816:21, 816:23, 817:1, 817:18, 820:13, 822:25, 824:14, 827:2, 830:11, 831:25, 832:1, 832:15, 832:17, 834:13, 842:12, 842:13, 844:5, 846:21, 847:17, 847:24,</p>	<p>863:5, 865:5, 865:13, 869:16, 870:6, 871:5, 873:9, 874:8, 890:4, 918:1, 923:19, 925:9, 940:14, 967:20, 982:25, 988:13, 992:11, 993:20, 994:14, 996:9, 996:10, 996:24, 997:4, 997:24, 998:18, 999:6, 999:25, 1001:1, 1002:6, 1002:13, 1004:13, 1005:13, 1007:4, 1007:13 <b>paragraphs</b> [1] - 849:11 <b>parameter</b> [1] - 837:23 <b>parameters</b> [11] - 828:10, 828:21, 829:7, 831:4, 847:23, 849:19, 850:12, 850:14, 850:17, 918:7 <b>pardon</b> [1] - 891:11 <b>parens</b> [3] - 988:18, 988:21, 1007:18 <b>park</b> [1] - 910:8 <b>parking</b> [7] - 887:18, 888:1, 890:10, 891:2, 892:17, 893:19, 900:13 <b>part</b> [30] - 821:4, 824:20, 833:9, 838:12, 839:5, 849:4, 852:8, 861:14, 863:7, 870:24, 876:4, 879:7, 892:12, 903:10, 907:12, 911:16, 917:25, 945:19, 950:7, 950:9, 963:2, 964:3, 966:7, 979:5, 979:21, 1009:2, 1013:24, 1019:2, 1026:13 <b>participate</b> [1] - 872:9 <b>participated</b> [1] - 889:12 <b>particular</b> [11] - 817:18, 828:5, 847:6, 847:24, 850:6, 853:10, 861:14, 880:20, 933:1, 948:15, 981:23 <b>particularly</b> [5] - 957:21,</p>	<p>975:2, 981:1, 1010:11 <b>parties</b> [2] - 954:22 <b>pass</b> [1] - 945:25 <b>passage</b> [1] - 884:5 <b>past</b> [11] - 848:4, 849:15, 849:25, 870:13, 876:11, 893:13, 956:9, 985:4, 1003:3, 1004:21, 1013:1 <b>Patch</b> [1] - 1008:25 <b>patterns</b> [1] - 1001:20 <b>pause</b> [1] - 1000:24 <b>peaks</b> [1] - 840:24 <b>Peanut</b> [1] - 1008:25 <b>peculiar</b> [1] - 915:23 <b>people</b> [10] - 858:22, 900:24, 905:19, 926:21, 964:14, 976:14, 983:15, 986:21, 1025:10, 1025:24 <b>per</b> [14] - 828:15, 837:24, 839:22, 849:23, 849:24, 850:4, 850:19, 853:11, 894:23, 918:3, 918:8, 918:9, 942:13 <b>percent</b> [15] - 828:17, 829:2, 880:17, 891:9, 891:12, 930:1, 940:20, 940:24, 945:21, 946:5, 946:8, 976:10, 978:11, 978:12, 1027:19 <b>percentage</b> [2] - 850:20, 850:21 <b>perfect</b> [1] - 846:10 <b>performed</b> [1] - 820:25 <b>performing</b> [1] - 1026:16 <b>perhaps</b> [5] - 843:7, 856:15, 916:24, 961:12, 1001:2 <b>period</b> [27] - 823:24, 829:4, 833:14, 833:18, 836:8, 837:12, 843:4, 856:13, 887:22, 909:17, 910:10, 912:11, 942:20, 946:15, 959:24, 963:12, 982:4, 983:25, 992:22, 1005:25, 1018:19, 1021:10, 1021:16,</p>
---	--	---	--	--

<p>1023:6, 1025:2, 1025:8 <b>periods</b> [1] - 955:2 <b>PERRY</b> [1] - 814:17 <b>persisted</b> [4] - 834:23, 835:25, 871:12, 1005:9 <b>person</b> [3] - 852:14, 857:16, 1031:8 <b>personally</b> [1] - 906:24 <b>perspective</b> [1] - 838:8 <b>PHILIP</b> [1] - 814:17 <b>photograph</b> [1] - 907:8 <b>photographs</b> [3] - 907:8, 974:25, 1027:13 <b>pick</b> [6] - 816:11, 819:2, 883:10, 894:4, 894:9, 919:12 <b>picking</b> [1] - 883:7 <b>picture</b> [14] - 880:20, 881:18, 882:11, 884:20, 887:5, 894:17, 896:13, 897:22, 899:2, 907:2, 907:4, 915:1, 919:13, 920:9 <b>pictures</b> [9] - 842:7, 879:25, 895:2, 909:5, 914:19, 918:19, 919:6, 922:8, 926:11 <b>piece</b> [2] - 920:21, 977:21 <b>pipe</b> [1] - 895:25 <b>place</b> [32] - 819:2, 819:13, 824:8, 826:24, 836:6, 836:23, 837:10, 837:12, 840:21, 844:2, 851:22, 866:20, 882:4, 900:24, 901:7, 910:4, 946:20, 946:22, 947:11, 958:2, 958:3, 959:21, 960:1, 960:2, 960:24, 964:13, 966:25, 977:13, 979:7, 981:1, 986:5, 1023:14 <b>placed</b> [1] - 819:9 <b>places</b> [3] - 826:19, 1026:20, 1027:19 <b>placing</b> [4] - 863:14, 864:21, 866:15,</p>	<p>908:14 <b>Plaintiff</b> [1] - 814:4 <b>plan</b> [3] - 964:4, 964:13, 965:1 <b>Plan</b> [1] - 1028:21 <b>plant</b> [10] - 915:11, 915:13, 915:24, 918:16, 919:4, 926:15, 926:20, 932:12, 989:14, 1027:21 <b>Plant</b> [1] - 926:13 <b>planted</b> [19] - 915:12, 917:9, 918:14, 921:12, 922:25, 923:3, 932:6, 932:23, 934:9, 935:4, 935:14, 936:16, 937:12, 1008:24, 1009:1, 1009:3, 1009:4, 1027:16 <b>planting</b> [4] - 923:17, 935:1, 1008:21, 1009:7 <b>plants</b> [1] - 908:12 <b>Platform</b> [1] - 1008:25 <b>plausibility</b> [1] - 1003:14 <b>play</b> [9] - 838:17, 874:25, 936:20, 938:5, 969:24, 970:3, 970:19, 971:7, 978:2 <b>played</b> [11] - 875:1, 934:13, 935:19, 936:21, 937:20, 969:9, 969:25, 970:4, 970:20, 971:8, 978:3 <b>plenty</b> [1] - 1022:13 <b>plumes</b> [1] - 1001:20 <b>plus</b> [1] - 1025:8 <b>pockets</b> [1] - 975:1 <b>point</b> [42] - 821:7, 823:11, 824:17, 826:22, 858:2, 858:4, 858:9, 868:2, 871:16, 876:21, 891:6, 903:9, 909:22, 910:14, 925:4, 935:7, 935:8, 937:10, 938:12, 939:17, 943:22, 946:19, 949:8, 959:12, 961:20, 963:19, 964:6, 965:1, 973:11, 974:14, 982:13, 983:5, 986:18,</p>	<p>1001:11, 1016:8, 1017:23, 1018:20, 1019:6, 1019:8, 1019:9, 1020:8 <b>Point</b> [34] - 821:15, 822:4, 823:1, 823:6, 829:7, 829:17, 848:23, 887:21, 887:24, 890:7, 891:16, 893:12, 893:14, 894:1, 894:22, 900:20, 941:3, 959:14, 973:5, 975:4, 980:3, 983:2, 996:10, 998:21, 999:1, 1000:23, 1001:6, 1001:8, 1008:9, 1008:15, 1009:3, 1014:25, 1017:6, 1027:11 <b>Point/East</b> [3] - 958:23, 959:11, 1014:23 <b>pointed</b> [1] - 1024:11 <b>points</b> [1] - 1022:4 <b>policies</b> [1] - 842:20 <b>policy</b> [1] - 962:11 <b>poor</b> [21] - 818:7, 820:16, 821:1, 821:3, 822:19, 829:11, 829:14, 830:23, 838:14, 869:19, 887:10, 900:23, 925:6, 986:2, 986:15, 987:15, 1007:13, 1007:14, 1009:22, 1009:23 <b>population</b> [32] - 817:15, 827:16, 828:9, 828:21, 829:7, 831:1, 831:2, 831:11, 839:4, 839:13, 841:2, 841:3, 844:9, 847:23, 849:15, 849:18, 855:16, 871:2, 876:19, 879:24, 909:20, 909:23, 956:14, 957:10, 963:12, 980:14, 980:18, 984:3, 984:20, 998:2, 1016:22, 1016:24 <b>populations</b> [23] - 817:3, 817:5, 817:7, 823:8, 823:9,</p>	<p>849:16, 867:21, 876:13, 934:24, 983:10, 985:22, 997:15, 1000:1, 1002:8, 1002:18, 1004:25, 1005:1, 1005:15, 1005:16, 1016:7 <b>Porter's</b> [1] - 1008:25 <b>portion</b> [21] - 822:11, 852:5, 866:12, 892:3, 902:13, 903:16, 912:19, 925:2, 925:25, 928:15, 933:21, 935:23, 973:2, 980:1, 991:19, 996:1, 1001:10, 1008:23, 1014:19, 1015:2, 1015:4 <b>portions</b> [9] - 928:25, 968:21, 969:16, 981:20, 992:3, 999:1, 999:3, 1005:1, 1026:17 <b>Portland</b> [2] - 814:13, 1030:2 <b>Portland's</b> [1] - 1030:10 <b>posed</b> [2] - 843:4, 856:13 <b>position</b> [1] - 985:6 <b>positive</b> [4] - 922:4, 924:11, 925:16, 925:17 <b>positives</b> [1] - 924:12 <b>possibly</b> [3] - 829:10, 843:25, 869:18 <b>post</b> [1] - 830:6 <b>potential</b> [9] - 828:20, 829:9, 869:17, 902:17, 984:19, 985:2, 985:16, 985:25, 1011:15 <b>potentially</b> [1] - 859:10 <b>pounds</b> [17] - 941:22, 942:2, 942:4, 942:5, 945:1, 945:3, 951:3, 951:17, 952:1, 952:5, 952:20, 953:15, 957:12, 1018:1, 1020:9, 1023:20 <b>pour</b> [1] - 897:7 <b>practically</b> [2] - 825:19, 909:19 <b>practice</b> [20] - 818:17, 818:18, 819:17,</p>	<p>842:13, 842:14, 844:2, 844:17, 865:18, 865:20, 865:25, 876:24, 876:25, 908:4, 908:5, 909:1, 986:23, 987:5, 989:16 <b>practiced</b> [1] - 865:20 <b>practices</b> [24] - 818:9, 818:11, 818:13, 820:10, 820:12, 821:3, 821:5, 821:21, 822:1, 822:19, 829:11, 829:15, 836:16, 843:10, 856:10, 861:3, 869:10, 869:20, 870:7, 900:24, 909:2, 986:2, 986:12, 987:15 <b>precisely</b> [1] - 959:25 <b>preclude</b> [1] - 833:24 <b>precluded</b> [8] - 832:7, 833:7, 833:22, 833:24, 853:13, 853:15, 854:23, 854:25 <b>Predation</b> [3] - 1003:20, 1003:25, 1004:11 <b>predation</b> [21] - 827:6, 827:12, 892:13, 900:11, 924:14, 940:20, 940:24, 978:13, 980:20, 987:25, 988:21, 992:25, 998:5, 998:15, 999:13, 999:18, 1000:17, 1003:5, 1005:7, 1010:4, 1015:15 <b>predator</b> [6] - 891:15, 891:16, 994:2, 994:16, 994:21, 994:23 <b>predators</b> [16] - 891:6, 979:11, 979:15, 979:19, 979:22, 980:5, 980:13, 980:17, 980:21, 994:9, 999:22, 1004:19, 1007:7, 1007:17, 1013:22, 1014:14 <b>predatory</b> [1] - 940:21 <b>predecessors</b> [1] - 1012:8 <b>predictability</b> [1] -</p>
---	--	--	--	---

