No. 142, Original

In the

Supreme Court of the United States

STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

Before the Special Master

Hon. Ralph I. Lancaster

UPDATED PRE-FILED DIRECT TESTIMONY OF FLORIDA WITNESS ERIC SUTTON

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October 26, 2016

1. I, Eric Sutton, offer the following as my Direct Testimony.

2. I am the Assistant Executive Director of the Florida Fish and Wildlife Conservation Commission ("FWC" or "Commission"). I have held that position for over three years.

3. In my position as Assistant Executive Director, I oversee the Commission's operations in conjunction with and under the direction of Nick Wiley, the Executive Director, and the seven members of the Commission.

4. Before becoming Assistant Executive Director, I was the division director of the Division of Habitat and Species at the Commission for about two years. Before that, I was with the Southwest Florida Water Management District ("SWFWMD") for several years, working in the land management area. Altogether, I was with the SWFWMD for about six years.

5. I have both an undergraduate degree and a master's degree in zoology from the University of South Florida.

6. The primary purpose of my testimony is to describe the roles and responsibilities of the FWC, and to detail the various measures that the State of Florida has taken to protect, conserve, and manage the oyster resources in the Apalachicola Bay in Florida. In particular, I will describe the specific actions that FWC took to respond to the historic oyster crash we experienced in 2012.

7. I will also describe the actions the federal government took in response to the crash. The U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), quickly concluded that the central cause of the crash was the stress of low freshwater input to the Bay, and that overharvesting was not a central cause. These findings were memorialized in a memo by Laura Petes of the NOAA Climate Program Office in September

2012, and in a decision memo issued by NOAA in August 2013, both of which I have reviewed in my capacity as Assistant Executive Director of the Commission. I am familiar with these documents and have reviewed them because of my work at FWC. A true and accurate copy of Petes' memo and an email to which it was attached is exhibit FX-412, and a true and accurate copy of the NOAA decision memo is exhibit FX-413. As a result of these findings, FWC received federal disaster assistance funding from NOAA.

8. Specifically, Petes found that "oyster mortality would be occurring even in the absence of harvesting pressure," concluding that "Florida Gulf Coast oysters have been negatively affected by drought and reduced freshwater input." (Petes Memo, FX-412 at NOAA-0003818 & NOAA-0003825).

9. Likewise, the NOAA decision memo concluded that "the physical (high salinity) and biological (increased predation and natural mortality) environmental issues have played a more central role in the declines to the oyster stock in this area." (NOAA Decision Memo, FX-413 at 3 of the Decision Memo). Indeed, it is my understanding that had overharvesting or mismanagement been the central cause, Florida would not have been eligible for disaster funding.

10. I also describe the *2012-2013 Florida Gulf Coast Disaster Report* ("Disaster Report") prepared by FWC scientists after the 2012 oyster crash in Apalachicola Bay. I have reviewed and am familiar with this document because of my work at FWC. JX-91 is a true and accurate copy of the Disaster Report, which is part of the official records of the State of Florida. It was made as part of FWC's regular practice and was maintained in the course of its regularly conducted business.

11. The Disaster Report concluded that lack of freshwater flow caused the 2012 crash:

> The cause of the oyster decline is a lack of freshwater flow into rivers and estuaries. . . . Due to lack of freshwater input, salinities on oyster fishing grounds have significantly increased resulting in "poor" conditions for oyster growth and survival since May 2011. Prolonged relatively freshwater conditions, typical of estuaries have not been observed since at least February 2010, resulting in increased predator abundance, increased disease and decreased nutrition.

(JX-91, at 5-6).

I. FWC ROLES AND RESPONSIBILITIES

12. The FWC manages the take and possession of wildlife species in Florida that are not otherwise regulated by federal laws, and if species are regulated by federal law, FWC co-manages in conjunction with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service. FWC regulates all aspects of species management, from fishing to hunting to threatened and endangered species. The agency is enshrined in the Florida Constitution, and it has seven commissioners appointed by the Governor who meet five times each year to hear staff reports, consider rule proposals, and conduct other business. FWC plays a critical role in managing lands around the State to conserve and project wildlife resources and we frequently partner with the U.S. Fish and Wildlife Service to achieve our mission.

13. The FWC manages the state's fish and wildlife, including its marine wildlife resources, for the long-term well-being and benefit of the people of Florida. It's a large job, as the state has more than 575 species of wildlife, 200 native species of freshwater fish, and 500 native species of saltwater fish. Accordingly, FWC is one of the largest and most well-funded state wildlife management agencies in the nation.

