



MARINE MAMMAL COMMISSION

10 August 2009

Mr. David Cottingham, Chief
Marine Mammal and Sea Turtle Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

Dear Mr. Cottingham:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the notice of proposed rulemaking regarding the List of Fisheries for 2010 (74 Fed. Reg. 27739). The Commission generally supports the National Marine Fisheries Service's proposed changes to the 2010 List of Fisheries but also offers the following recommendations and rationale.

Recommendations

Based on its review of the proposed 2010 List of Fisheries, the Marine Mammal Commission—

- concurs with the National Marine Fisheries Service's proposal to reclassify the American Samoa longline fishery from category III to category II;
- concurs with Service's proposal to classify the Hawaii shortline fishery as category II;
- recommends that the Service continue to classify the Alaska southeast salmon purse seine fishery as category II;
- recommends that the Service reclassify the Gulf of Alaska sablefish longline fishery from category III to category II;
- concurs with the Service's proposal to place the spiny lobster component of the category III California spiny lobster, coonstripe shrimp, rock crab, and tanner crab pot/trap fishery into category II;
- recommends that Service classify all West Coast pot/trap fisheries (i.e., those off Washington and Oregon as well as those off California) as category II;
- concurs with the Service's proposal to reclassify the California pelagic longline fishery from category II to category III;
- recommends that the Service develop and implement expanded monitoring programs for the California halibut, white seabass, and other species set gillnet fishery (3.5-in mesh) and the California yellowtail, barracuda, and white seabass drift gillnet fisheries (mesh size ≥ 3.5 in and < 14 in);

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- recommends that the Service review the available information on state and federal permit holders in northeast and mid-Atlantic fisheries and revise the published List of Fisheries to accurately reflect the number of active vessels and participants in each fishery;
- concurs with the Service's proposal to add the Gulf of Maine/Bay of Fundy harbor porpoise stock to the list of species or stocks incidentally killed or injured in the northeast bottom trawl fishery; and
- recommends that the Service not remove the superscript "1" after Gulf of Maine/Bay of Fundy harbor porpoise in its listing of the mid-Atlantic gillnet fishery until the Service has more definitive information indicating that the number of removals is, and is likely to remain, below 50 percent of the stock's potential biological removal level.

The Marine Mammal Commission also reiterates several recommendations that were included in its comments on proposed Lists of Fisheries in past years but that have yet to be adopted. In this regard, the Marine Mammal Commission reiterates its previous recommendations that the National Marine Fisheries Service—

- develop and implement the research and monitoring programs needed to manage high-seas fisheries in a manner consistent with the requirements of the Marine Mammal Protection Act and the High Seas Driftnet Fishing Moratorium Protection Act;
- expedite its investigation of bottlenose dolphin stock structure in the Gulf of Mexico, expand its efforts to collect reliable information on serious injury and mortality rates of marine mammals incidental to Gulf of Mexico fisheries, and reevaluate the classification of Gulf of Mexico fisheries as information becomes available; and
- indicate the level of observer coverage for each fishery as part of the List of Fisheries.

In response to the Service's request for comments on tribal fisheries, the Marine Mammal Commission recommends that the National Marine Fisheries Service—

- (1) include tribal fisheries on the List of Fisheries, (2) revise its regulations implementing section 118 (e.g., 50 C.F.R. § 229.1(d)) to clarify that treaty tribal fisheries are subject to the requirements of the Marine Mammal Protection Act, including section 118, and (3) begin working with the affected tribes to integrate the registration process with existing licensing or permitting systems if it appears that some tribal fisheries will be listed as category I or category II fisheries;
- notify all treaty tribes believed to be engaged in hunting that any directed taking of marine mammals requires authorization under the Marine Mammal Protection Act; and
- incorporate into the applicable stock assessment reports language similar to that included in the stock assessment report for the Washington stock of sea otters prepared by the Fish and Wildlife Service to clarify that, in accordance with the ruling in *Anderson v. Evans*, any such taking requires authorization under the Marine Mammal Protection Act.