THE REPORTING GROUP 5, 837:11,

957:24  
**predictable** [1] - 1027:4  
**predicted** [3] - 850:19, 975:12, 1019:3  
**predicting** [1] - 957:20  
**predictive** [2] - 850:7, 997:15  
**predirect** [1] - 882:2  
**prefer** [1] - 916:12  
**prefiled** [3] - 968:8, 971:21, 983:1  
**preliminary** [3] - 949:15, 953:19, 953:22  
**premise** [1] - 904:2  
**premium** [1] - 893:16  
**preparation** [1] - 861:11  
**prepared** [1] - 987:11  
**preparing** [3] - 863:20, 904:14, 969:14  
**presence** [7] - 979:11, 979:14, 994:1, 994:15, 994:21, 1005:15, 1007:17  
**present** [7] - 817:19, 834:23, 836:1, 871:13, 924:25, 928:12, 932:15  
**Present** [1] - 814:23  
**presentation** [2] - 853:5, 938:9  
**presented** [4] - 872:3, 873:12, 874:17, 934:2  
**presenting** [3] - 875:6, 934:16, 936:23  
**Pressure** [1] - 828:6  
**pressure** [15] - 828:16, 844:10, 844:13, 845:1, 847:22, 849:21, 863:12, 890:14, 892:22, 915:19, 917:10, 917:15, 977:9, 977:11, 983:11  
**pressures** [1] - 869:11  
**pretrial** [1] - 967:22  
**pretty** [14] - 845:10, 851:4, 885:13, 893:12, 898:23, 900:12, 913:8, 913:11, 913:16, 928:23, 976:15, 982:21, 1000:11, 1027:24  
**prevailed** [2] - 842:16,

848:8  
**prevailing** [3] - 826:13, 973:18, 1001:19  
**prevented** [2] - 1009:19, 1011:20  
**prevents** [1] - 1007:6  
**previous** [3] - 854:15, 920:6, 993:25  
**previously** [4] - 830:8, 975:15, 978:25, 1017:19  
**price** [2] - 1023:22, 1025:6  
**prices** [1] - 983:13  
**primarily** [7] - 822:2, 826:12, 877:19, 947:4, 1007:17, 1012:14, 1028:10  
**primary** [15] - 817:3, 820:14, 822:5, 822:7, 822:16, 870:9, 959:9, 970:6, 1014:12, 1014:23, 1014:25, 1015:20, 1016:18, 1017:24, 1027:8  
**PRIMIS** [1] - 814:20  
**principal** [1] - 975:5  
**private** [4] - 989:7, 989:12, 989:19, 990:18  
**problem** [10] - 867:12, 891:5, 891:8, 903:19, 906:25, 923:14, 944:3, 948:21, 970:7, 977:24  
**proceed** [2] - 816:5, 955:11  
**proceeded** [1] - 963:3  
**Proceeding** [1] - 1030:15  
**PROCEEDINGS** [2] - 814:9, 816:1  
**Proceedings** [1] - 1031:6  
**process** [21] - 853:18, 853:20, 861:14, 862:25, 863:3, 863:4, 864:8, 864:20, 878:16, 883:9, 883:14, 898:18, 907:16, 907:22, 923:23, 963:25, 964:19, 980:23, 997:19, 1005:5, 1026:25  
**processing** [1] - 908:12

**processor** [1] - 865:23  
**processors** [4] - 846:4, 857:15, 966:17, 997:18  
**produced** [2] - 862:5, 932:19  
**produces** [1] - 893:15  
**producing** [12] - 817:3, 822:5, 822:7, 822:16, 870:9, 959:9, 977:7, 1014:12, 1014:24, 1015:20, 1017:24, 1025:4  
**product** [7] - 840:18, 865:22, 893:17, 984:7, 987:4, 1021:19, 1021:20  
**production** [12] - 828:15, 829:9, 836:15, 837:23, 844:11, 849:19, 850:12, 850:14, 869:17, 918:7, 957:19, 992:15  
**production/ harvesting** [1] - 844:15  
**productive** [5] - 908:21, 982:17, 982:18, 982:23, 985:17  
**proffer** [1] - 886:12  
**program** [5] - 910:4, 910:6, 910:19, 1028:8, 1028:9  
**programs** [2] - 911:1, 913:2  
**progress** [5] - 964:1, 971:5, 986:8, 1005:6, 1027:15  
**progressed** [5] - 838:18, 971:12, 971:22, 976:11, 1016:5  
**progressing** [2] - 981:17, 983:25  
**progression** [6] - 923:25, 970:12, 975:25, 989:6, 999:18, 1014:6  
**progressively** [1] - 938:13  
**projects** [2] - 910:24, 921:24  
**Prolonged** [1] - 1006:22  
**prolonged** [6] - 827:4, 979:18, 998:14,

1007:15  
**prompt** [2] - 909:24, 910:1  
**proper** [2] - 888:8, 947:2  
**properly** [1] - 1026:1  
**protect** [5] - 854:23, 876:8, 938:22, 985:11, 1017:3  
**protection** [1] - 889:14  
**prove** [1] - 961:10  
**proven** [2] - 893:11, 908:6  
**provide** [7] - 862:3, 862:10, 886:22, 955:2, 967:22, 973:17, 997:14  
**provided** [9] - 842:24, 881:12, 919:5, 931:20, 951:7, 955:3, 964:21, 965:23  
**providing** [6] - 844:24, 856:22, 877:1, 885:25, 892:16, 967:14  
**proximal** [2] - 1005:10, 1026:23  
**Public** [2] - 814:15, 1031:2  
**public** [7] - 853:1, 853:3, 855:13, 872:7, 960:22, 990:19, 990:22  
**publicly** [1] - 856:23  
**published** [1] - 853:2  
**pull** [5] - 865:4, 874:23, 886:19, 892:8, 1014:18  
**pulled** [6] - 837:6, 899:19, 918:23, 955:15, 957:9, 957:13  
**pumping** [1] - 882:6  
**purpose** [2] - 927:22, 997:14  
**pushed** [1] - 819:16  
**put** [32] - 837:8, 840:3, 849:2, 852:22, 856:19, 859:9, 863:19, 863:21, 863:24, 872:22, 880:4, 883:10, 896:13, 896:23, 897:11, 898:6, 898:14, 898:21, 910:4, 911:25, 916:23, 930:13,

954:19, 957:1, 960:2, 1014:17, 1017:8, 1020:25, 1026:19, 1026:20  
**Putnam** [1] - 820:2  
**putting** [7] - 852:7, 853:15, 859:4, 861:11, 868:6, 908:2, 922:2  
**PVC** [1] - 895:24

**Q**

**quadrat** [14] - 895:19, 896:6, 896:8, 896:10, 896:16, 897:14, 897:23, 898:13, 898:21, 899:10, 914:11, 914:15, 918:6, 927:15  
**quadrats** [1] - 895:9  
**qualified** [1] - 928:24  
**qualify** [2] - 821:25, 857:11  
**quality** [8] - 823:11, 823:17, 824:16, 838:14, 884:16, 893:17, 1009:23, 1009:24  
**quarter** [1] - 895:24  
**questions** [13] - 816:23, 818:4, 823:5, 872:9, 936:5, 944:8, 950:15, 1007:25, 1011:13, 1013:10, 1014:11, 1023:24, 1025:21  
**quickly** [4] - 866:24, 940:8, 982:2, 993:18  
**quit** [3] - 926:1, 974:4, 1025:10  
**quite** [7] - 876:2, 928:15, 932:24, 953:6, 960:18, 989:16, 1010:6  
**quote** [3] - 875:14, 887:18, 903:10  
**QURESHI** [1] - 814:18

**R**

**rainfall** [1] - 1003:2  
**raise** [1] - 838:2  
**raised** [3] - 845:19, 845:21, 871:17  
**raising** [1] - 855:15  
**rake** [2] - 819:4, 883:6  
**rakes** [2] - 818:22, 818:23  
**RALPH** [1] - 814:11

**ran** [2] - 912:22, 984:7  
**random** [1] - 896:4  
**randomly** [1] - 896:2  
**range** [2] - 835:14, 926:23  
**Rao** [1] - 1025:16  
**RAO** [2] - 814:19, 1025:20  
**rate** [4] - 826:17, 831:12, 955:21, 955:24  
**rates** [3] - 988:17, 1002:20, 1003:3  
**rather** [8] - 818:19, 859:3, 871:4, 890:14, 895:12, 915:7, 927:12, 958:3  
**re** [1] - 847:11  
**re-cover** [1] - 847:11  
**reach** [1] - 904:21  
**reached** [1] - 962:3  
**reaches** [2] - 965:19, 1027:1  
**reaching** [1] - 1027:19  
**reaction** [1] - 856:25  
**read** [15] - 816:22, 818:3, 823:4, 853:13, 856:2, 856:3, 860:4, 873:15, 927:2, 936:10, 951:10, 971:18, 987:22, 993:18, 1028:25  
**reading** [7] - 820:6, 848:12, 878:18, 885:24, 1007:1, 1029:9, 1029:10  
**reads** [1] - 1004:17  
**ready** [1] - 825:4  
**real** [6] - 858:6, 858:15, 881:2, 882:22, 917:17, 937:3  
**reality** [1] - 945:2  
**realize** [2] - 971:18, 1028:3  
**realized** [1] - 853:22  
**really** [22] - 826:19, 835:12, 837:19, 839:8, 840:8, 881:21, 882:25, 906:10, 911:10, 916:12, 920:5, 929:10, 962:25, 963:6, 967:6, 976:13, 986:12, 1005:25, 1008:14, 1008:17, 1026:25, 1027:22  
**reason** [9] - 838:3,

891:17, 933:7, 998:9, 1016:10, 1016:13, 1016:14, 1020:17  
**reasonable** [3] - 887:2, 964:12, 998:10  
**reasons** [2] - 893:13, 970:12  
**recalling** [1] - 940:14  
**received** [1] - 911:4  
**receiving** [3] - 854:8, 911:2, 975:8  
**recent** [1] - 1004:24  
**recently** [6] - 907:9, 927:24, 928:1, 937:12, 975:3, 975:4  
**receptive** [1] - 937:4  
**Recess** [3] - 878:9, 940:2, 1011:9  
**recess** [3] - 1010:15, 1029:24, 1030:11  
**recognize** [7] - 825:21, 845:11, 880:12, 880:15, 895:17, 929:10, 929:24  
**recognized** [1] - 845:8  
**recognizing** [1] - 898:10  
**recollection** [4] - 854:8, 887:25, 970:23, 971:11  
**reconnaissance** [1] - 914:10  
**record** [12] - 867:7, 868:19, 869:8, 886:6, 886:11, 888:13, 898:5, 914:2, 944:12, 945:12, 968:6, 1010:22  
**recorded** [1] - 873:8  
**recorder** [2] - 833:17, 833:23  
**recovered** [1] - 833:25  
**recovery** [22] - 832:7, 833:7, 833:13, 833:19, 833:25, 928:21, 963:16, 963:24, 964:3, 964:5, 964:9, 964:11, 964:13, 964:17, 964:19, 965:1, 965:4, 965:6, 965:12, 966:10, 966:19, 967:3  
**Recross** [1] - 815:2  
**RECROSS** [1] - 1013:11

**RECROSS-EXAMINATION** [1] - 1013:11  
**recruit** [2] - 850:22, 988:1  
**recruited** [1] - 837:22  
**recruiting** [1] - 852:4  
**recruitment** [33] - 823:12, 824:10, 824:18, 824:22, 825:16, 825:17, 825:24, 826:1, 830:13, 831:5, 831:21, 836:12, 836:21, 836:24, 837:3, 839:11, 840:22, 844:9, 868:3, 868:14, 870:1, 988:20, 993:1, 1003:4, 1007:14, 1017:1, 1021:18, 1021:21, 1021:24, 1023:15, 1023:16, 1027:14  
**recruits** [1] - 850:18  
**recurring** [1] - 910:18  
**recycle** [1] - 908:12  
**Redirect** [1] - 815:2  
**REDIRECT** [2] - 968:11, 1024:5  
**redirect** [1] - 905:6  
**reduce** [1] - 831:9  
**reduced** [7] - 827:7, 827:22, 827:23, 836:12, 836:23, 837:25, 1002:20  
**reduces** [1] - 837:21  
**reducing** [2] - 985:5, 985:6  
**Reef** [4] - 924:3, 925:5, 927:9, 929:3  
**reef** [102] - 817:6, 817:17, 817:23, 823:8, 823:10, 824:1, 824:2, 836:18, 838:23, 838:24, 839:9, 839:11, 839:18, 840:15, 840:16, 840:17, 841:1, 841:4, 841:19, 842:4, 867:23, 867:24, 868:10, 875:14, 878:23, 878:25, 879:13, 880:9, 880:11, 880:25, 881:4, 881:7, 882:16, 882:18, 883:2,