14. We carry out our wildlife resource protection mission in several ways. First, we are a law enforcement agency; we enforce statutes and regulations to protect fish and wildlife in

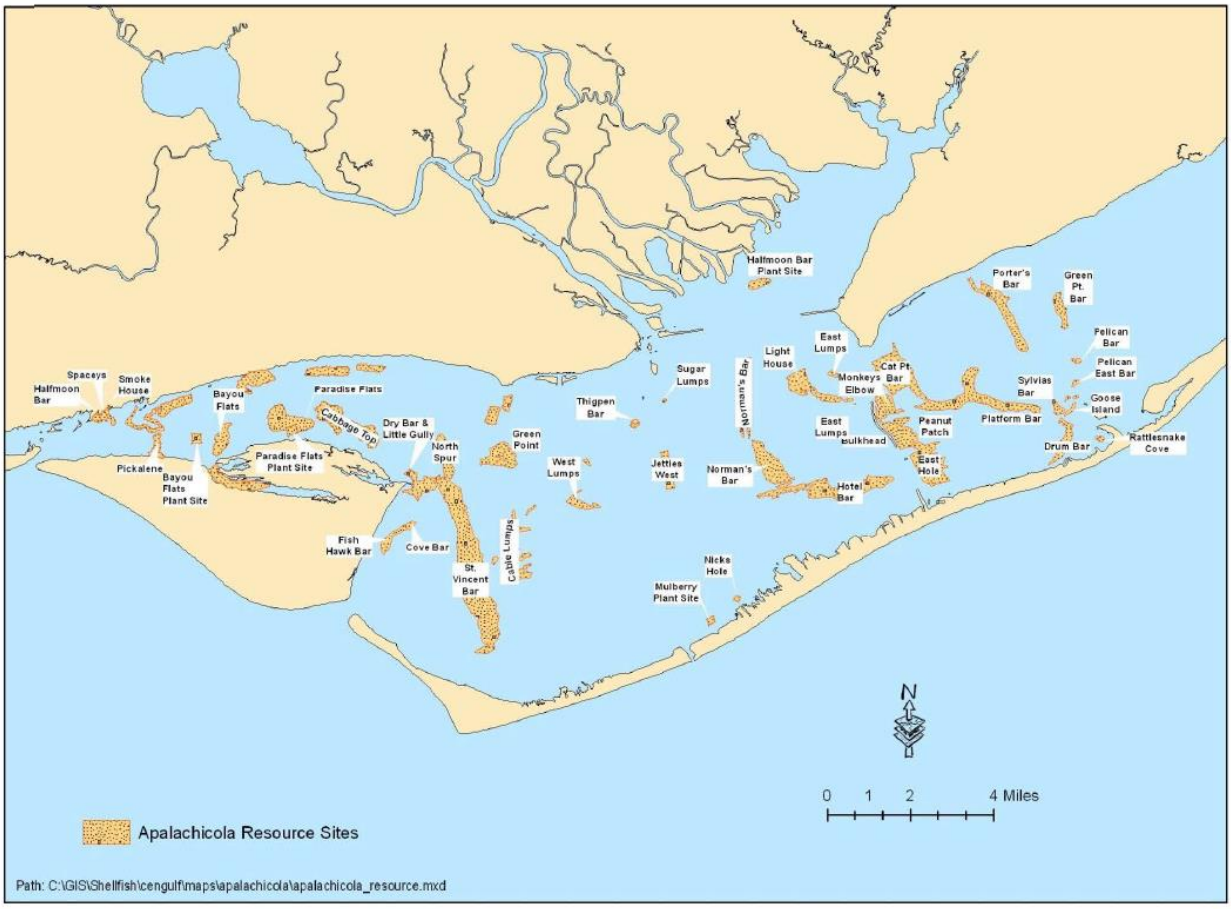
the state. Second, we are a management agency, led by science and charged with adopting new regulations and modifying old ones to properly manage and conserve wildlife resources. Third, we are a research agency, that conducts studies to generate scientific data needed to manage the state's fish and wildlife resources and conserve the complex and delicate ecosystems in which they live. Finally, we are engaged in community outreach to further our management goals.

15. I will touch on all of these areas, however, Captain Rob Beaton is Florida's primary witness regarding fisheries enforcement in Apalachicola Bay.

II. FWC Oyster Fishery Management in Apalachicola Bay

16. A critically important part of our role is managing the oyster fisheries in Florida, particularly in the Apalachicola Bay, which is the largest oyster fishery in the State. Oysters from the Bay historically made up over 90 percent of oysters commercially harvested in Florida, and almost 10 percent of oysters harvested nationwide. (Disaster Report, JX-91 at 13). We deploy the full scope of our authority to ensure this unique natural resource is protected. The following figure is a map of the oyster bars in Apalachicola Bay.

Figure 10. Oyster Reefs of the Apalachicola Bay System



(Figure 10 from the 2012-2013 Florida Gulf Coast Disaster Report, JX-9)

17. In managing the oyster fishery, FWC collaborates with the Florida Department of Agriculture and Consumer Services ("DACS"). Within FWC, oyster fishery management is primarily carried out by the Division of Marine Fisheries Management, while the Division of Aquaculture is responsible within DACS. (Oyster Resource Assessment Report, Apalachicola Bay, August 2012, JX-67 at 1). DACS's primary role has been to oversee regulatory compliance dealing with food safety regulations, most often at oyster processing houses. In short, FWC is responsible for regulating the fishery, while DACS primary mission has been to protect human health.

a. JX-67 is the Oyster Resource Assessment Report from August 2012. I have reviewed and am familiar with this document because of my work at FWC. This exhibit is a true and accurate copy of a document prepared by DACS Staff during the normal course of its operations in 2012 and is maintained as an official record of the State of Florida.