RATIONALE

Pacific Fisheries

The Marine Mammal Commission concurs with the Service's proposal to reclassify the American Samoa longline fishery from category III to category II. The fishing gear and methods used in this fishery are similar to the Hawaii deep-set (category I) and shallow-set (category II) longline fisheries, which frequently or occasionally incidentally kill or seriously injure marine mammals. In 2008 three marine mammal interactions were reported in the American Samoa longline fishery, two involving false killer whales (one died) and one involving a rough-toothed dolphin. However, scientists do not know whether the marine mammals that occur around American Samoa constitute separate stocks and, if so, what the abundances of those stocks might be. Without this information, the Service cannot calculate the stocks' potential biological removal levels and has no basis for categorizing the fishery other than by analogy to other fisheries. The Service states that it will not make determinations on the seriousness of injuries incurred, the stocks to which the affected animals belong, or the total bycatch for this fishery until 2010. Postponing these determinations unnecessarily delays research and conservation measures for these marine mammal stocks, such as the placement of observers on the participating vessels.

The Marine Mammal Commission concurs with the Service's proposal to classify the Hawaii shortline fishery as category II. This change is warranted based on the lack of information regarding population structure and abundance of marine mammals that may interact with this fishery in Hawaii state waters and around seamounts in the U.S. Exclusive Economic Zone. In the absence of adequate information to categorize the fishery accurately, placement in category II is appropriate given the similarities in the gear and methods used in this fishery to those used in the Hawaii deep-set (category I) and shallow-set (category II) longline fisheries.

Alaska Fisheries

The Marine Mammal Commission recommends that the Service continue to classify the Alaska southeast salmon purse seine fishery as category II. The Service indicates that since 1996 this fishery has had no known entanglements of marine mammals or even anecdotal reports of such interactions. However, the lack of evidence for interactions does not provide a reliable basis for reclassifying this fishery to category III if the Service has failed to institute an observer program for it. Self-reporting by participants in fisheries does not provide a reliable basis for estimating interaction rates. The Service has an obligation to provide such a legitimate basis before reclassifying this fishery.

The Marine Mammal Commission recommends that the Service reclassify the Gulf of Alaska sablefish longline fishery from category III to category II. The 2008 stock assessment reports indicate that observers reported that three sperm whales were seriously injured in this fishery in 2006. Extrapolating from those observations (based on 11.2 percent observer coverage) indicates 10 sperm whales were injured or killed during 2006 or, if those takes are spread over a five-year period,

that two sperm whales were injured or killed each year from 2002 to 2006. The Service did not reclassify this fishery because its “analysis for more recent years’ data is not complete, and there is no calculated PBR [potential biological removal level] for this stock” (74 Fed. Reg. 27744). However, given the estimated number of injuries or deaths based on 2002 to 2006 data, the Service’s inability to calculate a potential biological removal level for the North Pacific sperm whale stock is not a sufficient basis for maintaining the current category III classification for this fishery.

In fact, the Service is unable to estimate potential biological removal levels for 57 percent of the marine mammal stocks that occur in Alaska because of inadequate or outdated data. The Service cannot continue to use this lack of information as the basis for failing to classify fisheries that incidentally kill or seriously injure marine mammals. Doing so is inconsistent with the Service’s own guidance for addressing such situations, which directs placement in category II when the available information is not sufficient to categorize a fishery accurately (74 Fed. Reg. 27740). In this case, reclassification of the Gulf of Alaska sablefish longline fishery to category II is warranted based on the lack of information regarding the population structure and abundance of North Pacific sperm whales and the available information on serious injury and mortality rates.

California Fisheries

The Marine Mammal Commission concurs with the Service’s proposal to place the spiny lobster component of the category III California spiny lobster, coonstripe shrimp, rock crab, and tanner crab pot/trap fishery into category II. The reclassification is warranted based on the serious injury of a humpback whale entangled in lobster trap gear in 2007, indicating an average mortality and serious injury rate of 0.2 humpback whale per year, or 8 percent of the potential biological removal level.

However, the Service’s large whale disentanglement network also reported four additional humpback whale entanglement events off California in 2007. Those events involved various types of fishing gear and resulted in serious injuries. Because the gear used to catch spiny lobster appears to be the same as that used to catch these other target species, the takes cannot be attributed conclusively to fishing effort aimed at any of the target species. This information suggests that any or all of these California pot/trap fisheries may warrant a category II listing.