884:3, 884:8, 884:18, 885:20, 886:17, 887:6, 887:17, 887:21, 890:23, 891:1, 893:5, 895:2, 896:2, 898:3, 898:22, 901:22, 901:24, 902:21, 902:22, 902:23, 902:24, 903:12, 903:14, 904:3, 904:4, 904:6, 904:7, 904:18, 904:22, 907:2, 907:6, 908:16, 908:18, 909:6, 909:8, 909:12, 916:11, 918:12, 918:13, 924:16, 924:18, 927:8, 934:23, 936:16, 938:17, 980:14, 980:15, 980:18, 980:19, 980:24, 981:6, 981:9, 981:13, 982:6, 982:13, 982:21, 988:2, 993:2, 999:12  
**reefs** [93] - 817:3, 822:5, 822:8, 822:9, 822:16, 823:20, 825:25, 827:20, 832:4, 832:21, 833:25, 834:2, 834:8, 837:18, 837:20, 841:23, 842:9, 847:25, 848:3, 865:17, 868:1, 870:9, 875:15, 878:16, 878:22, 879:3, 879:10, 879:13, 879:17, 880:15, 880:18, 884:4, 885:6, 885:9, 885:10, 896:14, 901:13, 902:1, 902:11, 902:18, 903:15, 907:9, 907:12, 908:2, 909:6, 909:25, 913:9, 921:21, 922:25, 925:11, 929:14, 929:20, 930:1, 930:19, 937:10, 937:25, 938:3, 938:15, 938:18, 973:4, 973:24, 973:25, 975:22, 978:10, 978:16,

978:21, 979:1, 979:5, 980:12, 982:17, 988:16, 997:13, 998:21, 998:24, 998:25, 999:4, 1000:1, 1000:15, 1001:13, 1001:16, 1001:21, 1002:25, 1005:20, 1016:7, 1026:16, 1026:17, 1027:1, 1027:6, 1027:17  
**refer** [6] - 823:22, 827:21, 844:4, 903:5, 945:18, 1026:2  
**reference** [5] - 817:17, 825:11, 833:5, 865:2, 941:12  
**Referenced** [1] - 815:8  
**referenced** [1] - 987:14  
**references** [1] - 847:21  
**referencing** [1] - 886:24  
**referred** [1] - 986:3  
**referring** [9] - 835:12, 850:2, 875:24, 877:4, 877:16, 877:17, 936:7, 946:14, 1000:13  
**reflect** [1] - 883:24  
**reflected** [2] - 849:19, 926:18  
**reflecting** [2] - 829:10, 869:18  
**reflective** [2] - 982:25, 1009:9  
**reflects** [1] - 942:18  
**refurbished** [2] - 932:19, 932:23  
**regarding** [2] - 996:1, 1006:21  
**regardless** [2] - 883:4, 936:7  
**regenerated** [1] - 1017:2  
**regime** [2] - 999:21, 1005:12  
**regimes** [4] - 979:17, 988:22, 998:14, 1003:7  
**regulate** [3] - 1018:9, 1018:12, 1018:16  
**regulated** [1] - 1018:10  
**regulation** [1] - 837:15  
**regulations** [1] - 853:9  
**rehabilitated** [2] -

<p>1009:7, 1010:1  <b>rehabilitating</b> [1] - 908:15  <b>related</b> [2] - 901:11, 983:22  <b>relates</b> [1] - 938:7  <b>relating</b> [3] - 862:11, 862:17, 940:10  <b>relationships</b> [1] - 840:25  <b>relatively</b> [10] - 849:19, 876:15, 876:24, 876:25, 910:1, 910:19, 929:20, 929:22, 934:8, 999:4  <b>reliable</b> [1] - 946:2  <b>relief</b> [1] - 816:15  <b>relies</b> [1] - 853:9  <b>remain</b> [1] - 999:14  <b>remainder</b> [2] - 819:15, 848:25  <b>remaining</b> [3] - 838:10, 981:22, 1016:9  <b>remains</b> [1] - 848:22  <b>remarks</b> [1] - 994:13  <b>remember</b> [3] - 902:25, 1019:24, 1025:14  <b>reminding</b> [1] - 1010:5  <b>removal</b> [1] - 831:13  <b>remove</b> [3] - 842:2, 857:25, 882:24  <b>removed</b> [10] - 827:24, 828:1, 839:7, 839:16, 839:17, 839:20, 841:18, 842:9, 878:24  <b>removing</b> [1] - 985:14  <b>renewable</b> [2] - 840:19, 1008:17  <b>renewed</b> [1] - 1017:1  <b>renewing</b> [1] - 831:1  <b>repeat</b> [2] - 874:2, 906:8  <b>repeats</b> [1] - 869:9  <b>rephrase</b> [1] - 943:18  <b>replace</b> [1] - 896:8  <b>replenished</b> [1] - 831:12  <b>replicable</b> [1] - 955:1  <b>Report</b> [3] - 859:19, 958:12, 1029:7  <b>report</b> [78] - 816:16, 820:3, 821:18, 822:17, 822:23, 828:4, 828:20, 834:16, 835:16, 835:23, 838:12,</p>	<p>842:23, 844:7, 845:7, 845:9, 846:12, 846:16, 846:22, 847:2, 847:9, 847:12, 847:22, 848:14, 848:22, 849:4, 850:6, 852:8, 852:25, 853:1, 853:14, 853:21, 854:9, 854:15, 854:16, 856:20, 857:18, 859:5, 859:10, 861:12, 863:4, 863:22, 863:25, 864:2, 864:5, 864:16, 864:17, 867:2, 868:6, 868:23, 868:25, 870:24, 871:19, 871:20, 871:21, 892:3, 911:19, 922:23, 926:19, 929:18, 933:4, 941:11, 941:13, 946:7, 951:16, 956:22, 958:23, 959:25, 960:10, 970:24, 992:4, 995:8, 995:22, 1004:5, 1005:4, 1006:11, 1006:13, 1006:14, 1007:3  <b>reported</b> [9] - 828:13, 828:16, 828:25, 913:14, 915:9, 946:3, 951:17, 1023:10, 1023:12  <b>Reporter</b> [1] - 1031:16  <b>reporter</b> [2] - 856:4, 972:15  <b>reporting</b> [8] - 837:9, 919:3, 926:22, 945:7, 946:4, 947:15, 947:20, 948:3  <b>reports</b> [28] - 834:19, 844:15, 851:3, 852:22, 855:12, 856:4, 857:13, 858:22, 858:23, 860:22, 871:8, 875:13, 904:14, 923:6, 942:6, 945:22, 956:11, 956:18, 959:18, 959:20, 960:21, 972:12, 974:3, 1004:22, 1022:2</p>	<p>1022:23, 1023:7, 1026:2  <b>represent</b> [1] - 882:16  <b>representation</b> [4] - 858:25, 873:13, 901:22, 903:13  <b>representative</b> [6] - 881:6, 882:12, 898:3, 901:4, 904:3, 904:5  <b>represented</b> [1] - 928:21  <b>representing</b> [1] - 967:1  <b>represents</b> [1] - 946:6  <b>reproduction</b> [4] - 825:15, 868:14, 902:18, 902:19  <b>reproductive</b> [6] - 902:17, 984:19, 984:20, 985:1, 985:16, 985:25  <b>request</b> [10] - 816:14, 860:8, 860:10, 860:17, 886:21, 910:23, 911:8, 912:1, 930:21, 934:21  <b>requested</b> [2] - 900:19, 951:8  <b>requesting</b> [1] - 877:23  <b>required</b> [4] - 945:25, 1015:15, 1015:18, 1015:21  <b>requirement</b> [1] - 947:4  <b>requirements</b> [1] - 947:2  <b>research</b> [1] - 889:4  <b>reshell</b> [1] - 1008:8  <b>reshelled</b> [3] - 914:8, 935:4, 1008:4  <b>reshelling</b> [13] - 907:17, 907:23, 910:4, 910:6, 912:19, 917:8, 958:20, 1008:1, 1009:20, 1027:6, 1028:5, 1028:8, 1028:9  <b>resilient</b> [2] - 876:13, 1012:25  <b>resistance</b> [1] - 1008:11  <b>resolution</b> [1] - 881:2  <b>Resource</b> [1] - 867:5  <b>resource</b> [62] - 816:16, 821:20,</p>	<p>833:8, 837:17, 838:21, 838:25, 843:9, 844:6, 846:22, 849:3, 849:21, 850:3, 851:16, 851:25, 852:20, 853:22, 854:10, 854:21, 854:24, 855:2, 855:3, 855:8, 855:12, 856:17, 857:21, 861:12, 870:25, 872:13, 876:9, 879:7, 883:12, 889:4, 889:14, 890:13, 890:17, 890:22, 891:14, 892:21, 908:20, 908:23, 911:17, 913:15, 922:18, 929:18, 932:20, 938:22, 956:12, 957:3, 959:19, 959:23, 963:17, 963:19, 966:11, 987:23, 995:22, 1008:16, 1008:17, 1018:21, 1018:22, 1022:22  <b>resources</b> [11] - 818:6, 820:17, 820:20, 842:19, 842:21, 849:8, 867:23, 870:9, 992:4, 992:12, 1012:5  <b>Resources</b> [1] - 868:24  <b>respect</b> [3] - 822:15, 869:10, 887:22  <b>responding</b> [2] - 856:11, 861:3  <b>response</b> [6] - 832:5, 832:22, 860:16, 903:10, 945:24, 1027:23  <b>responses</b> [1] - 1014:10  <b>responsibilities</b> [1] - 907:12  <b>responsibility</b> [2] - 843:15, 849:4  <b>responsible</b> [2] - 922:18, 977:16  <b>rest</b> [1] - 988:13  <b>restaurants</b> [2] - 1030:1, 1030:10  <b>restoration</b> [1] - 875:18, 907:11,</p>	<p>910:24, 921:22, 921:24, 926:17, 926:21, 938:13, 958:19  <b>restorations</b> [1] - 909:12  <b>restore</b> [3] - 879:23, 909:24, 946:17  <b>restored</b> [7] - 881:7, 907:5, 907:9, 921:21, 964:23, 975:3, 975:4  <b>restoring</b> [4] - 875:21, 909:7, 909:8, 938:11  <b>restrictions</b> [2] - 863:14, 866:15  <b>result</b> [11] - 818:7, 821:2, 821:4, 865:16, 870:13, 924:14, 947:13, 983:3, 983:23, 993:6, 1028:14  <b>resulted</b> [3] - 832:6, 856:9, 861:2  <b>resulting</b> [4] - 863:15, 866:16, 988:1, 992:25  <b>results</b> [6] - 836:15, 865:22, 913:8, 915:10, 921:10, 921:22  <b>retard</b> [1] - 999:21  <b>retired</b> [1] - 962:15  <b>returned</b> [2] - 836:18, 838:23  <b>reviewed</b> [3] - 873:23, 874:6, 985:3  <b>rid</b> [1] - 994:9  <b>right-hand</b> [8] - 861:19, 861:20, 862:21, 869:2, 920:3, 920:18, 931:19, 969:4  <b>rise</b> [3] - 925:3, 994:4, 994:25  <b>risk</b> [4] - 842:21, 858:7, 858:15, 961:18  <b>River</b> [7] - 973:15, 973:16, 988:18, 994:3, 994:25, 1003:3, 1006:23  <b>river</b> [12] - 925:3, 973:11, 983:8, 988:19, 1001:17, 1001:19, 1001:21, 1002:20, 1005:10, 1021:15, 1026:23, 1027:3  <b>RMR</b> [2] - 814:14,</p>
---	--	--	---	---

1031:15  
**road** [1] - 852:1  
**rock** [3] - 979:25,  
 999:13, 1007:18  
**roll** [1] - 920:6  
**rough** [1] - 884:19  
**row** [4] - 857:6,  
 951:25, 959:19,  
 960:21  
**rule** [3] - 843:18,  
 853:17, 853:20  
**rule-making** [2] -  
 853:17, 853:20  
**run** [3] - 845:17,  
 972:10, 973:6  
**running** [4] - 888:17,  
 942:1, 951:3, 986:11  
**runs** [1] - 954:7