18. DACS has also been responsible for providing valuable information to FWC on oyster abundance in the Bay in the form of annual oyster surveys. Mark Berrigan, a former long-term DACS employee, is Florida's primary witness testifying about the role played by DACS.

A. General Harvesting Regulations

19. FWC has adopted and implements the rules found in Chapter 68B-27 of the Florida Administrative Code to manage oyster resources around the State. Through these rules, FWC (1) regulates bag limits (how many "bags" of oysters a harvester can take in a given time period), (2) sets oyster size limits, (3) defines harvesting seasons, and (4) requires licensing for commercial harvesters, among other things. I summarize several of these rules below.

20. Because the resources of the Apalachicola Bay are so important, FWC has also adopted several rules specifically applicable to the Bay in addition to the rules generally applicable to oyster harvesting in the State. (*See* 68B-27.014(1)(b); 68B-27.017).

21. Under good conditions, commercial harvesters in the Apalachicola Bay could take no more than 20 bags[1] of oysters per person, per day, from October 1 through June 30 of the following year. For the remainder of the year, harvesters were allowed only take 20 bags per person *or* per vessel, whichever is less. Recreational harvesters are limited to two bags per

[1] A "bag" of oysters simply refers to any container containing oysters equivalent to two five-gallon buckets, one ten-gallon bucket, or sixty pounds. (Fla. Admin. Code R. 68B-27.013(2)).

person or per vessel. (Fla. Admin. Code R. 68B-27:014). As I will explain, however, the Commission has implemented far stricter bag limits as a result of the oyster crash of 2012.

22. Before bagging the oysters, the harvesters must "cull" the oysters – which means to sort them by size and clean them – and return undersized oysters to the water. A legally harvestable oyster must be at least three inches in greatest dimension. (Fla. Admin. Code R. 68B-27.015(1)).

23. Sometimes, undersized oysters are attached to legal size oysters, such that separating them would destroy either oyster. To avoid needless destruction of oysters, the FWC allows a person to harvest undersized *attached* oysters, provided the undersized oysters do not make up more than fifteen percent (15%) of any bag. This is called a "tolerance." If the oysters are unattached, a person may harvest or "land," which simply means the physical act of bringing the oysters ashore, no more than five percent (5%) of undersized oysters. (Fla. Admin. Code R. 68B-27.015(3)).

24. The Commission has set two distinct harvesting seasons: the Summer Season runs from June 1 through August 31 of each year, while the Winter Season runs from September 1 through May 31. The Commission designates and rotates the areas of the Bay that are harvestable during each season. (Fla. Admin. Code R. 68B-27.019; Fla. Admin. Code R. 5L-1003(1)). It is important to note, however, that these seasons are in no way related to the biology of the oyster, as it does not harm oyster populations to harvest them in either season. FWC implements the winter/summer seasons to protect human health and to rotate harvesting areas.

25. All commercial oyster harvesters in the Apalachicola Bay must obtain a saltwater products license from the Commission and an Apalachicola Bay oyster harvesting license issued by DACS to harvest or sell oysters. (§ 379.361(5), Fla. Stat.; Fla. Admin. Code R. 68B-27.018).

To obtain the latter, a person must pay a fee and attend an educational seminar addressing, among other things, conservation of the Bay. (§ 379.361(5)(d)-(e), Fla. Stat.). Proceeds from the fees are used by DACS to relay and transplant live oysters, construct or rehabilitate oyster bars, operate educational programs for harvesters, and fund research. (§379.361(5)(i), Fla. Stat.).

26. Likewise, to legally operate a shellfish processing facility, a shellfish dealer or "oyster house" must obtain a shellfish processing plant certification license pursuant to DACS Comprehensive Shellfish Control Code., (Fla. Admin. Code R. 5L-1.001; Fla. Admin. Code R. 5L-1.005).

B. Annual Oyster Surveys and FWC Executive Orders

27. FWC attempts to manage the oyster harvest in Apalachicola Bay in the most effective way possible by tailoring our management to constantly changing natural conditions. For this reason, it is important to have accurate oyster population assessments. Based on up-to-date oyster population information, the Commission can issue "executive orders" as necessary to modify, on a temporary basis, the usual regulatory requirements by limiting harvesting, modifying bag limits, and setting other restrictions.

28. The FWC Executive Director has authority, derived from the Florida Constitution, to issue the "executive orders" on an as-needed basis to ensure that oyster resources are conserved and protected from emerging threats. Through these orders, as I will discuss later, FWC has acted to efficiently and effectively respond to the changing management needs of the Apalachicola Bay to ensure the continued vitality of those resources.