The Service uses two criteria to evaluate and classify pot/trap fisheries in category II (73 Fed. Reg. 73045). The first criterion is whether it has direct evidence of entanglements in a specific fishery. However, reviews by Robbins and Mattila (2001, 2004) indicate that the vast majority (90 to 97 percent) of humpback whale entanglements are not observed. Thus, relying on direct observations is not a sufficient basis for classifying fisheries that may take humpback whales. The second criterion is requires that pot/trap fisheries overlap in space and time with humpback whale feeding or migration areas along the West Coast or take place in areas where entangled humpback whales have been observed and reported to the Service. Although this may be adequate for humpback whales, it does not ensure that other large whales are equally protected. The Service recognizes the shortcomings in its information on entanglements rates and cautions that its estimates of seriously injured or killed whales should be considered minimum estimates. The

number of fisheries interacting with whales also is underestimated because whales that become entangled in gear may never be observed or linked to a specific trap or pot fishery. Simply put, the existing evidence is not sufficient to make an informed assessment regarding the entanglement rates for pot/trap fisheries on the West Coast. For that reason, the Marine Mammal Commission reiterates its previous recommendation that the Service classify all West Coast pot/trap fisheries (i.e., those off Washington and Oregon as well as those off California) as category II. Dividing and renaming the West Coast pot/trap fisheries based on observed entanglement events is not appropriate, given the small fraction of entanglements likely to be observed and the fact that the gear cannot be distinguished.

The Marine Mammal Commission concurs with the Service's proposal to reclassify the California pelagic longline fishery from category II to category III. This change is warranted based on the results of an extensive observer program (observer coverage ranged from 12 to 50 percent from 2003–2005 and 100 percent in 2006 and 2007) and the low rate of observed deaths and serious injuries. Risso's dolphins from the California/Oregon/Washington stock are the primary concern, and total take of these dolphins in all commercial fisheries, including the California pelagic longline fishery, is less than 10 percent of the stock's potential biological removal level. The existing evidence indicates that the California pelagic longline fishery does not interact with other marine mammal species or stocks.

The Service requested public comment and information on two large whale entanglements in 2007. The Service believes that gear from either the category II California set gillnet fishery (3.5-in mesh) for halibut, white seabass, and other species or the California drift gillnet fisheries (mesh size ≥ 3.5 in and < 14 in) for yellowtail, barracuda, and white seabass could have caused these entanglements, based on the area and time of year that the whales were sighted (74 Fed. Reg. 27746). Observer coverage is insufficient to provide reliable data on marine mammal take rates in both of these fisheries. The Service did not use observers to monitor the set gillnet fishery during half of the period between 1990 and 2007. The Service used observers to monitor the drift gillnet fisheries only from 2002 to 2004 (at a rate of 13 percent per year). These fisheries include 82 vessels that incidentally kill or seriously injure marine mammals from at least six different stocks—eight if eastern Pacific gray whales and humpback whales are included on the list. The size of these fisheries and the number of species they take warrant increased observer coverage. For that purpose, the Marine Mammal Commission recommends that the Service develop and implement expanded monitoring programs for the California halibut, white seabass, and other species set gillnet fishery (3.5-in mesh) and the California yellowtail, barracuda, and white seabass drift gillnet fisheries (mesh size ≥ 3.5 in and < 14 in).

Atlantic Fisheries

In the proposed 2010 List of Fisheries, the Service estimates the number of participants for northeast and mid-Atlantic fisheries based on state and federal permit information. In several cases, the addition of the state dataset caused the estimated number of participants in the fisheries to increase significantly (10 or even 20-fold) compared to previous Lists of Fisheries. For example, the number of participants listed for the category I mid-Atlantic gillnet fishery increased from more than

360 to 7,596 and in the category I northeast sink gillnet fishery, the number jumped from 341 to more than 6,455. The Service revised its estimates without removing any duplication on the lists of state and federal permit holders (i.e., individuals holding both state and federal permits for a particular fishery) or accounting for inactive permits. Thus, although the information previously included in the List of Fisheries may have underestimated the number of participants, the new information likely overestimates the level of participation in some fisheries. The uncertainty surrounding the number of participants in these fisheries further complicates their management, the estimation of fishing effort and incidental take rates, and the deployment of observers. The Marine Mammal Commission therefore recommends that the Service review the available information on state and federal permit holders in northeast and mid-Atlantic fisheries and revise the published List of Fisheries to accurately reflect the number of active vessels and participants in each fishery.

