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**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ALASKA**

STATE OF ALASKA,

Plaintiffs,

v.

JANE LUBCHENCO, *et al.*

Defendants.

Case No.: 3:10-cv-00271-TMB

ALASKA SEAFOOD COOPERATIVE, et al.,

Plaintiffs,

v.

NATIONAL MARINE FISHERIES
SERVICE; *et al.*

Defendants.

Case No.: 3:11-cv-00001-TMB

FREEZER LONGLINE COALITION,

Plaintiff,

v.

JANE LUBCHENCO, *et al.*

Defendants.

Case No. 3:11-cv-00004-TMB

DECLARATION OF JOHN GAUVIN

I, John Gauvin, hereby declare and state as follows:

1. I am the Fisheries Science Director for Plaintiff Alaska Seafood Cooperative (“AKSC”). I have personal knowledge of the facts herein and if called upon to testify thereon, could competently do so.

2. I have an M.S. in Resource Economics from the University of Rhode Island. After completing graduate studies in 1988, I worked in fisheries management as a fishery economist for the South Atlantic Fishery Management Council as well as a contractor for the National Marine Fisheries Service (“NMFS”), various regional fishery management councils, and other government agencies. I have served as a member of the North Pacific Fishery Management Council’s (“NPFMC”) Steller sea lion (“SSL”) mitigation committee since 2003. Additionally, since 2001 I have served on the North Pacific Research Board, a research institution created by Congress in 1997 to recommend research initiatives in the North Pacific Ocean, Bering Sea, and Arctic Ocean to the Secretary of Commerce. The Board prioritizes, funds, and manages ecosystem-wide research in these areas through an annual budget of roughly \$18 million.

3. Since 1993, I have been involved in both applied research and the use of science in fisheries management in Alaska. I have worked for various companies and sectors that fish in Alaska for species such as pollock, flatfish, mackerel, and cod, including the trawl sector, shoreside delivery vessels, and smaller Gulf of Alaska catcher vessels. This work has included partnerships with various scientists and stakeholders to generate solutions to environmental and regulatory matters affecting commercial fishing such as bycatch reduction, reduction in regulatory and economic discards, and gear modifications to reduce effects on benthic habitat. Since 2006, I have developed and managed a small cooperative research program in fisheries for

the Marine Conservation Alliance Foundation.

4. I am familiar with the restrictions on the Atka mackerel and Pacific cod fisheries established by the Interim Final Rule (“IFR”) as of January 1, 2011 and have personal knowledge of the resulting changes in operations of AKSC and its members that resulted from the new restrictions. As described in more detail below, in my opinion, the IFR has had environmental impacts both inside and outside of the areas closed to fishing.

5. During 2011, AKSC and the Amendment 80 sector have continued to experience the changes in fishing operations and locations outlined in the Declaration of Lori Swanson (Docket 92). The IFR closures have resulted in fewer fishing days for the Amendment 80 sector, and more concentrated fishing effort in the limited fishing grounds that are now open to commercial fishing. The closures have had significant impacts on the operations of and markets for both the Atka mackerel and Pacific cod fisheries, with corresponding changed impacts on the North Pacific environment that require further analysis.

6. The IFR closed the western Aleutian Islands to Atka mackerel fishing, changed fishing locations in the central Aleutians, and reduced catch in the central Aleutian sub-area to no more than 47% of the annual Acceptable Biological Catch (“ABC”) that previously would have been available in full. The now-closed fishing grounds in the central and western Aleutians had provided a catch of larger Atka mackerel that are more valuable in Japan and other Asian markets. The areas that are now open under the IFR in the central Aleutians shifted nearly all fishing to outside of critical habitat where smaller, less valuable mackerel comprise most of the catch.

7. Aleutian Islands trawl fisheries are highly constrained from finding new fishing locations by Essential Fish Habitat (“EFH”) regulations that limit operations to a very small

fraction of the management area. These EFH regulations are in place to protect seafloor habitat from the effects of trawl fishing. The EFH measures for the Aleutian Islands were developed with the objective of preventing fishing from impacting any previously un-fished areas. The ability of the mackerel fisheries to shift to new fishing grounds was therefore preempted by the overlap with habitat protection measures and the amount of fishing that now occurs in the area remaining open to fishing now exceeds what was expected in the EFH modeling done in 2005 to evaluate the effects of fishing on habitat.

8. The Amendment 80 sector's operational flexibility in 2012 is even more limited than it was in 2011 because the Arctic ice edge is unusually far south this winter. Amendment 80 fisheries are generally multi-species fisheries that are subject to multiple layers of potential natural and regulatory constraints. The sector's operations are dependent on having alternative fishing opportunities and locations to move to as conditions change and opportunities emerge in response to changing conditions. For example, in relatively cold winter years where the ice edge extends further into the Bering Sea or arrives in the Bering Sea earlier, Amendment 80 fisheries benefitted from the diversity in their allowable catch portfolios to shift to fisheries not affected by ice. Aleutian Islands fisheries for cod and mackerel are never affected by the ice edge in the winter. Prior to the IFR, Amendment 80 vessels that depend on Bering Sea flatfish and cod would likely have opted to do their mackerel and cod fishing in the Aleutians instead of tying up at the dock and waiting for the ice edge to recede. In 2012, this reduced operational flexibility combined with the southern ice edge is beginning to impair flatfish fishing opportunities in the Bering Sea. NMFS did not analyze the potential environmental impacts to areas outside of Area 542 and 543 resulting from these types of changes in fishing patterns and concentration.