29. DACS has historically conducted an annual oyster survey to supply the latest oyster population data. DACS has conducted these oyster resource surveys – also known as oyster monitoring or assessments – on the primary oyster-producing reefs in the Apalachicola

Bay since 1982. FWC often uses the surveys of oyster resources in East Hole Bar and Cat Point Bar (two of the largest publically-harvested oyster bars in the Bay) to help make resource-management decisions. In recent years, FWC has taken over the annual oyster resources assessment, using the same techniques and enhancing them to gather additional data on oyster population and viability.

30. FWC's resource managers use the information collected in the oyster surveys to (1) predict trends in oyster production, (2) monitor oyster population dynamics, and (3) determine the impacts on oyster resources of climatic events like hurricanes, floods, and droughts. (Disaster Report, JX-9 at 22).

31. Resource managers also use information from the oyster resource assessments to determine the relative condition of oyster resources based on estimated harvesting. This is referred to as the Standard Resource Management Protocol, found in Florida Administrative Code Rule 68B-27.017. (Disaster Report, JX-9 at 22-23). The Standard Resource Management Protocol (Fla. Admin. Code R. 68B-27.017) is used as the criteria for setting the total number of harvesting days in the Winter Harvesting Season in Apalachicola Bay, which can vary from year to year based on population strength.

32. FWC's authority allows it to respond to fisheries management crisis situations. In the event of a serious fishery collapse, for instance, FWC can require oyster monitoring stations or "check stations" in the Bay, requiring all commercial harvesters to bring their catch through these stations before landing their oysters. (Fla. Admin. Code R. 68B-27.016). This protocol allows our officers to enforce bag and size limits on every oyster harvested.

C. Non-Regulatory Management Tools

33. In addition to the regulatory tools I've described, the State of Florida implements programs to regularly renourish the primary public oyster bars through regular "re-shelling" or "cultching." In simple terms, reshelling or cultching are when we take suitable material – like oyster shells, processed oyster shells, dredged oyster shells, or scallop shells – and place it on areas of the Bay floor. This new material allows for spat or gametes released from oysters to attach and grow, restoring existing reefs or creating new ones. The Division of Aquaculture in DACS is primarily responsible for oyster habitat restoration efforts.

34. The State has been cultching since as early as 1914, and has maintained an aggressive shell-planting program since 1949. More than 3.5 million bushels of cultch and oyster shells were planted between 1990 and 2009 in the Bay. (*See* Disaster Report, JX-9 at 19-20).

35. The State has cultched or reshelled thousands of acres in the Bay since 1970. (Oyster Fishery of the Gulf of Mexico United States: A Regional Management Plan, JX-62). JX-62 is a March 2012 report, titled Oyster Fishery of the Gulf of Mexico United States: A Regional Management Plan, and prepared by the Gulf States Marine Fisheries Commission, which counted among its members Nick Wiley, the Executive Director of FWC. I have reviewed and am familiar with this document because of my work at FWC. For example, hundreds of acres were cultched just in Franklin County between the beginning of 2010 and end of 2015. (Franklin County Cultch Planting Log, JX-163). JX-163 is a true and accurate copy of a document collecting data through October 2015; this document was prepared by DACS staff during the normal course of its operations, which is maintained as an official record of the state of Florida. I have reviewed and am familiar with this document because of my work at FWC. Additionally,

DACS has a program to transplant juvenile oysters to favorable growing waters while relaying market-sized oysters.

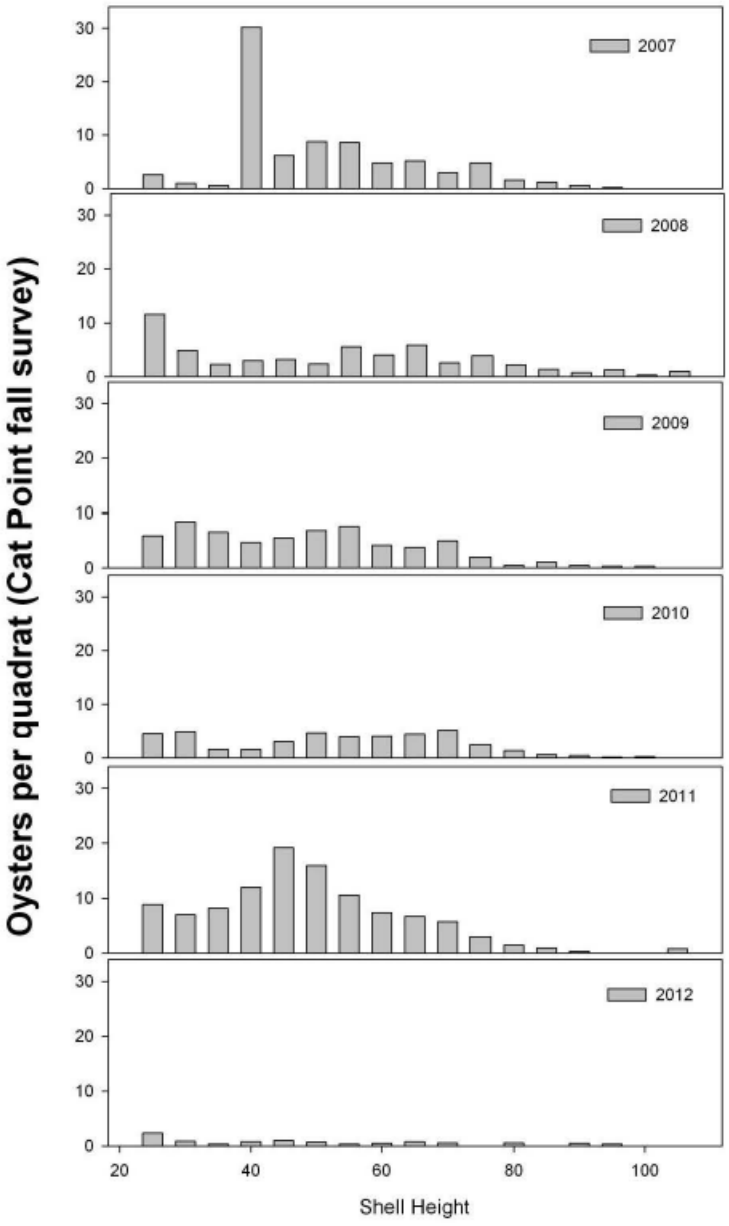
36. Finally, while most of the Bay is open to public oyster harvesting, there are areas of the Bay that are privately leased from the State. These areas are privately managed, and commercial oysterman cannot fish there.