The Marine Mammal Commission concurs with the Service's proposal to add the Gulf of Maine/Bay of Fundy harbor porpoise stock to the list of species or stocks incidentally killed or injured in the northeast bottom trawl fishery. The final 2008 stock assessment report indicates six harbor porpoises killed from 2003 to 2006. Yet, three years after the last recorded incidental take, the Service has yet to generate a total mortality estimate or calculate the percentage of the stock's potential biological removal level (610) killed or seriously injured in this fishery. The combined mortality of harbor porpoises from this stock in the northeast sink gillnet, mid-Atlantic gillnet, and northeast bottom trawl fisheries exceeds the stock's potential biological removal level. For that reason, the Service should recognize the harbor porpoise as a stock incidentally injured or killed in the northeast bottom trawl fishery and work jointly with the Harbor Porpoise Take Reduction Team and the Atlantic Trawl Gear Take Reduction Team to reduce the stock's total incidental serious injury and mortality to below its potential biological removal level and, ultimately, to an insignificant level approaching zero.

The Service is proposing to remove the superscript "1" after Gulf of Maine/Bay of Fundy harbor porpoise in the category I mid-Atlantic gillnet fishery. This notation indicates that the taking of the denoted stock is driving the classification of the fishery. The Service's rationale for its proposed change is that the estimated serious injury and mortality of harbor porpoises in this fishery is 299 animals annually, or 49 percent of the stock's potential biological removal level of 610 animals. Under the Service's regulations (50 C.F.R. § 229.2), a category I fishery is one that, by itself, is responsible for the annual removal of 50 percent or more of any stock's potential biological removal level. However, it would be premature to conclude that the taking of harbor porpoises is no longer driving the classification of the mid-Atlantic gillnet fishery. The estimated take is only a single percentage point (or 11 animals) below the threshold that would trigger a category I classification. Given the level of observer coverage in the fishery (2.2 percent) and the resulting uncertainty around the estimates of incidental serious injury and mortality, this difference is not significant or justification for removal of the superscript notation. In addition, the Service's proposal fails to recognize the increasing trend in the deaths of harbor porpoises in this fishery in recent years. Between 2003 and the 2006 the estimated mortality increased from 76 to 137, then to 470, and finally to 511. Mortality and serious injury in 2006 reached 84 percent of the stock's potential biological removal level. This history, the small amount by which the most recent estimate has dropped below the 50 percent threshold, and the uncertainty attached to the estimated number of

removals all argue against the proposed change. The Marine Mammal Commission therefore recommends that the Service not remove the superscript “1” after Gulf of Maine/Bay of Fundy harbor porpoise in its listing of the mid-Atlantic gillnet fishery until the Service has more definitive information indicating that the number of removals is, and is likely to remain, below 50 percent of the stock’s potential biological removal level.

Reiteration of Previous Recommendations

The Marine Mammal Commission supports the Service’s inclusion of high-seas fisheries on the List of Fisheries. Doing so is essential to achieve the objectives of the Marine Mammal Protection Act and the High Seas Driftnet Fishing Moratorium Protection Act. The descriptions and evaluations of high-seas fisheries on the List of Fisheries highlight the lack of data on both the status and the incidental take of marine mammals outside the U.S. Exclusive Economic Zone. This lack of data is not surprising because current U.S. marine mammal stock assessment programs are focused on the stock structure, abundance, and incidental take of marine mammals in U.S. waters. The Service indicated in its response to comments on the draft 2009 List of Fisheries that the “development of a research and monitoring plan to manage high seas fisheries in a manner consistent with the requirements of the MMPA will require novel stock assessment techniques and the development, and/or continuation, of international partnerships.” Gathering data to support the management of high-seas fisheries will be difficult but will provide many ancillary benefits, including the development of useful tools for managing transboundary stocks. Therefore, the Marine Mammal Commission reiterates its previous recommendation that the Service develop and implement the research and monitoring programs needed to manage high-seas fisheries in a manner consistent with the requirements of the Marine Mammal Protection Act and the High Seas Driftnet Fishing Moratorium Protection Act.