9. With the implementation of the IFR, additional fishing effort has been targeted on

Arrowtooth flounder, and that increased effort is expected to continue. Prior to the IFR, catches of flatfish, including Arrowtooth flounder, have historically been well under the total allowable catch limits. Arrowtooth flounder prey on and compete with both target (e.g. pollock) and non-target groundfish species (e.g. sculpins, juvenile skates, and halibut). Increased catch of Arrowtooth flounder will alter existing predator/prey relationships. NMFS normally evaluates these potential downstream effects of changes in fisheries with ecosystem models such as “Ecopath” and Ecosym” which can be useful in accounting for unanticipated effects and complex relationships that are not apparent, but NMFS did not do so in its preparation of the 2010 Biological Opinion and Environmental Assessment. These types of relationships need to be better understood as part of the consideration of proposed management measures.

10. The impacts on Pacific cod stocks as a result of the IFR also need to be better understood. Pacific cod is distributed widely over the eastern Bering Sea as well as the Aleutian Islands. The cod stock in the Bering Sea/Aleutian Islands is managed as a single unit subject to a single Total Allowable Catch (“TAC”) for all gear types. The commercial fisheries previously targeted the larger, older cod that are found in the western Aleutian Islands but can no longer do so under the IFR. Reduced mortality of these larger cod may have impacts on recruitment, year classes, size and amount of fish caught elsewhere in the North Pacific. Since Pacific cod also prey on juvenile pollock, Atka mackerel, and other fish, the increased presence of cod in the ecosystem will change these predator/prey relationships as well. Again, a full understanding of these impacts will be important in formulating and analyzing alternative management measures.

11. Areas closed to fishing are also experiencing unknown environmental impacts due to decreased removals of Pacific cod and Atka mackerel which likely will change the predator/prey relationships from a previously fished ecosystem. In addition, a new study

published by scientists at Oregon State University, a true and correct copy of which is attached as Exhibit A, provides new information about shark and orca predation on Steller sea lions that should be considered in evaluating ecosystem-wide predator/prey relationships. An accurate understanding of these predator/prey relationships is key to evaluating the environmental impacts of the IFR and any alternatives to it.

12. NMFS used an outdated and overly simplistic single-species modeling approach in the 2010 Biological Opinion to analyze the potential effects of curtailing fishing for Atka mackerel and Pacific cod in the western Aleutian Islands and the large reduction in fishing in the central Aleutians. These models projected significant increases to those stocks as a result of the curtailment of fishing. In contrast, the ecosystem effects sections of NMFS' 2010 and 2011 annual stock assessment for Atka mackerel both concluded that: "Declining trends in predator abundance could lead to possible decreases in Atka mackerel mortality, while increases in predator biomass could potentially increase the mortality." Exhibit B at 1274; Exhibit C at 1106-1107. True and correct copies of the relevant sections of the 2010 and 2011 SAFE reports are attached as Exhibits B and C. According to the SAFE reports and other sources cited therein, Pacific cod are responsible for 25% of Atka mackerel "natural mortality," and predation by cod exceeds predation on mackerel by Steller sea lions. This suggests the closures in the IFR will increase predation on mackerel by cod, perhaps resulting in no net gain or even a net reduction in Atka mackerel abundance in the closed areas. The uncertainties associated with the use of a single species model instead of a multi-species model are well illustrated in the October 2011 Independent Scientific Review of the Biological Opinion (2010) of the Fisheries Management Plan for the Bering Sea/Aleutian Islands Management Plan. A true and correct copy of the relevant portion of the report is attached as Exhibit D.

13. In my opinion, there is considerable uncertainty as to whether the IFR's prohibitions on fishing for cod in Area 543 and most of Area 542 will result in the increase in the biomass of Atka mackerel that was predicted in the 2010 Biological Opinion. First, as discussed above, predation by Pacific cod on Atka mackerel was not adequately evaluated. Second, the 2010 and 2011 SAFE reports show that Atka mackerel is currently at relatively high population abundance, making it inherently doubtful that Atka mackerel biomass will increase to the extent predicted by NMFS in the 2010 Biological Opinion. *See Exhibits B and C.*

14. The North Pacific Fishery Management Council sets annual harvest limits for groundfish species at its December meetings. ABC, the scientifically-determined level of catch that prevents overfishing, was set in 2011 and 2012 at levels high enough to accommodate increased catch for Pacific cod and Atka mackerel. However, TAC for Atka mackerel was reduced in 2011-2012 solely because of the IFR closures in Areas 542 and 543, as shown in the SAFE reports, and similar reductions are proposed for 2013.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Dated this 8th day of February, 2012 at Seattle, Washington.


John Gauvin

Certificate of Service

I hereby certify that on February 8, 2012, I electronically filed the foregoing Declaration of John Gauvin via the CM/ECF system, which will send notification of the filing to attorneys of record, including as listed below:

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