III. THE OYSTER CRASH OF 2012.

37. In summer of 2012, the Apalachicola Bay experienced a dramatic crash in oyster resources, which was precipitated by extremely low flows in the Apalachicola River. As the situation unfolded, FWC used the regulatory authorities I have discussed to limit the annual oyster harvest and protect the resource.

38. FWC began to have serious concerns about the health of the oyster fishery when it received the 2012 Oyster Resource Assessment Report. The 2012 report stated that oyster populations in the Bay had become severely stressed, and predicted a significant decline in harvestable oysters in the Winter Season. The report also noted low river discharges were identified. (Oyster Resource Assessment Report, Apalachicola Bay August 2012, JX-67).

39. When FWC looked at the 2012 data on oyster abundance at the major oyster bars in the Bay and compared it to prior years, we knew immediately that the fishery was experiencing a major collapse.



(Figure 11 from the 2012-2013 Florida Gulf Coast Disaster Report, JX-9, showing the change in oyster density at Cat Point Bar from 2007 through 2012. A quadrat is the standard tool used by DACS to measure the number of oysters in given area.).

A. NOAA Commercial Fishery Failure Determination.

40. Once the crash was identified, FWC took swift regulatory action to conserve and protect the oyster resources in the Apalachicola Bay, which I describe in detail below. But the State of Florida also had a significant concern how crash would affect the men and women of

Apalachicola who rely on oystering for their livelihood. On September 5, 2012, the Florida Agriculture Commissioner Adam H. Putnam sent a letter to Governor Rick Scott to inform him that oyster resources in the Bay were being severely impacted by low flows from the Apalachicola River, among other things. (Letter from Putnam to Scott, JX-77 at 3-4). JX-77 is a true and accurate copy of this letter, which is part of the official records of the State of Florida. I have reviewed and am familiar with this document because of my work at FWC.

41. Governor Scott immediately responded, sending a letter the next day to the U.S. Department of Commerce (in which is housed the National Oceanic and Atmospheric Administration ("NOAA") and Nation Marine Fisheries Service "NMFS", often referred to as "NOAA Fisheries") to request that it declare a commercial fishery failure due to a fishery resource disaster for the oyster harvesting areas in the Bay. The Secretary of Commerce can render such designations pursuant to Section 312(a) of the Magnuson-Stevens Fishery Management and Conservation Act. (Letter from Scott to Department of Agriculture, JX-77 at 1-2).

42. After requesting the disaster declaration, staff at FWC's Division of Marine Fisheries, including David Heil and Jim Estes, developed the 2012-2013 Florida Gulf Coast Oyster Disaster Report to analyze the causes of the oyster fishery collapse and support the State of Florida's request.

43. During this period, FWC staff communicated regularly with NOAA scientists who asked questions and requested information to inform their determination as to the cause of the collapse. These records are maintained in the course of FWC's regular operations. JX-89 is a true and accurate copy of the communications in April 2013 between FWC staff and NOAA and

are part of the official records of the State of Florida. I have reviewed and am familiar with these records because of my work at FWC.

44. Some of the key findings of the report included the following:

> The mechanisms for this disaster have not been quantified, but include increased oyster predators and disease resulting from increased salinities and decreased oyster nutrition from decreased freshwater input.
>
> * * *
>
> The commercial oyster fishery failure was not the result of fishery management and or enforcement practices
>
> * * *
>
> Recovery from this serious disruption affecting future production will be longer if the number of low river flow days in future years remains high, and sustainable recovery could be precluded altogether if low flow days increase.
>
> * * *
>
> The cause of the oyster decline is a lack of freshwater flow into rivers and estuaries.

Disaster Report, JX-9 at 4-6).