In letters reviewing the 2003 through 2009 Lists of Fisheries, the Commission expressed concern about marine mammal interactions with fisheries in the Gulf of Mexico. The Commission recommended that the Service expedite its investigation of bottlenose dolphin stock structure and reevaluate the classification of Gulf of Mexico fisheries. The Commission further recommended that the Service expand its efforts to collect reliable information on serious injury and mortality rates of marine mammals incidental to Gulf of Mexico fisheries, with priority given to instituting an observer program for the menhaden purse seine fishery and expanding efforts to evaluate bottlenose dolphin entanglement in blue crab trap/pot gear. The Service has initiated some efforts to address these issues and has indicated its intent to reevaluate these fisheries as new information becomes available, particularly information regarding the stock structure of bottlenose dolphins in the Gulf of Mexico. However, the Service indicates that it has been unable to address the Commission’s concerns more broadly due to resource limitations. Nonetheless, the Commission believes that these are important issues that need to be resolved. For that reason, the Marine Mammal Commission reiterates its previous recommendation that the Service expedite its investigation of bottlenose dolphin stock structure in the Gulf of Mexico, expand its efforts to collect reliable information on serious injury and mortality rates of marine mammals incidental to Gulf of Mexico fisheries, and reevaluate the classification of Gulf of Mexico fisheries as information becomes available. Clearly, more aggressive management is needed in this region.

Consistent with its recommendations regarding the 2005 through 2009 Lists of Fisheries, the Marine Mammal Commission reiterates its previous recommendation that the Service indicate the level of observer coverage for each fishery as part of the List of Fisheries. The Service responded to a similar comment on the draft 2009 List of Fisheries that it “feel[s] that the LOF is not the appropriate venue for reporting this data because it will confuse rather than clarify if presented without all the associated information supplied in the SARs.” However, the Service also “agrees that observer coverage information would be useful for the reader to reference when determining whether a given fishery was adequately observed and no marine mammals were taken or the fishery was not adequately observed and mortality and serious injury may have occurred but were not documented.” Reporting such information also is necessary because fisheries without recorded interactions are not included in the stock assessment reports. Toward this end, the Service stated that it “is exploring other options for providing information on observer coverage as it applies to the LOF...” (73 Fed. Reg. 73038).

Treaty Tribal Fisheries

The Service also is seeking comment on whether to include treaty tribal fisheries on the List of Fisheries. Currently, such fisheries are not included because the Service has determined that they are conducted pursuant to the tribe’s hunting and fishing rights by treaty and therefore are exempt from the requirements of the Marine Mammal Protection Act. The Service based this determination largely on section 14 of the Marine Mammal Protection Act Amendments of 1994 (Pub. L. 103-238), which states that “[n]othing in this Act including any amendment to the Marine Mammal Protection Act of 1972 made by this Act...alters or is intended to alter any treaty between the United States and one or more Indian tribes....”

The Commission believes that the Service misinterpreted this guidance in the first instance. “This Act” to which section 14 refers is the Marine Mammal Protection Act Amendments of 1994, not the Marine Mammal Protection Act itself. Thus, this provision stands for the proposition that nothing in the amendments or changes made to the Marine Mammal Protection Act by those amendments was intended to change the status quo with respect to tribal rights relating to the taking of marine mammals. It was not a more sweeping statement that tribal hunting rights were no longer subject to the provisions of the Marine Mammal Protection Act to the extent that they had been subject to its provisions prior to enactment of the 1994 amendments. In this regard, the Commission notes that the Service had interpreted the forerunner to section 118 of the Act, section 114 (which provided an interim exemption for commercial fisheries under which incidental taking was authorized while the longer-term approach that eventually became section 118 was developed) as applying to all commercial fisheries, including those conducted by treaty tribes. Because the 1994 amendments were not intended to change the status quo with respect to treaty rights, it follows that tribes should have been included in the new fisheries regime to the same extent that they had been included in the interim regime.