**S**

**sake** [1] - 1020:12  
**sale** [1] - 844:16  
**saleable** [2] - 962:6,  
 962:7  
**salinities** [3] - 980:8,  
 998:12, 1012:15  
**salinity** [36] - 826:12,  
 827:5, 827:12,  
 901:15, 929:1,  
 929:4, 972:13,  
 977:14, 979:14,  
 979:17, 979:18,  
 982:20, 988:22,  
 991:21, 994:25,  
 998:4, 998:14,  
 999:14, 999:21,  
 1002:21, 1003:6,  
 1005:8, 1005:12,  
 1005:17, 1005:25,  
 1007:6, 1007:16,  
 1009:25, 1011:19,  
 1012:4, 1013:6,  
 1013:22, 1014:14,  
 1027:8  
**salvage** [2] - 858:2,  
 961:20  
**sample** [10] - 896:7,  
 897:23, 897:24,  
 897:25, 974:11,  
 997:10, 997:12,  
 997:21, 1030:10  
**sampled** [1] - 817:6  
**samples** [11] - 895:8,  
 899:19, 914:10,  
 914:11, 915:15,  
 974:23, 976:6,  
 982:4, 996:18,  
 996:24, 997:6  
**sampling** [18] - 817:2,

817:25, 818:5,  
 820:24, 878:16,  
 895:5, 901:7, 918:7,  
 926:1, 927:12,  
 974:4, 974:5, 974:9,  
 974:11, 974:13,  
 974:15, 997:14,  
 1004:14  
**save** [1] - 961:21  
**saving** [1] - 1019:6  
**savings** [1] - 1030:5  
**saw** [16] - 890:10,  
 925:8, 946:6,  
 959:18, 961:12,  
 970:12, 974:2,  
 975:24, 978:6,  
 978:10, 979:16,  
 981:20, 982:11,  
 998:9, 1006:3,  
 1027:12  
**scale** [3] - 908:9,  
 909:12, 967:6  
**scenario** [1] - 972:10  
**scene** [1] - 894:1  
**scientific** [2] - 893:7,  
 903:20  
**scientist** [1] - 902:15  
**scissor** [1] - 818:24  
**scissor-like** [1] -  
 818:24  
**scoop** [3] - 819:1,  
 896:19, 898:18  
**scooped** [1] - 898:13  
**scooping** [1] - 897:16  
**Scorpion** [4] - 924:3,  
 925:5, 929:3, 975:15  
**scour** [1] - 982:1  
**screen** [4] - 865:4,  
 881:14, 944:25,  
 972:3  
**Seafood** [2] - 860:8,  
 860:18  
**seafood** [1] - 1024:22  
**season** [24] - 829:22,  
 833:16, 844:12,  
 844:21, 845:5,  
 845:14, 845:16,  
 845:18, 846:3,  
 849:1, 849:8, 850:9,  
 850:11, 852:16,  
 956:20, 956:21,  
 967:5, 973:1,  
 973:20, 974:8,  
 976:16, 985:10,  
 1016:16, 1019:1  
**seasons** [3] - 830:2,  
 833:1, 833:10  
**seat** [1] - 977:19  
**second** [19] - 820:12,  
 822:25, 867:18,

873:6, 888:6,  
 888:21, 916:4,  
 916:8, 942:2,  
 948:25, 949:18,  
 951:11, 958:15,  
 996:9, 1002:7,  
 1002:12, 1002:13,  
 1020:2  
**section** [13] - 831:24,  
 841:14, 860:2,  
 869:14, 931:22,  
 933:25, 938:9,  
 939:4, 940:9,  
 993:17, 994:11,  
 1003:19, 1009:6  
**sector** [1] - 986:15  
**sedimentation** [1] -  
 890:16  
**see** [143] - 817:8,  
 821:7, 823:2,  
 825:23, 825:25,  
 827:9, 832:13,  
 842:1, 846:25,  
 847:18, 847:19,  
 847:20, 848:9,  
 848:18, 849:13,  
 850:23, 855:15,  
 855:17, 857:1,  
 859:20, 861:20,  
 861:24, 862:19,  
 863:17, 866:21,  
 866:23, 868:4,  
 868:25, 869:5,  
 880:20, 880:25,  
 881:1, 881:2,  
 882:13, 886:23,  
 888:9, 888:16,  
 889:1, 890:5,  
 890:16, 890:18,  
 890:19, 890:22,  
 894:10, 894:17,  
 895:22, 898:10,  
 899:1, 899:9, 900:7,  
 903:7, 915:18,  
 917:7, 918:21,  
 920:6, 920:25,  
 922:14, 923:5,  
 923:12, 923:20,  
 924:9, 926:13,  
 931:8, 931:24,  
 932:9, 935:16,  
 935:21, 936:2,  
 938:7, 939:18,  
 942:1, 945:15,  
 945:17, 945:22,  
 949:19, 949:24,  
 950:16, 950:18,  
 950:20, 954:11,  
 955:6, 955:17,  
 955:25, 956:2,  
 956:25, 956:26,  
 956:27, 956:28,  
 956:29, 956:30,  
 956:31, 956:32,  
 956:33, 956:34,  
 956:35, 956:36,  
 956:37, 956:38,  
 956:39, 956:40,  
 956:41, 956:42,  
 956:43, 956:44,  
 956:45, 956:46,  
 956:47, 956:48,  
 956:49, 956:50,  
 956:51, 956:52,  
 956:53, 956:54,  
 956:55, 956:56,  
 956:57, 956:58,  
 956:59, 956:60,  
 956:61, 956:62,  
 956:63, 956:64,  
 956:65, 956:66,  
 956:67, 956:68,  
 956:69, 956:70,  
 956:71, 956:72,  
 956:73, 956:74,  
 956:75, 956:76,  
 956:77, 956:78,  
 956:79, 956:80,  
 956:81, 956:82,  
 956:83, 956:84,  
 956:85, 956:86,  
 956:87, 956:88,  
 956:89, 956:90,  
 956:91, 956:92,  
 956:93, 956:94,  
 956:95, 956:96,  
 956:97, 956:98,  
 956:99, 956:100,  
 956:101, 956:102,  
 956:103, 956:104,  
 956:105, 956:106,  
 956:107, 956:108,  
 956:109, 956:110,  
 956:111, 956:112,  
 956:113, 956:114,  
 956:115, 956:116,  
 956:117, 956:118,  
 956:119, 956:120,  
 956:121, 956:122,  
 956:123, 956:124,  
 956:125, 956:126,  
 956:127, 956:128,  
 956:129, 956:130,  
 956:131, 956:132,  
 956:133, 956:134,  
 956:135, 956:136,  
 956:137, 956:138,  
 956:139, 956:140,  
 956:141, 956:142,  
 956:143, 956:144,  
 956:145, 956:146,  
 956:147, 956:148,  
 956:149, 956:150,  
 956:151, 956:152,  
 956:153, 956:154,  
 956:155, 956:156,  
 956:157, 956:158,  
 956:159, 956:160,  
 956:161, 956:162,  
 956:163, 956:164,  
 956:165, 956:166,  
 956:167, 956:168,  
 956:169, 956:170,  
 956:171, 956:172,  
 956:173, 956:174,  
 956:175, 956:176,  
 956:177, 956:178,  
 956:179, 956:180,  
 956:181, 956:182,  
 956:183, 956:184,  
 956:185, 956:186,  
 956:187, 956:188,  
 956:189, 956:190,  
 956:191, 956:192,  
 956:193, 956:194,  
 956:195, 956:196,  
 956:197, 956:198,  
 956:199, 956:200,  
 956:201, 956:202,  
 956:203, 956:204,  
 956:205, 956:206,  
 956:207, 956:208,  
 956:209, 956:210,  
 956:211, 956:212,  
 956:213, 956:214,  
 956:215, 956:216,  
 956:217, 956:218,  
 956:219, 956:220,  
 956:221, 956:222,  
 956:223, 956:224,  
 956:225, 956:226,  
 956:227, 956:228,  
 956:229, 956:230,  
 956:231, 956:232,  
 956:233, 956:234,  
 956:235, 956:236,  
 956:237, 956:238,  
 956:239, 956:240,  
 956:241, 956:242,  
 956:243, 956:244,  
 956:245, 956:246,  
 956:247, 956:248,  
 956:249, 956:250,  
 956:251, 956:252,  
 956:253, 956:254,  
 956:255, 956:256,  
 956:257, 956:258,  
 956:259, 956:260,  
 956:261, 956:262,  
 956:263, 956:264,  
 956:265, 956:266,  
 956:267, 956:268,  
 956:269, 956:270,  
 956:271, 956:272,  
 956:273, 956:274,  
 956:275, 956:276,  
 956:277, 956:278,  
 956:279, 956:280,  
 956:281, 956:282,  
 956:283, 956:284,  
 956:285, 956:286,  
 956:287, 956:288,  
 956:289, 956:290,  
 956:291, 956:292,  
 956:293, 956:294,  
 956:295, 956:296,  
 956:297, 956:298,  
 956:299, 956:300,  
 956:301, 956:302,  
 956:303, 956:304,  
 956:305, 956:306,  
 956:307, 956:308,  
 956:309, 956:310,  
 956:311, 956:312,  
 956:313, 956:314,  
 956:315, 956:316,  
 956:317, 956:318,  
 956:319, 956:320,  
 956:321, 956:322,  
 956:323, 956:324,  
 956:325, 956:326,  
 956:327, 956:328,  
 956:329, 956:330,  
 956:331, 956:332,  
 956:333, 956:334,  
 956:335, 956:336,  
 956:337, 956:338,  
 956:339, 956:340,  
 956:341, 956:342,  
 956:343, 956:344,  
 956:345, 956:346,  
 956:347, 956:348,  
 956:349, 956:350,  
 956:351, 956:352,  
 956:353, 956:354,  
 956:355, 956:356,  
 956:357, 956:358,  
 956:359, 956:360,  
 956:361, 956:362,  
 956:363, 956:364,  
 956:365, 956:366,  
 956:367, 956:368,  
 956:369, 956:370,  
 956:371, 956:372,  
 956:373, 956:374,  
 956:375, 956:376,  
 956:377, 956:378,  
 956:379, 956:380,  
 956:381, 956:382,  
 956:383, 956:384,  
 956:385, 956:386,  
 956:387, 956:388,  
 956:389, 956:390,  
 956:391, 956:392,  
 956:393, 956:394,  
 956:395, 956:396,  
 956:397, 956:398,  
 956:399, 956:400,  
 956:401, 956:402,  
 956:403, 956:404,  
 956:405, 956:406,  
 956:407, 956:408,  
 956:409, 956:410,  
 956:411, 956:412,  
 956:413, 956:414,  
 956:415, 956:416,  
 956:417, 956:418,  
 956:419, 956:420,  
 956:421, 956:422,  
 956:423, 956:424,  
 956:425, 956:426,  
 956:427, 956:428,  
 956:429, 956:430,  
 956:431, 956:432,  
 956:433, 956:434,  
 956:435, 956:436,  
 956:437, 956:438,  
 956:439, 956:440,  
 956:441, 956:442,  
 956:443, 956:444,  
 956:445, 956:446,  
 956:447, 956:448,  
 956:449, 956:450,  
 956:451, 956:452,  
 956:453, 956:454,  
 956:455, 956:456,  
 956:457, 956:458,  
 956:459, 956:460,  
 956:461, 956:462,  
 956:463, 956:464,  
 956:465, 956:466,  
 956:467, 956:468,  
 956:469, 956:470,  
 956:471, 956:472,  
 956:473, 956:474,  
 956:475, 956:476,  
 956:477, 956:478,  
 956:479, 956:480,  
 956:481, 956:482,  
 956:483, 956:484,  
 956:485, 956:486,  
 956:487, 956:488,  
 956:489, 956:490,  
 956:491, 956:492,  
 956:493, 956:494,  
 956:495, 956:496,  
 956:497, 956:498,  
 956:499, 956:500,  
 956:501, 956:502,  
 956:503, 956:504,  
 956:505, 956:506,  
 956:507, 956:508,  
 956:509, 956:510,  
 956:511, 956:512,  
 956:513, 956:514,  
 956:515, 956:516,  
 956:517, 956:518,  
 956:519, 956:520,  
 956:521, 956:522,  
 956:523, 956:524,  
 956:525, 956:526,  
 956:527, 956:528,  
 956:529, 956:530,  
 956:531, 956:532,  
 956:533, 956:534,  
 956:535, 956:536,  
 956:537, 956:538,  
 956:539, 956:540,  
 956:541, 956:542,  
 956:543, 956:544,  
 956:545, 956:546,  
 956:547, 956:548,  
 956:549, 956:550,  
 956:551, 956:552,  
 956:553, 956:554,  
 956:555, 956:556,  
 956:557, 956:558,  
 956:559, 956:560,  
 956:561, 956:562,  
 956:563, 956:564,  
 956:565, 956:566,  
 956:567, 956:568,  
 956:569, 956:570,  
 956:571, 956:572,  
 956:573, 956:574,  
 956:575, 956:576,  
 956:577, 956:578,  
 956:579, 956:580,  
 956:581, 956:582,  
 956:583, 956:584,  
 956:585, 956:586,  
 956:587, 956:588,  
 956:589, 956:590,  
 956:591, 956:592,  
 956:593, 956:594,  
 956:595, 956:596,  
 956:597, 956:598,  
 956:599, 956:600,  
 956:601, 956:602,  
 956:603, 956:604,  
 956:605, 956:606,  
 956:607, 956:608,  
 956:609, 956:610,  
 956:611, 956:612,  
 956:613, 956:614,  
 956:615, 956:616,  
 956:617, 956:618,  
 956:619, 956:620,  
 956:621, 956:622,  
 956:623, 956:624,  
 956:625, 956:626,  
 956:627, 956:628,  
 956:629, 956:630,  
 956:631, 956:632,  
 956:633, 956:634,  
 956:635, 956:636,  
 956:637, 956:638,  
 956:639, 956:640,  
 956:641, 956:642,  
 956:643, 956:644,  
 956:645, 956:646,  
 956:647, 956:648,  
 956:649, 956:650,  
 956:651, 956:652,  
 956:653, 956:654,  
 956:655, 956:656,  
 956:657, 956:658,  
 956:659, 956:660,  
 956:661, 956:662,  
 956:663, 956:664,  
 956:665, 956:666,  
 956:667, 956:668,  
 956:669, 956:670,  
 956:671, 956:672,  
 956:673, 956:674,  
 956:675, 956:676,  
 956:677, 956:678,  
 956:679, 956:680,  
 956:681, 956:682,  
 956:683, 956:684,  
 956:685, 956:686,  
 956:687, 956:688,  
 956:689, 956:690,  
 956:691, 956:692,  
 956:693, 956:694,  
 956:695, 956:696,  
 956:697, 956:698,  
 956:699, 956:700,  
 956:701, 956:702,  
 956:703, 956:704,  
 956:705, 956:706,  
 956:707, 956:708,  
 956:709, 956:710,  
 956:711, 956:712,  
 956:713, 956:714,  
 956:715, 956:716,  
 956:717, 956:718,  
 956:719, 956:720,  
 956:721, 956:722,  
 956:723, 956:724,  
 956:725, 956:726,  
 956:727, 956:728,  
 956:729, 956:730,  
 956:731, 956:732,  
 956:733, 956:734,  
 956:735, 956:736,  
 956:737, 956:738,  
 956:739, 956:740,  
 956:741, 956:742,  
 956:743, 956:744,  
 956:745, 956:746,  
 956:747, 956:748,  
 956:749, 956:750,  
 956:751, 956:752,  
 956:753, 956:754,  
 956:755, 956:756,  
 956:757, 956:758,  
 956:759, 956:760,  
 956:761, 956:762,  
 956:763, 956:764,  
 956:765, 956:766,  
 956:767, 956:768,  
 956:769, 956:770,  
 956:771, 956:772,  
 956:773, 956:774,  
 956:775, 956:776,  
 956:777, 956:778,  
 956:779, 956:780,  
 956:781, 956:782,  
 956:783, 956:784,  
 956:785, 956:786,  
 956:787, 956:788,  
 956:789, 956:790,  
 956:791, 956:792,  
 956:793, 956:794,  
 956:795, 956:796,  
 956:797, 956:798,  
 956:799, 956:800,  
 956:801, 956:802,  
 956:803, 956:804,  
 956:805, 956:806,  
 956:807, 956:808,  
 956:809, 956:810,  
 956:811, 956:812,  
 956:813, 956:814,  
 956:815, 956:816,  
 956:817, 956:818,  
 956:819, 956:820