45. In addition to FWC's own findings, the agency considered the input from researchers at the University of Florida, who had reached some similar conclusions in a public report issued in April 2013:

> The UF report indicated "the 2012 decline in oyster landings and recruitment of juvenile oysters is unprecedented during the period of data analyzed and has likely involved recruitment failure or high mortality of small oysters."
>
> The UF report indicated "there is no evidence that the harvesting of sub-legal oysters has or would lead to overfishing . . . unless the sub-legal harvest has been unregulated and extremely high.
>
> The UF report concluded that recruitment overharvest did not play a role in the fishery failure as "the decline in sub-legal abundance, sudden as it was, cannot be attributed to reduced spawner abundance (i.e., adult population) and/or larval supply."

> The UF stock assessment indicated that "the current [3"] size limit is generally sufficient for maximizing yield."

(Disaster Report, JX-9 at 7).

46. FWC completed the Oyster Disaster Report in May of 2013 and provided it to NOAA Fisheries, to explain the causes behind the oyster crash and the basis for which Florida was requesting federal disaster assistance. On August 12, 2013, the Secretary of Commerce issued a determination that a fishery resource disaster had occurred for the oyster stocks in Florida's portion of the Gulf, primarily in the Apalachicola Bay. (NOAA Decision Memo, FX-413 at 4-7).

47. The decision memorandum from the Regional Administrator, for NOAA Fisheries to the Deputy Assistant Administrator for Regulatory Programs explained the legal basis on which the agency could grant the Florida Governor's request for federal fishery disaster assistance:

> Under [Magnuson-Stevens Fishery Management and Conservation Act] 312(a) the allowable cases for a fishery resource disaster are natural causes, undetermined cases, or man-made causes beyond the control of fishery managers to mitigation through conservation and management measures …
>
> ***
>
> Under [Interjurisdictional Fisheries Act] 308(d) the allowable cases for a fishery resource disaster are natural or undetermined cases.

After thorough consideration of all the factors leading to the crash, NOAA Fisheries rejected overharvesting as the primary cause of the crash and concluded, as did FWC, that it was brought about primarily by the stress of low freshwater input to the Bay. (*See* Decision Memo, FX-413, at 4 of the Memo).

48. One of NOAA's Climate Program Office staff, Laura Petes, provided input to decision makers on the causes of the oyster crash. She specifically considered, and rejected, the theory that harvesting pressure was the cause of the collapse, finding rather that "due to stressful conditions associated with the severity and duration of the recent drought, it is likely that high Florida Gulf Coast oyster mortality would be occurring even in the absence of harvesting pressure." (Laura Petes Memo FX-412, at NOAA-0003818). More than a year later, federal scientists confirmed Petes' initial findings. NOAA Fisheries, on behalf of the Secretary of Commerce, declared the fishery resource disaster and identified three primary causes for the crash, each related to low flows in the rivers reaching the Bay (including increased salinity). (*See* August 13, 2013 E-mail from NOAA, JX-97). JX-97 is a true and accurate copy of emails sent between NOAA, Governor Scott's Office, and Jim Estes of FWC in August 2013. These records are maintained in the course of FWC's regular operations and are official records of the State of Florida. I have reviewed and am familiar with these emails because of my work at FWC.

49. While Georgia alleges in this case that Florida mismanagement of the oyster fishery is the cause of the 2012 collapse, my understanding is that the federal fisheries laws obligates the Secretary of Commerce to deny federal disaster assistance in situations where the cause of the fishery failure is related to mismanagement. That did not occur.

50. As a result of that federal declaration, Florida received over $6 million in federal funds with which to assess the economic and social effects of the fishery failure and any other activity necessary to restore the fishery. (*See* Magnuson-Stevens Fishery Management and Conservation Act § 312(a), 16 U.S.C. 1861(a)). The State has begun using those funds of a number of projects, including almost $4.6 million for re-shelling, over $400,000 for monitoring

of wild oyster populations in the Bay, over $560,000 for vocational and educational training for oyster industry workers, and over $760,000 for upgrades to Bay processor facilities.

B. FWC Action to Preserve Oyster Resources in the Bay.

51. In addition to seeking federal disaster funding, FWC responded decisively to the oyster crash by moving to reduce harvesting pressure on the stressed resource through regulatory restrictions. When earlier droughts and hurricanes impacted the oyster fishery in Apalachicola Bay, the Bay successfully recovered under the regulatory regime and harvesting limitations that FWC administers. Despite FWC's implementation of ever greater harvesting restrictions after the 2012 crash, the oyster fishery has not recovered as it did previously.

52. First, FWC prohibited commercial harvesting in the Bay on Saturdays and Sundays from November 17, 2012, through May 31, 2013. (*See* Disaster Report, JX-9 at 6-7). This effectively reduced the opportunity to harvest during the Winter Season by almost 30 percent.

53. After this, the Commission began issuing a steady stream of aggressive executive orders, drastically reducing opportunities to harvest oysters in the Bay. I have reviewed and am familiar with these orders because of my work at FWC. True and accurate copies of these executive orders have been submitted into evidence, and I detail them below.