Even if one adopts the Service’s view concerning the 1994 amendments and their implications for tribal fisheries, the situation has changed based on the ruling of the Ninth Circuit Court of Appeals in *Anderson v. Evans*. In that case, the court ruled that regardless of whether treaty

hunting rights had been abrogated by enactment of the Marine Mammal Protection Act, the hunting of gray whales by the Makah Tribe was nonetheless subject to the requirements of the Act under a conservation necessity theory. The court relied on a three-part test to determine when conservation statutes, such as the Marine Mammal Protection Act, affect Indian treaty rights: (1) whether the United States has jurisdiction where the hunting or fishing occurs, (2) whether the statute is non-discriminatory, and (3) whether the application of the statute to regulate treaty rights is necessary to achieve its conservation purpose.

Applying this test invariably leads to the conclusion that tribal fisheries are subject to the requirements of section 118 of the Marine Mammal Protection Act. Clearly, the fisheries at issue, and any taking of marine mammals that results, occur in areas subject to the jurisdiction of the United States. Similarly, just as the court found in *Anderson*, the statute is non-discriminatory because tribal fishermen are not being singled out any more than non-tribal fishermen in the same areas. The conservation necessity test is also satisfied as laid out by the court in *Anderson*. The court found that, in enacting the Marine Mammal Protection Act, Congress was not merely concerned with the survival of marine mammals but with ensuring that marine mammals are maintained at their optimum sustainable populations and continue to be significant functioning elements in the ecosystem. The court believed that, for these broader goals to be achieved, the taking of gray whales by the Makah Tribe needed to be reviewed under the provisions of the Act. Applying the findings and directives set forth in *Anderson*, we see no reason why the taking of marine mammals incidental to tribal fisheries should not also be subject to review under the provisions of the Marine Mammal Protection Act.

The Commission recognizes that the ruling in *Anderson* is not without its critics. That criticism focuses primarily on the court's application of the conservation necessity prong of the test and whether it should apply to the broader policy goals of the Marine Mammal Protection Act or only when there is a demonstrated risk to the species at issue. Despite this criticism, *Anderson* remains the applicable law in the Ninth Circuit, the area that includes most if not all the tribal fisheries subject to treaties. As such, it cannot be ignored. Furthermore, the Commission believes that the take of marine mammals incidental to tribal fisheries raises true conservation issues for some species (e.g., some stocks of harbor porpoise) that would likely satisfy the conservation necessity test even under a narrower application. The Marine Mammal Commission therefore recommends that the National Marine Fisheries Service (1) include tribal fisheries on the List of Fisheries, (2) revise its regulations implementing section 118 (e.g., 50 C.F.R. § 229.1(d)) to clarify that treaty tribal fisheries are subject to the requirements of the Marine Mammal Protection Act, including section 118, and (3) begin working with the affected tribes to identify opportunities to integrate the registration process with existing licensing or permitting systems if it appears that some tribal fisheries will be listed as category I or category II fisheries.

In reviewing the stock assessment reports prepared by the Service under section 117 of the Marine Mammal Protection Act, we note that tribal hunting of harbor seals and California sea lions is included as a possible source of mortality. If such hunting is in fact ongoing, it would be subject to the same analysis as the proposed taking of gray whales at issue in *Anderson v. Evans* and would presumably require authorization under the Act. The Marine Mammal Commission therefore

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recommends that the National Marine Fisheries Service notify all treaty tribes believed to be engaged in such hunting that any directed taking of marine mammals requires authorization under the Marine Mammal Protection Act. The Marine Mammal Commission further recommends that the Service incorporate into the applicable stock assessment reports language similar to that included in the stock assessment report for the Washington stock of sea otters prepared by the Fish and Wildlife Service to clarify that, in accordance with the ruling in *Anderson*, any such taking requires authorization under the Marine Mammal Protection Act.

Please let me know if you have any questions regarding the Commission's recommendations and rationale.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

Literature Cited

- Robbins, J., and D. Matilla. 2001. Monitoring entanglements of humpback whales (*Megaptera novaeangliae*) in the Gulf of Maine on the basis of caudal peduncle scarring. Report to the 53rd Scientific Committee Meeting of the International Whaling Commission, SC/53/NAH25.
- Robbins, J., and D. Matilla. 2004. Estimating humpback whale (*Megaptera novaeangliae*) entanglement rates on the basis of scar evidence. Report to the Northeast Fisheries Science Center, National Marine Fisheries Service, Order Number 43EANF030121.