<p><b>settling</b> [1] - 825:9  <b>seven</b> [2] - 852:17, 912:12  <b>seven-year</b> [1] - 912:12  <b>several</b> [3] - 894:2, 974:3, 1028:17  <b>severe</b> [2] - 821:19, 988:16  <b>severely</b> [3] - 817:7, 938:2, 1000:16  <b>severity</b> [2] - 929:10, 929:25  <b>shallow</b> [1] - 1000:1  <b>shape</b> [5] - 909:7, 928:18, 929:2, 929:5, 929:9  <b>shared</b> [1] - 911:1  <b>shell</b> [46] - 819:6, 819:8, 824:3, 825:7, 825:12, 863:16, 865:17, 866:17, 867:25, 881:25, 884:9, 887:7, 893:2, 893:3, 893:4, 893:8, 893:9, 893:11, 893:15, 893:18, 893:25, 894:9, 894:12, 894:13, 894:14, 894:18, 898:14, 898:19, 899:22, 900:10, 908:2, 908:12, 920:21, 921:5, 921:6, 927:24, 936:11, 937:12, 981:4, 981:22, 987:5, 989:14, 1009:7  <b>shelled</b> [3] - 910:9, 935:25, 938:1  <b>shellfish</b> [1] - 990:9  <b>shelling</b> [10] - 907:16, 908:1, 910:15, 910:19, 911:4, 912:3, 913:5, 913:9, 913:15, 1009:10  <b>shells</b> [7] - 826:1, 883:7, 883:10, 883:16, 894:20, 908:11, 982:1  <b>shellstock</b> [2] - 863:16, 866:17  <b>Shields</b> [6] - 879:9, 888:25, 889:3, 896:11, 914:6, 950:12  <b>shields</b> [9] - 883:13, 889:24, 890:3, 890:25, 892:16,</p>	<p>916:23, 918:23, 919:3, 925:19  <b>shoot</b> [1] - 916:6  <b>short</b> [1] - 855:24  <b>shorter</b> [1] - 889:11  <b>shortly</b> [1] - 914:21  <b>shot</b> [1] - 960:16  <b>show</b> [15] - 842:6, 885:11, 919:9, 919:18, 924:22, 971:17, 971:19, 987:17, 990:2, 993:16, 993:17, 1001:2, 1021:14, 1021:24, 1021:25  <b>showed</b> [7] - 960:3, 968:17, 968:21, 991:23, 993:14, 1006:12, 1009:8  <b>showing</b> [8] - 892:2, 949:14, 957:16, 988:16, 993:16, 1000:16, 1003:1, 1018:24  <b>shown</b> [7] - 905:7, 928:16, 928:17, 957:15, 989:5, 992:2, 995:25  <b>shows</b> [5] - 869:4, 901:2, 920:20, 992:14, 1022:6  <b>shrimp</b> [1] - 827:18  <b>shucked</b> [1] - 908:13  <b>side</b> [6] - 833:15, 855:7, 855:8, 885:20, 943:24, 971:25  <b>sideways</b> [1] - 883:15  <b>sign</b> [2] - 926:22, 927:19  <b>significant</b> [5] - 878:25, 909:24, 924:17, 925:12, 1022:6  <b>significantly</b> [1] - 966:12  <b>signs</b> [1] - 1000:16  <b>silt</b> [6] - 882:8, 882:11, 882:24, 883:1, 883:3, 887:14  <b>similar</b> [8] - 849:9, 855:25, 868:22, 868:23, 885:1, 895:18, 907:10, 992:19  <b>similarly</b> [6] - 865:14, 922:23, 942:1, 952:24, 953:10, 961:12  <b>simple</b> [3] - 905:16,</p>	<p>908:5, 908:7  <b>simpler</b> [1] - 862:8  <b>simply</b> [2] - 980:25, 997:21  <b>single</b> [7] - 893:16, 904:6, 904:7, 904:18, 904:22, 905:22, 1018:4  <b>site</b> [9] - 915:12, 916:24, 917:12, 926:15, 926:20, 927:1, 932:14, 932:18, 1027:21  <b>Site</b> [3] - 926:13, 931:23, 932:3  <b>sites</b> [4] - 915:24, 919:5, 921:11, 932:12  <b>situation</b> [22] - 833:9, 836:15, 838:18, 840:11, 840:19, 841:20, 842:8, 850:16, 856:9, 861:2, 882:22, 893:21, 897:12, 898:12, 899:9, 899:18, 900:9, 929:25, 933:16, 979:18, 979:21, 1019:14  <b>situations</b> [1] - 857:17  <b>six</b> [1] - 953:24  <b>size</b> [57] - 819:13, 825:19, 825:20, 834:16, 834:20, 835:1, 836:13, 836:19, 837:2, 837:4, 837:22, 838:1, 838:5, 839:20, 840:6, 840:7, 840:8, 840:12, 841:17, 843:6, 843:14, 843:18, 844:17, 844:19, 845:3, 848:2, 848:5, 856:6, 856:15, 856:23, 860:24, 861:7, 863:14, 866:15, 870:11, 871:5, 871:9, 903:25, 904:20, 921:1, 926:23, 935:11, 947:1, 947:4, 979:8, 982:11, 982:12, 983:21, 984:14, 985:5, 985:7, 1023:8, 1023:11, 1023:16</p>	<p>848:17  <b>slide</b> [10] - 874:20, 875:4, 880:4, 900:1, 934:11, 935:17, 936:19, 937:18, 938:4, 1020:25  <b>slides</b> [6] - 898:4, 919:15, 930:17, 934:3, 969:2, 969:17  <b>slow</b> [1] - 816:4  <b>slowly</b> [1] - 856:3  <b>small</b> [20] - 819:5, 819:6, 834:22, 835:18, 836:6, 836:22, 836:25, 838:22, 839:12, 839:25, 843:19, 856:7, 860:25, 865:21, 871:11, 910:19, 934:24, 934:25, 984:23, 985:11  <b>smaller</b> [11] - 818:15, 835:5, 837:8, 837:25, 876:18, 876:23, 881:1, 938:15, 975:7, 983:10, 983:20  <b>Smith</b> [1] - 892:6  <b>snail</b> [3] - 940:21, 979:25, 1005:16  <b>snails</b> [8] - 999:13, 1005:7, 1005:10, 1005:20, 1005:22, 1005:23, 1006:4, 1007:18  <b>snippet</b> [2] - 969:10, 969:25  <b>soft</b> [1] - 980:9  <b>sold</b> [1] - 941:24  <b>solution</b> [1] - 998:10  <b>sometimes</b> [3] - 907:19, 923:10, 928:5  <b>somewhat</b> [7] - 835:11, 868:22, 879:15, 885:18, 933:11, 1026:23, 1029:13  <b>somewhere</b> [1] - 910:8  <b>sooner</b> [1] - 984:7  <b>sorry</b> [41] - 824:12, 832:11, 846:17, 847:4, 847:5, 858:13, 859:17, 862:7, 863:1, 867:11, 872:18, 874:13, 881:16, 886:7, 886:8, 895:16, 896:9, 897:25, 900:9, 906:1, 910:3, 919:22, 921:13, 923:4, 923:16, 927:5, 939:15, 947:7, 947:8, 948:8, 948:14, 948:20, 954:15, 960:14, 995:17, 1003:22, 1004:3, 1010:21  <b>sort</b> [2] - 964:12, 984:8  <b>Sound</b> [13] - 928:25, 929:3, 972:22, 973:3, 975:14, 980:3, 991:18, 999:3, 1000:5, 1000:12, 1000:14, 1000:22, 1001:23  <b>sound</b> [3] - 885:2, 910:10, 1017:4  <b>sounds</b> [2] - 959:1, 959:8  <b>source</b> [4] - 955:7, 973:14, 975:21, 1008:16  <b>south</b> [1] - 973:6  <b>southeastern</b> [1] - 1013:18  <b>southern</b> [3] - 928:25, 974:7, 981:20  <b>southward</b> [1] - 997:25  <b>southwestern</b> [1] - 925:24  <b>sovereignty</b> [1] - 989:11  <b>spat</b> [33] - 823:12, 824:8, 824:9, 824:17, 825:10, 825:11, 825:13, 825:14, 825:18, 825:21, 825:23, 825:25, 826:2, 839:12, 868:2, 868:14, 881:2, 887:11, 887:12, 915:18, 916:7, 919:11, 920:24, 920:25, 921:2, 921:7, 924:4, 932:13, 935:12, 937:13, 979:9  <b>spawned</b> [2] - 902:20, 902:22  <b>spawning</b> [2] - 840:21, 840:24  <b>speaking</b> [2] - 855:2,</p>
--	---	---	---