54. Pursuant to executive order 13-17 on June 1, 2013, for example, the Commission closed oyster harvesting throughout the Bay on Fridays and Saturdays, beginning June 1, 2013 and running through August 31, 2013 (the entire Summer Season). (Executive Order 13-17, FX-472).

55. The Commission issued two more executive orders on September 1 and September 4, 2013, closing down *all* harvesting of oysters in the Apalachicola Bay from

September 1 through September 3, 2013. (Executive Order 13-32, JX-98); (JX-99, Executive Order 13-33).

56. On May 12, 2014, the Commission issued an executive order closing harvesting in large swaths of St. George Sound and St. Vincent Sound in Apalachicola Bay until specifically reopened by DACS. (Executive Order 14-11, JX-110). The closed areas, Areas 1601 and 1611, are defined and mapped out in Florida Administrative Code Rule 5L-1.003(1)(a)-(b).

57. On May 30, 2014, the Commission issued an order prohibiting commercial and recreational oyster harvesting in East Hole in the Bay. The order also prohibited throughout the Bay harvesting on Friday and Saturday, and reduced the bag limit for commercial harvesters to eight bags per day and for recreational harvesters to five gallons per day. All of the restrictions in this order applied for the entire 2014 Summer Season. (Executive Order 14-12, JX-111).

58. On August 27, 2014, the Commission issued an executive order (1) extending the prohibition on harvesting in East Hole through the entire Winter Season (September 1, 2014, through May 31, 2015), (2) reducing the commercial bag limit to five bags per day throughout the Winter Season, (3) extending the limit on recreational harvesting of five gallons through the Winter Season, (4) closing all harvesting in Areas 1601 and 1611 until specifically reopened by DACS, and (5) prohibiting all harvesting in the Bay on Fridays, Saturdays, and Sundays, throughout the Winter Season. (Executive Order 14-18, JX-114).

59. Despite all of these measures, we realized that the Bay was not exhibiting the resiliency that long-time fisheries managers in the Bay had seen in the past. For that reason, we continued tightening our response throughout 2015, to the point of installing "check stations" to inspect every bag of oysters being harvested.

60. On May 28, 2015, after a brief harvest was permitted, FWC reclosed East Hole for the entire 2015 Summer Season. Additionally, it prohibited commercial harvesting on Fridays, Saturdays, and Sundays throughout the Bay from June 1 through July 16, 2015, and for Saturdays and Sundays from July 20 through August 28, 2015. On June 1, 2015, the Commission also extended the six-bag per-day limit on commercial harvesters and the five-gallon per-day limit on residential harvesters for the entire Summer Season. (Executive Order 15-14, JX-120).

61. On August 28, 2015, the Commission continued its vigorous protection of the oyster resources in the Apalachicola Bay, issuing executive order 15-18. In that order, we: (1) prohibited commercial and recreational harvesting on Fridays, Saturdays, and Sundays throughout the Bay, (2) implemented a four-bag per-day limit on commercial harvesters, (3) implemented a five-gallon or half-bag limit on recreational harvesters, (4) prohibited all harvesting in East Hole on all days except for Mondays, and (5) prohibited all harvesting in large swaths of the Bay identified as Areas 1612 and 1622, which are described and mapped in Florida Administrative Code Rule 5L-1.003. All of these restrictions ran from September 1, 2015, through May 31, 2016. (Executive Order 15-18, JX-123).

62. On October 29, 2015, FWC established "check stations" or "in the Bay in 2015 and in executive order 15-31, issued on October 29, 2015, required all Wholesale Dealers to only accept oysters from saltwater products license holders that had been tagged as going through a monitoring station. The dealers were required by the order to collect such tags and provide them to the Commission, as well as provide a daily accounting of pounds of wild oysters in the shell received from the saltwater products license holder. (Executive Order 15-31, FX-407).

63. On May 26, 2016, FWC again (1) prohibited all commercial and recreational harvesting in East Hole, (2) prohibited all commercial and recreational harvesting on Fridays, Saturdays, and Sundays throughout the Apalachicola Bay, (3) extended the four-bag per-day limit on commercial harvesters, and (4) extended the five-gallon per-day limit on recreational harvesters. These restrictions ran for the 2016 Summer Season. (Executive Order 16-17, FX-481).

64. Most recently, on August 30, 2016, the Commission issued executive order 16-28 to continue to limit harvesting, hoping to assist in recovery. In it, the Commission (1) prohibited all commercial and recreational harvesting in the Bay on Saturdays and Sundays, (2) reduced the bag limit on commercial harvesters even further, allowing only *three* bags per harvester per day, (3) continued the five-gallon or half-bag limit on recreational harvesters, and (4) again prohibited all harvesting in Areas 1612 and 1622. The restrictions are slated to run for the entire Winter Season, September 2016 through May 2017. (Executive Order 16-28, FX-482).

65. In sum, the Commission has continuously reduced the commercial bag limit over the last several years, going from 20 bags per person all the way down to three bags per person for commercial harvesters, and down from two bags (equivalent to four five-gallon buckets) to just five gallons per recreational harvester. It has continually closed off large areas of the Bay. It has limited the days on which harvesting may occur. And, it has established monitoring stations to ensure compliance with its regulations and executive orders.

66. Despite our diligent management, however, the oyster populations in the Bay are not rebounding at the level we have seen in the past when there were other stressful natural events that destroyed oyster stocks. (*See* Updated FDACS Oyster Survey Data, JX-135). This data, which spans several years, is reflected in JX-135. JX-135 is a true and accurate copy of a

spreadsheet prepared by DACS staff in or around May 2015 during the normal course of its operations and is maintained as an official record of the State of Florida. I have reviewed and am familiar with this spreadsheet because of my work at FWC

III. CONCLUSION

67. In conclusion, FWC has used the numerous tools at its disposal to manage the oysters in Apalachicola Bay and will continue aggressively managing the resource for the foreseeable future. As fisheries managers, we hope that through the return of environmentally sustainable flows from the River, the Bay environment will improve and return the health of one of the most productive oyster fisheries in the United States.

68. In my testimony, I referenced several documents, all of which were either generated by the staff at FWC and reviewed by myself, or which I reviewed as part of my duties as the Assistant Executive Director of FWC. True and accurate copies of all of the documents are submitted as exhibits, and I describe the documents and my familiarity with each of them below.

a. FX-407 – Executive Order 15-31: This exhibit is a true and accurate copy of an executive order issued by FWC on October 29, 2015, which is maintained as an official record of the state of Florida.

b. FX-412 – This exhibit is a true and accurate copy of an email from NOAA personnel to several [recipients] on July 31, 2013, that contains a memo by Laura Petes of the NOAA Climate Program Office, sent internally on September 25, 2012. The memo is a true and accurate copy of the document prepared by Laura Petes at NOAA in 2012, which was produced in this litigation by the United

States government in response to a request for official government materials and records.

c. FX-413 - NOAA Decision Memo: This exhibit is a true and accurate copy of a decision memo signed by NOAA on August 12, 2013, which was produced in this litigation by the United States government in response to a request for official government materials and records.

d. JX-77 - Letter sent from Governor Scott to NOAA, letter from Commissioner Putnam to Governor Scott, the August 2012 Oyster Resource Assessment: This exhibit is a true and accurate copy of a letter from Governor Scott to NOAA sent on September 6, 2012, a letter from Commissioner Putnam to Governor Scott sent on September 5, 2012, and the August 2012 Oyster Resource Assessment prepared by DACS. These letters and assessment are maintained as an official record of the State of Florida.

e. JX-9 - 2012 - 2013 Florida Gulf Coast Oyster Disaster Report: This exhibit is a true and accurate copy of a document prepared and maintained by FWC Staff during the normal course of its operations, and is maintained as an official record of the State of Florida.

f. JX-97 - August 13, 2013 E-mail from NOAA: This exhibit contains true and accurate copies of emails sent between NOAA, Governor Scott's Office, and Jim Estes of FWC in August 2013, and is maintained as an official record of the State of Florida.

g. JX-135 – Updated FDACS Oyster Survey Data: This exhibit is a true and accurate copy of a document prepared by DACS staff during the normal course of business, which is maintained as an official record of the State of Florida.

h. JX-163 - Franklin County Cultch Planting Log: This exhibit is a true and accurate copy of a document prepared by DACS staff during the normal course of its operations, which is maintained as an official record of the State of Florida.

i. JX-67 - Oyster Resource Assessment Report, Apalachicola Bay, August 2012: This exhibit is a true and accurate copy of a document prepared by DACS Staff during the normal course of its operations in 2012, which is maintained as an official record of the State of Florida.

j. FX-472 - Executive Order 13-17: This exhibit is a true and accurate copy of an executive order was issued by FWC on May 29, 2013.

k. JX-98 - Executive Order 13-32: This exhibit is a true and accurate copy of an executive order was issued by FWC on August 30, 2013.

l. JX-99 - Executive Order 13-33: This exhibit is a true and accurate copy of an executive order was issued by FWC on September 4, 2013.

m. JX-110 - Executive Order 14-11: This exhibit is a true and accurate copy of an executive order was issued by FWC on May 12, 2014.

n. JX-111 - Executive Order 14-12: This exhibit is a true and accurate copy of an executive order issued by FWC on May 30, 2014

o. JX-114 - Executive Order 14-18: This exhibit is a true and accurate copy of an executive order issued by FWC on August 27, 2014.

p. JX-120 - Executive Order 15-14: This exhibit is a true and accurate copy of an executive order issued by FWC on May 28, 2015.

q. JX-123 - Executive Order 15-18: This exhibit is a true and accurate copy of an executive order issued by FWC on August 28, 2015.

r. FX-481 - Executive Order 16-17: This exhibit is a true and accurate copy of an executive order issued by FWC on May 26, 2016.

s. FX-482 - Executive Order 16-28: This exhibit is a true and accurate copy of an executive order issued by FWC on August 30, 2016.