<p>971:15  <b>SPECIAL</b> [46] -              814:11, 816:2,              819:23, 820:4,              859:24, 878:5,              878:11, 886:7,              887:1, 892:4,              905:12, 906:1,              906:5, 913:20,              913:23, 939:7,              939:13, 939:22,              939:24, 940:5,              955:10, 968:4,              969:19, 972:1,              972:7, 972:14,              978:19, 990:6,              990:8, 1010:9,              1010:19, 1011:2,              1011:5, 1024:2,              1025:19, 1025:23,              1026:5, 1026:15,              1027:5, 1028:3,              1028:13, 1028:19,              1028:23, 1029:4,              1029:16, 1029:23  <b>Special</b> [8] - 837:5,              971:16, 972:6,              977:18, 990:2,              991:15, 991:17,              1001:2  <b>specific</b> [1] - 955:2  <b>specifically</b> [3] -              941:3, 975:20,              1022:10  <b>spill</b> [18] - 829:24,              832:5, 832:23,              832:24, 834:23,              835:19, 842:17,              843:11, 856:8,              858:10, 858:14,              861:1, 871:12,              928:22, 962:18,              1023:3, 1024:21,              1024:24  <b>split</b> [1] - 930:3  <b>sponges</b> [1] - 980:8  <b>spot</b> [1] - 976:15  <b>spread</b> [1] - 1005:9  <b>spring</b> [1] - 918:4  <b>Spur</b> [10] - 926:12,              926:20, 974:21,              975:3, 998:21,              999:1, 1000:23,              1001:4, 1009:4,              1027:11  <b>square</b> [3] - 895:24,              896:19, 896:22  <b>squared</b> [1] - 894:23  <b>St</b> [26] - 928:25, 929:3,              972:22, 973:3,</p>	<p>973:15, 974:4,              974:6, 975:14,              980:3, 981:20,              982:17, 982:19,              991:18, 996:15,              996:19, 997:8,              997:11, 997:24,              998:3, 999:3,              1000:5, 1000:12,              1000:13, 1000:22,              1001:22, 1009:4  <b>stable</b> [5] - 849:11,              849:14, 849:19,              956:15, 1026:21  <b>stack</b> [1] - 954:25  <b>staff</b> [5] - 914:6,              922:25, 931:8,              931:10, 995:15  <b>stage</b> [2] - 825:4,              825:10  <b>stages</b> [7] - 824:3,              825:3, 825:5, 826:9,              826:10, 894:21  <b>Stakeholders</b> [1] -              1028:20  <b>stand</b> [2] - 920:15,              1001:14  <b>standing</b> [17] - 827:7,              827:14, 827:15,              827:18, 827:25,              828:1, 830:24,              831:8, 831:9, 840:5,              845:22, 854:10,              870:8, 870:10,              977:10, 992:15  <b>start</b> [11] - 828:8,              888:19, 919:20,              919:24, 920:4,              965:12, 965:16,              968:15, 978:23,              1025:15  <b>started</b> [8] - 889:20,              929:9, 929:24,              938:6, 949:5,              964:19, 983:24,              1027:13  <b>starting</b> [3] - 823:5,              903:11, 983:7  <b>starts</b> [9] - 817:1,              863:6, 863:9,              867:19, 888:24,              913:24, 921:4,              993:21, 998:20  <b>STATE</b> [2] - 814:3,              814:6  <b>state</b> [7] - 828:20,              835:24, 848:14,              850:2, 912:18,              912:21, 1021:9  <b>State</b> [20] - 814:15</p>	<p>814:17, 814:20,              862:4, 862:15,              875:19, 909:23,              910:3, 910:14,              911:11, 911:22,              946:16, 946:19,              966:9, 967:10,              967:15, 989:11,              1008:4, 1015:7,              1031:3  <b>state-wide</b> [1] -              1021:9  <b>statement</b> [25] -              831:17, 831:18,              835:20, 849:9,              870:23, 873:10,              873:24, 874:2,              886:16, 902:10,              903:24, 904:20,              925:15, 925:16,              925:18, 926:3,              936:1, 958:1, 959:2,              959:9, 970:11,              994:6, 994:7, 995:3,              1006:20  <b>statements</b> [6] -              821:25, 870:3,              875:9, 960:17,              996:5, 1029:14  <b>States</b> [1] - 1013:18  <b>states</b> [16] - 823:17,              824:8, 824:9,              830:11, 832:2,              844:6, 844:25,              846:21, 848:22,              849:14, 856:4,              870:7, 910:25,              923:5, 977:6, 1025:3  <b>STATES</b> [1] - 814:1  <b>stating</b> [2] - 845:13,              866:19  <b>station</b> [2] - 945:22,              946:24  <b>stations</b> [10] - 946:1,              946:2, 946:20,              946:22, 947:9,              947:10, 947:21,              974:5, 974:11,              997:10  <b>statistical</b> [1] - 945:6  <b>statistics</b> [4] - 943:2,              1017:21, 1018:17,              1020:24  <b>status</b> [1] - 930:19  <b>stay</b> [4] - 849:9, 882:4,              953:25, 1006:5  <b>stayed</b> [1] - 976:17  <b>stenographic</b> [1] -              1031:5</p>	<p><b>steps</b> [2] - 860:16,              946:16  <b>Steve</b> [4] - 945:20,              945:24, 949:2,              949:11  <b>still</b> [39] - 819:22,              820:5, 840:16,              844:1, 844:17,              868:17, 881:5,              881:25, 885:16,              901:10, 912:24,              922:17, 923:22,              927:24, 929:22,              931:16, 932:17,              933:18, 943:22,              947:20, 962:4,              965:14, 966:22,              966:23, 968:24,              970:6, 975:2, 975:7,              975:8, 982:9,              982:10, 991:24,              992:17, 1004:3,              1013:6, 1024:7,              1025:4, 1027:23  <b>stimulation</b> [1] -              916:13  <b>stock</b> [5] - 827:15,              828:2, 831:8, 840:5,              840:6  <b>stocks</b> [19] - 827:7,              827:14, 827:17,              827:18, 827:25,              830:24, 831:9,              844:14, 845:2,              845:23, 854:10,              857:25, 870:8,              870:10, 977:1,              977:10, 992:15,              1019:5, 1019:11  <b>stone</b> [18] - 890:11,              891:3, 891:5, 891:9,              891:13, 891:22,              892:11, 892:18,              893:24, 893:25,              894:3, 894:7,              894:10, 894:22,              940:10, 940:25,              980:2, 1007:17  <b>stopped</b> [2] - 910:15,              911:11  <b>stopping</b> [1] - 1019:8  <b>Storm</b> [1] - 890:21  <b>storm</b> [1] - 890:23  <b>storms</b> [1] - 885:13  <b>story</b> [1] - 833:15  <b>strange</b> [1] - 916:2  <b>strategies</b> [1] - 860:7  <b>Street</b> [1] - 814:12  <b>street</b> [1] - 961:7</p>	<p>838:17, 988:21,              998:3, 998:15,              1003:6  <b>stressed</b> [6] - 817:7,              821:20, 821:21,              831:2, 849:17,              1000:16  <b>strike</b> [2] - 942:22,              1021:4  <b>string</b> [2] - 948:25,              950:3  <b>strike</b> [1] - 965:5  <b>strong</b> [1] - 999:20  <b>strongly</b> [2] - 967:2,              1001:17  <b>structure</b> [8] - 867:24,              868:10, 875:14,              895:3, 908:16,              908:18, 934:23,              938:17  <b>structures</b> [1] - 907:3  <b>students</b> [1] - 900:5  <b>studies</b> [1] - 827:16  <b>study</b> [1] - 1021:14  <b>stuff</b> [1] - 974:25  <b>style</b> [1] - 899:13  <b>sub</b> [31] - 827:8,              831:6, 834:18,              835:4, 835:9,              835:12, 836:10,              836:13, 836:17,              838:16, 839:17,              839:19, 842:14,              844:14, 845:2,              845:15, 848:1,              848:6, 850:21,              870:10, 870:16,              871:7, 876:23,              900:22, 960:23,              961:1, 961:4,              984:24, 985:14,              1005:19, 1023:14  <b>sub-adult</b> [2] - 827:8,              1005:19  <b>sub-legal</b> [28] - 831:6,              834:18, 835:4,              835:9, 835:12,              836:10, 836:13,              836:17, 838:16,              839:17, 839:19,              842:14, 844:14,              845:2, 845:15,              848:1, 848:6,              870:10, 870:16,              871:7, 876:23,              900:22, 960:23,              961:1, 961:4,              984:24, 985:14,              1023:14  <b>sub-legals</b> [1] -</p>
---	---	--	--	--

THE REPORTING GROUP [6] - 827:4,

<p>850:21  <b>subject</b> <sup>[11]</sup> - 823:6, 878:3, 878:7, 881:7, 900:11, 900:21, 939:18, 982:20, 990:23, 998:12, 999:13  <b>submerged</b> <sup>[2]</sup> - 989:12, 989:18  <b>submitted</b> <sup>[3]</sup> - 835:23, 846:14, 865:1  <b>subscribe</b> <sup>[1]</sup> - 1031:10  <b>subsequently</b> <sup>[1]</sup> - 860:12  <b>substantial</b> <sup>[5]</sup> - 943:12, 943:16, 944:18, 945:9, 959:11  <b>substantially</b> <sup>[2]</sup> - 870:13, 953:7  <b>substrate</b> <sup>[22]</sup> - 823:11, 823:17, 823:18, 823:23, 824:5, 824:16, 824:21, 825:12, 826:21, 868:1, 868:12, 870:12, 880:9, 884:16, 887:10, 887:15, 893:10, 893:12, 901:16, 916:25, 1026:10  <b>substrates</b> <sup>[1]</sup> - 1026:8  <b>subtidal</b> <sup>[2]</sup> - 879:4, 880:11  <b>succeeded</b> <sup>[1]</sup> - 884:13  <b>success</b> <sup>[3]</sup> - 826:17, 964:13, 1027:6  <b>successful</b> <sup>[7]</sup> - 825:14, 825:15, 825:24, 908:6, 912:2, 921:24, 921:25  <b>successor</b> <sup>[2]</sup> - 966:6, 966:7  <b>suffering</b> <sup>[2]</sup> - 878:25, 1025:4  <b>sufficient</b> <sup>[4]</sup> - 838:5, 844:18, 845:3, 851:25  <b>suggest</b> <sup>[10]</sup> - 817:22, 829:8, 848:2, 852:3, 865:19, 932:12, 956:18, 1004:23, 1022:5, 1030:2  <b>suggested</b> <sup>[2]</sup> - 818:6,</p>	<p>821:1  <b>suggesting</b> <sup>[1]</sup> - 933:12  <b>suggests</b> <sup>[1]</sup> - 849:21  <b>suitable</b> <sup>[5]</sup> - 825:6, 825:7, 826:16, 887:8, 982:22  <b>summarizes</b> <sup>[1]</sup> - 846:22  <b>summarizing</b> <sup>[1]</sup> - 932:1  <b>Summary</b> <sup>[1]</sup> - 867:4  <b>summary</b> <sup>[8]</sup> - 816:21, 820:7, 867:20, 871:20, 949:14, 955:14, 1003:12, 1006:17  <b>summer</b> <sup>[10]</sup> - 832:5, 832:22, 833:15, 860:11, 877:7, 915:5, 915:20, 972:25, 976:16, 1009:1  <b>summers</b> <sup>[1]</sup> - 1016:18  <b>summertime</b> <sup>[1]</sup> - 833:12  <b>supervisor</b> <sup>[2]</sup> - 889:6, 949:6  <b>supply</b> <sup>[1]</sup> - 1005:12  <b>support</b> <sup>[3]</sup> - 844:20, 845:4, 988:11  <b>suppose</b> <sup>[1]</sup> - 928:4  <b>supposed</b> <sup>[9]</sup> - 837:7, 837:14, 837:16, 843:20, 843:22, 857:3, 883:25, 943:3, 997:17  <b>SUPREME</b> <sup>[1]</sup> - 814:1  <b>surely</b> <sup>[1]</sup> - 875:23  <b>surface</b> <sup>[9]</sup> - 825:6, 825:7, 878:22, 885:1, 896:16, 897:15, 897:19, 908:1, 908:3  <b>surfaces</b> <sup>[1]</sup> - 897:15  <b>surge</b> <sup>[1]</sup> - 884:7  <b>surprise</b> <sup>[2]</sup> - 1014:2, 1014:4  <b>surprising</b> <sup>[2]</sup> - 1014:5, 1014:7  <b>surrounded</b> <sup>[1]</sup> - 894:7  <b>survey</b> <sup>[1]</sup> - 895:5  <b>surveys</b> <sup>[4]</sup> - 846:22, 883:12, 889:15, 957:11  <b>survival</b> <sup>[5]</sup> - 826:20, 831:6, 916:15, 1007:14, 1027:1</p>	<p><b>survive</b> <sup>[2]</sup> - 935:11, 1018:23  <b>survived</b> <sup>[2]</sup> - 935:5, 935:7  <b>surviving</b> <sup>[1]</sup> - 817:6  <b>suspect</b> <sup>[2]</sup> - 946:3, 947:17  <b>sustain</b> <sup>[4]</sup> - 844:11, 848:24, 959:23, 987:2  <b>Sustainable</b> <sup>[1]</sup> - 1028:21  <b>sustainable</b> <sup>[2]</sup> - 987:4, 1008:16  <b>sustained</b> <sup>[3]</sup> - 892:4, 978:19, 1017:2  <b>sustaining</b> <sup>[2]</sup> - 849:22, 850:4  <b>swept</b> <sup>[2]</sup> - 973:21, 973:22  <b>swim</b> <sup>[1]</sup> - 1026:11  <b>swimming</b> <sup>[1]</sup> - 826:10  <b>switched</b> <sup>[1]</sup> - 911:7  <b>sworn</b> <sup>[3]</sup> - 866:4, 905:10, 965:24  <b>synopsis</b> <sup>[1]</sup> - 931:7  <b>synthesize</b> <sup>[1]</sup> - 1006:15  <b>system</b> <sup>[8]</sup> - 869:4, 925:2, 972:19, 972:22, 973:7, 985:18, 1016:19  <b>systems</b> <sup>[2]</sup> - 985:18, 985:19</p>	<p><b>table</b> <sup>[4]</sup> - 941:17, 941:19, 951:15, 1025:17  <b>tables</b> <sup>[1]</sup> - 831:3  <b>tabletop</b> <sup>[1]</sup> - 885:2  <b>talks</b> <sup>[2]</sup> - 974:3, 996:18  <b>tap</b> <sup>[1]</sup> - 882:23  <b>temperatures</b> <sup>[1]</sup> - 924:8  <b>tend</b> <sup>[1]</sup> - 894:3  <b>tenure</b> <sup>[1]</sup> - 911:6  <b>term</b> <sup>[15]</sup> - 817:12, 819:18, 826:5, 827:15, 829:19, 867:22, 867:24, 868:12, 876:2, 887:16, 887:19, 893:18, 908:15, 928:8, 981:7  <b>terminology</b> <sup>[7]</sup> - 825:13, 864:24, 893:6, 902:7, 903:21, 921:7, 925:21  <b>terms</b> <sup>[10]</sup> - 823:16, 824:23, 826:2, 835:11, 835:15, 840:3, 855:5, 884:6, 991:9, 1001:25  <b>terrible</b> <sup>[1]</sup> - 918:18  <b>terrific</b> <sup>[1]</sup> - 816:2  <b>test</b> <sup>[2]</sup> - 927:11, 1009:13  <b>testified</b> <sup>[7]</sup> - 860:15, 876:22, 895:25, 913:4, 924:21, 948:4, 948:11  <b>testifying</b> <sup>[2]</sup> - 967:13, 1015:12  <b>testimony</b> <sup>[37]</sup> - 822:15, 834:7, 838:20, 841:16, 852:19, 855:6, 857:5, 864:25, 865:3, 865:5, 865:8, 865:14, 866:5, 874:3, 882:2, 885:24, 886:1, 886:5, 886:9, 886:13, 886:22, 892:9, 892:11, 903:18, 905:10, 940:14, 940:19, 944:22, 965:24, 966:21, 966:23, 967:14, 967:17, 967:21, 967:23, 968:8, 968:10</p>	<p><b>texture</b> <sup>[1]</sup> - 924:6  <b>Thais</b> <sup>[1]</sup> - 979:25  <b>THE</b> <sup>[17]</sup> - 814:1, 972:2, 972:17, 990:4, 990:7, 990:9, 1011:7, 1026:4, 1026:7, 1026:18, 1027:10, 1028:6, 1028:15, 1028:22, 1029:3, 1029:9, 1030:13  <b>themselves</b> <sup>[3]</sup> - 826:21, 1026:8, 1026:9  <b>theory</b> <sup>[1]</sup> - 978:15  <b>therefore</b> <sup>[2]</sup> - 821:20, 951:24  <b>thinking</b> <sup>[4]</sup> - 874:13, 879:19, 912:6, 925:21  <b>third</b> <sup>[2]</sup> - 820:6, 1024:10  <b>thoughts</b> <sup>[1]</sup> - 890:12  <b>thousands</b> <sup>[1]</sup> - 885:12  <b>threat</b> <sup>[5]</sup> - 842:18, 843:5, 843:11, 856:13, 860:17  <b>three</b> <sup>[6]</sup> - 833:12, 833:13, 845:16, 849:10, 880:7, 912:10  <b>thriving</b> <sup>[1]</sup> - 1008:18  <b>throughout</b> <sup>[23]</sup> - 821:10, 821:23, 826:9, 843:4, 844:11, 844:20, 845:4, 846:2, 849:8, 856:12, 912:11, 925:1, 932:14, 971:12, 975:25, 977:16, 983:25, 989:17, 991:21, 1001:22, 1006:1, 1012:11, 1027:15  <b>throw</b> <sup>[3]</sup> - 818:16, 896:1, 926:3  <b>throwing</b> <sup>[1]</sup> - 900:25  <b>thumbnail</b> <sup>[1]</sup> - 982:11  <b>ticket</b> <sup>[1]</sup> - 947:24  <b>tickets</b> <sup>[3]</sup> - 947:25, 1018:18  <b>tidal</b> <sup>[5]</sup> - 884:7, 973:18, 975:22, 981:25, 1000:1  <b>tide</b> <sup>[1]</sup> - 973:22  <b>time-set</b> <sup>[1]</sup> - 846:20  <b>timetables</b> <sup>[1]</sup> - 965:10  <b>titled</b> <sup>[1]</sup> - 1024:9</p>
<b>T</b>				
<p><b>tab</b> <sup>[47]</sup> - 819:20, 819:25, 846:13, 859:12, 859:23, 866:10, 867:3, 867:14, 867:17, 868:17, 868:19, 888:7, 888:11, 888:13, 913:18, 913:24, 914:3, 922:6, 922:11, 930:25, 931:2, 931:4, 941:10, 945:11, 948:18, 948:22, 949:18, 958:7, 987:8, 991:25, 992:20, 993:11, 995:20, 1004:2, 1004:3, 1004:6, 1006:8, 1017:10, 1017:11, 1017:13, 1024:7, 1027:1</p>				
THE REPORTING GROUP				
Mason & Lockhart				

**today** [8] - 875:13, 890:10, 938:6, 967:13, 970:6, 973:4, 1010:25, 1025:16

**together** [10] - 819:1, 852:22, 859:4, 859:9, 861:11, 863:21, 876:8, 881:6, 916:23, 1012:8

**tolerance** [1] - 835:2

**tolerances** [1] - 843:19

**Tommy** [1] - 989:21

**tong** [2] - 915:15, 976:5

**tonger** [1] - 819:10

**tonging** [14] - 864:23, 865:19, 866:20, 883:6, 883:7, 890:8, 914:10, 915:17, 917:17, 920:16, 979:7, 981:12, 986:3, 987:15

**tongs** [13] - 818:22, 818:25, 819:3, 837:7, 863:15, 864:22, 866:16, 885:4, 914:14, 917:20, 927:12, 927:14, 981:14

**took** [13] - 860:16, 900:6, 903:1, 909:23, 910:1, 936:5, 944:7, 966:25, 967:9, 969:14, 977:13, 986:5, 1018:1

**tool** [1] - 908:20

**Top** [1] - 1009:5

**top** [17] - 841:5, 847:8, 847:20, 856:1, 859:18, 880:19, 899:10, 914:23, 917:3, 922:15, 923:5, 926:10, 926:12, 931:4, 941:14, 941:16, 945:15

**topic** [2] - 907:11, 941:5

**topics** [2] - 862:11, 941:5

**topographic** [1] - 885:5

**topography** [1] - 885:16

**tops** [1] - 885:17

**torture** [1] - 943:21

**total** [1] - 949:16

**totally** [3] - 855:13, 878:13, 883:15

**touched** [4] - 818:10, 828:24, 829:1, 829:23

**tough** [1] - 996:23

**toward** [5] - 842:20, 843:6, 843:13, 856:15, 962:13

**towards** [1] - 912:19

**track** [1] - 916:18

**traditionally** [2] - 1008:4, 1008:15

**tragedy** [1] - 846:9

**TRANSCRIPT** [1] - 814:9

**transcript** [4] - 873:23, 874:13, 965:21, 1031:5

**transcription** [1] - 969:15

**transcripts** [1] - 873:15

**transferred** [1] - 949:8

**trash** [7] - 864:23, 865:19, 866:20, 986:3, 986:20, 987:1, 987:4

**Trends** [1] - 992:8

**trends** [1] - 836:14

**tributaries** [1] - 973:17

**tried** [7] - 943:14, 983:5, 985:9, 1001:10, 1013:25, 1023:1, 1028:18

**trip** [9] - 828:15, 849:23, 849:24, 850:5, 942:13, 947:23, 947:25, 1018:18

**trips** [9] - 828:17, 828:25, 849:21, 942:6, 950:17, 950:21, 951:3, 951:19, 952:16

**trochophore** [1] - 826:14

**Tropical** [1] - 890:21

**trouble** [4] - 842:5, 851:18, 864:4, 885:8

**true** [14] - 828:19, 835:20, 870:3, 870:23, 873:10, 874:12, 875:9, 937:22, 962:20, 964:25, 966:20, 985:21, 993:8, 993:9

**trust** [1] - 906:22

**try** [10] - 841:13,

845:25, 846:2, 851:12, 916:7, 945:7, 992:1, 1016:6, 1028:17, 1030:3

**trying** [22] - 826:15, 832:10, 851:15, 857:18, 858:2, 876:3, 885:22, 887:20, 902:3, 903:3, 903:20, 907:24, 961:20, 986:13, 986:14, 997:19, 997:23, 1002:1, 1008:6, 1009:13, 1009:14, 1018:11

**TS** [1] - 890:16

**turn** [21] - 816:19, 822:22, 828:3, 834:11, 867:1, 869:11, 917:1, 922:6, 926:9, 930:24, 987:8, 991:25, 992:7, 993:11, 994:10, 995:19, 996:8, 998:16, 1002:3, 1006:8, 1006:18

**turning** [3] - 945:10, 948:18, 1018:19

**twice** [4] - 952:16, 952:17, 952:19, 952:20

**two** [45] - 822:1, 822:16, 832:16, 835:11, 836:3, 836:4, 836:23, 845:15, 848:4, 849:10, 849:15, 855:5, 857:5, 870:13, 888:16, 891:3, 910:2, 910:10, 917:1, 925:9, 927:21, 928:11, 928:12, 950:13, 956:8, 957:10, 957:12, 959:19, 960:21, 965:9, 967:6, 975:5, 977:11, 979:24, 991:12, 1003:4, 1004:21, 1016:17, 1021:15, 1021:22, 1021:25, 1022:19, 1023:6, 1023:12, 1023:18

**two-pages** [1] - 888:16

1021:15, 1023:6

**type** [15] - 830:4, 853:3, 853:6, 864:3, 865:21, 876:5, 882:7, 888:3, 894:24, 895:18, 897:1, 898:11, 899:14, 899:15, 914:9

**types** [7] - 835:25, 876:2, 895:2, 907:2, 914:5, 979:22, 980:9

**typical** [4] - 825:10, 881:3, 894:1, 1021:16

**typically** [28] - 817:12, 818:21, 819:7, 819:10, 823:22, 825:5, 825:7, 853:1, 853:2, 864:1, 864:3, 882:9, 885:4, 885:10, 897:3, 908:9, 908:10, 916:6, 922:2, 928:8, 972:20, 973:18, 979:15, 980:7, 980:11, 1016:17, 1021:22

**U**

**U.S** [1] - 877:23

**unabated** [2] - 844:13, 845:1

**uncertain** [1] - 848:22

**uncertainties** [2] - 856:11, 861:4

**uncommon** [1] - 865:20

**unculled** [1] - 865:16

**under** [18] - 820:6, 822:14, 857:23, 876:12, 879:6, 879:9, 932:2, 946:7, 948:11, 979:16, 980:7, 989:19, 1007:3, 1009:21, 1009:25, 1011:14, 1011:17, 1015:21

**underneath** [2] - 816:21, 846:19

**underproducing** [1] - 932:5

**underreport** [1] - 946:9

**underreported** [3] - 943:8, 943:10, 961:6

**underreporting** [12] - 943:13, 943:17, 943:19, 943:20, 944:18,

944:21, 945:8, 945:9, 948:6, 948:12, 948:17

**undertaken** [1] - 923:6

**unfair** [2] - 905:4, 905:11

**unfortunately** [2] - 843:9, 917:2

**unharvested** [1] - 878:25

**unhealthy** [1] - 841:19

**unit** [1] - 819:15

**United** [1] - 1013:18

**UNITED** [1] - 814:1

**unless** [1] - 977:18

**unlikely** [1] - 978:12

**unlimited** [1] - 851:16

**unpredictable** [2] - 843:5, 856:13

**unprudent** [1] - 857:24

**unskilled** [1] - 865:21

**unusual** [3] - 948:1, 948:5, 981:23

**unwieldy** [1] - 954:24

**up** [72] - 816:3, 816:11, 823:21, 823:22, 823:25, 832:25, 837:1, 837:6, 847:20, 864:23, 865:4, 879:21, 880:4, 881:13, 881:18, 883:7, 883:10, 885:12, 886:19, 888:20, 890:8, 892:8, 894:4, 894:9, 894:16, 896:14, 896:19, 897:16, 898:6, 898:13, 898:18, 899:19, 910:2, 914:7, 916:25, 924:22, 931:1, 938:4, 943:23, 947:10, 950:3, 957:3, 960:3, 960:17, 968:2, 968:6, 968:7, 972:15, 977:3, 981:12, 981:13, 982:1, 982:2, 982:11, 986:20, 987:20, 1001:14, 1014:17, 1016:10, 1017:8, 1020:8, 1021:1, 1021:8, 1021:24, 1021:25, 1022:11, 1023:1, 1023:5, 1024:1, 1027:7

<p><b>upcoming</b> [2] - 844:20, 845:5  <b>useful</b> [1] - 997:22  <b>uses</b> [1] - 852:9  <b>utilized</b> [1] - 932:20</p>	<p>1000:13, 1000:22, 1001:22, 1014:22  <b>Vincent's</b> [3] - 982:19, 997:11, 1009:4  <b>vine</b> [1] - 858:5  <b>violent</b> [2] - 885:13, 885:15  <b>visit</b> [1] - 991:1  <b>vitality</b> [2] - 839:3, 840:1  <b>voice</b> [1] - 972:15  <b>VOLUME</b> [1] - 814:5  <b>volume</b> [3] - 915:13, 917:9, 1029:1  <b>vulnerable</b> [1] - 985:23</p>	<p>976:9, 1000:7, 1028:1  <b>wave</b> [3] - 826:13, 882:23, 981:25  <b>ways</b> [2] - 907:15, 953:22  <b>weak</b> [2] - 988:1, 993:1  <b>weather</b> [1] - 1016:3  <b>week</b> [4] - 851:13, 853:11, 932:8, 932:20  <b>weekend</b> [4] - 1010:15, 1029:24, 1030:6, 1030:9  <b>weighed</b> [1] - 946:25  <b>weight</b> [1] - 947:3  <b>weighted</b> [1] - 896:1  <b>welcome</b> [1] - 1025:19  <b>west</b> [1] - 973:19  <b>Western</b> [1] - 922:16  <b>western</b> [12] - 923:8, 924:2, 925:1, 925:13, 925:22, 926:7, 929:3, 973:1, 973:2, 980:1, 999:1, 1009:2  <b>westernmost</b> [2] - 991:19, 1000:11  <b>westward</b> [1] - 1001:20  <b>whatsoever</b> [1] - 884:9  <b>whereas</b> [2] - 834:3, 956:3  <b>wherein</b> [2] - 863:13, 866:14  <b>WHEREOF</b> [1] - 1031:10  <b>whichever</b> [2] - 919:8, 919:13  <b>white</b> [4] - 904:17, 914:20, 918:18, 926:11  <b>whole</b> [9] - 826:18, 841:2, 846:2, 846:6, 917:20, 961:19, 976:11, 979:7, 1018:25  <b>wide</b> [5] - 821:13, 821:14, 901:23, 903:13, 1021:9  <b>wider</b> [1] - 835:14  <b>widespread</b> [2] - 986:23  <b>Wildlife</b> [17] - 829:25, 830:7, 832:25, 843:16, 852:9, 941:22, 945:1</p>	<p>955:14, 1015:10, 1015:15, 1015:18, 1018:2, 1018:6, 1018:8, 1023:8  <b>Wilson</b> [1] - 905:5  <b>wind</b> [2] - 826:13, 973:18  <b>WINE</b> [54] - 814:17, 881:10, 885:21, 886:20, 892:1, 904:23, 905:23, 906:2, 921:13, 933:15, 939:11, 954:12, 955:5, 967:25, 968:5, 968:12, 969:13, 969:20, 969:22, 970:2, 970:5, 970:18, 970:21, 971:6, 971:9, 972:5, 978:2, 978:4, 978:20, 987:19, 987:21, 993:22, 993:24, 994:18, 994:22, 996:22, 997:1, 997:3, 997:5, 999:7, 999:11, 1010:5, 1010:16, 1010:21, 1010:23, 1011:4, 1011:11, 1023:25, 1024:3, 1024:6, 1024:13, 1024:16, 1025:12, 1029:22  <b>wine's</b> [1] - 1014:10  <b>winter</b> [11] - 829:22, 833:11, 842:17, 844:11, 848:7, 848:25, 850:8, 853:11, 860:13, 959:24, 974:8  <b>wipe</b> [1] - 961:22  <b>wise</b> [1] - 916:19  <b>WITNESS</b> [17] - 972:2, 972:17, 990:4, 990:7, 990:9, 1011:7, 1026:4, 1026:7, 1026:18, 1027:10, 1028:6, 1028:15, 1028:22, 1029:3, 1029:9, 1030:13, 1031:10  <b>witness</b> [13] - 885:25, 886:23, 904:25, 905:2, 905:24, 906:3, 906:4, 939:10, 968:2, 971:15, 978:18  <b>Witness</b> [1] - 815:2</p>	<p>885:15, 894:25  <b>word</b> [6] - 877:25, 895:12, 901:9, 902:3, 961:7, 976:2  <b>words</b> [3] - 818:19, 821:11, 864:12  <b>Workers</b> [2] - 860:8, 860:18  <b>works</b> [1] - 889:5  <b>workshop</b> [1] - 853:3  <b>worried</b> [1] - 1008:21  <b>worse</b> [1] - 975:13  <b>worth</b> [1] - 955:16  <b>write</b> [7] - 822:17, 834:15, 864:2, 864:5, 867:20, 933:4, 1029:7  <b>writing</b> [5] - 855:12, 863:4, 864:15, 864:21, 866:18  <b>written</b> [12] - 835:22, 865:8, 865:14, 866:4, 872:2, 872:21, 873:4, 873:9, 874:3, 878:21, 972:11, 987:9  <b>wrote</b> [12] - 842:23, 844:22, 846:11, 857:10, 864:10, 864:16, 870:18, 871:14, 929:17, 946:12, 985:6, 1022:22</p>	
		<b>W</b>			
<b>V</b>			<b>Y</b>		
<p><b>value</b> [3] - 839:24, 839:25, 977:4  <b>values</b> [1] - 945:9  <b>variation</b> [1] - 955:23  <b>variations</b> [1] - 982:20  <b>various</b> [8] - 825:3, 831:4, 858:21, 908:17, 913:1, 971:22, 980:9, 1025:5  <b>vastly</b> [1] - 865:22  <b>versus</b> [3] - 909:6, 934:9, 940:11  <b>vessel</b> [1] - 832:15  <b>Veteran's</b> [1] - 1030:8  <b>viable</b> [1] - 1005:14  <b>video</b> [20] - 872:24, 873:2, 873:8, 873:16, 873:23, 874:5, 874:6, 875:1, 900:6, 934:13, 935:19, 936:21, 937:20, 968:18, 970:4, 970:20, 971:8, 977:21, 978:3, 992:2  <b>videod</b> [1] - 872:25  <b>videotaped</b> [1] - 968:22  <b>view</b> [21] - 843:7, 856:16, 857:9, 874:11, 876:4, 880:24, 920:5, 920:10, 965:3, 966:18, 970:6, 988:5, 988:25, 990:23, 993:6, 995:5, 995:8, 995:11, 1007:9, 1007:22, 1011:20  <b>viewed</b> [3] - 873:10, 873:18, 874:4  <b>Vincent</b> [23] - 928:25, 929:3, 958:24, 959:10, 972:22, 974:4, 974:6, 975:14, 981:20, 982:17, 991:18, 996:15, 996:19, 997:8, 997:24, 998:3, 999:3, 1000:5, 1000:12,</p>	<p><b>walk</b> [2] - 996:5, 1026:11  <b>walked</b> [1] - 975:22  <b>walkway</b> [1] - 920:14  <b>Walton</b> [11] - 970:2, 970:18, 971:6, 978:2, 987:19, 993:22, 994:18, 996:22, 997:4, 999:8, 1024:14  <b>wants</b> [1] - 895:22  <b>Ward</b> [1] - 989:21  <b>ward</b> [1] - 990:12  <b>warned</b> [3] - 854:9, 959:22, 1023:7  <b>warning</b> [6] - 844:24, 849:2, 851:24, 852:2, 855:15, 959:20  <b>warnings</b> [1] - 853:14  <b>watch</b> [1] - 840:24  <b>Water</b> [1] - 1028:21  <b>water</b> [33] - 819:2, 819:16, 824:25, 826:11, 826:14, 836:25, 843:21, 879:6, 879:9, 882:6, 897:6, 902:20, 943:4, 970:8, 971:1, 973:14, 973:17, 973:20, 973:21, 973:25, 975:9, 977:23, 986:21, 989:2, 994:8, 999:20, 1001:12, 1001:20, 1007:5, 1010:3, 1012:15, 1012:16, 1028:2  <b>waters</b> [1] - 1005:17  <b>Waterway</b> [5] - 973:10, 976:7,</p>	<b>Y</b>	<p><b>yards</b> [2] - 915:14, 918:17  <b>year</b> [35] - 840:22, 840:23, 845:8, 845:21, 848:11, 849:24, 852:17, 858:4, 910:10, 912:12, 912:23, 929:14, 948:10, 952:5, 953:3, 953:21, 953:24, 955:22, 955:23, 957:17, 974:24, 975:1, 1015:3, 1016:23, 1020:3, 1020:4, 1020:9, 1020:14, 1020:21, 1021:15, 1023:6, 1024:20  <b>years</b> [46] - 836:3, 836:4, 836:23, 848:4, 849:15, 849:25, 855:11, 857:6, 858:18,</p>		

858:19, 870:13,  
 885:12, 885:13,  
 889:7, 889:10,  
 889:20, 894:2,  
 905:9, 910:2, 912:2,  
 912:4, 912:6, 912:7,  
 913:17, 935:2,  
 955:16, 956:9,  
 957:10, 957:12,  
 959:15, 959:19,  
 960:21, 974:18,  
 977:12, 1003:4,  
 1004:21, 1009:13,  
 1012:6, 1012:9,  
 1012:10, 1021:22,  
 1021:25, 1022:19,  
 1023:12, 1023:18,  
 1023:21

**yesterday** [9] -  
 816:12, 818:10,  
 819:22, 828:24,  
 829:24, 852:12,  
 876:22, 924:21,  
 1013:25

**yield** [1] - 918:8

**yielding** [2] - 843:7,  
 856:15

**yourself** [2] - 861:10,  
 863:20

**YouTube** [1] - 874:24

**Z**

**zero** [5] - 887:7,  
 915:19, 917:10,  
 939:22, 939:23