

particular, the Fisheries Service failed to establish accountability measures in Amendment 5b that will ensure that bycatch does not exceed the annual catch limit it set for dusky sharks and failed to demonstrate how the measures it did include will be sufficient to rebuild the dusky shark population and end overfishing. The Fisheries Service also failed to comply with the National Environmental Policy Act (“NEPA”) and the Administrative Procedure Act (“APA”) in analyzing the impacts of, and alternatives to, Amendment 5b. Accordingly, this Court should remand the Fisheries Service’s action and require it to establish new management measures as expeditiously as possible and by a date certain that conform to the Magnuson-Stevens Act and NEPA.

2. The dusky shark is a highly migratory apex predator that has experienced dramatic declines in the population’s abundance due to fishing pressure. The Fisheries Service has identified dusky sharks as an “overfished” fish population¹ and subject to “overfishing” since at least 2006. Since then, the dusky shark has remained overfished and at very low abundance because, while fishermen have been prohibited from directly hunting and retaining dusky sharks since 2000, large numbers of these sharks are still caught incidentally as bycatch by commercial and recreational fisheries, and many of these sharks die.

3. The Fisheries Service’s refusal to place a hard limit on bycatch of dusky sharks has resulted in continued harm to the species. The Fisheries Service has failed for the better part of a decade to implement measures necessary to end overfishing of dusky sharks “immediately.” And, despite finding that its management measures have not fostered adequate progress toward rebuilding the population, the agency has failed since at least 2011 to make timely revisions to those measures, in violation of the Magnuson-Stevens Act. Amendment 5b does not cure these

¹ A fish population is also referred to as a “stock” under the Magnuson-Stevens Act.

problems. By failing to establish measures that would ensure that the catch of dusky sharks—including bycatch—will be limited to the level necessary to rebuild the population, the Fisheries Service is continuing the same management approach that has failed to end overfishing or make progress toward rebuilding the dusky shark population.

4. In order to finally end the slaughter of dusky sharks as bycatch and allow the species to rebuild, the Fisheries Service must establish accountability measures to ensure that dusky shark bycatch does not exceed the purported catch limit of zero and trigger changes to management if it does. Yet, in Amendment 5b, the Fisheries Service rejected this approach in favor of several unproven measures that it believes may reduce dusky shark bycatch, such as training fishers in shark identification, improving communication protocols between fishers, and requiring limited gear changes in part of the fishery. Moreover, even the modest measures that the Fisheries Service did include only apply to the “highly migratory species” fisheries, which represent only a subset of fisheries known to catch and kill dusky sharks. In so doing, the Fisheries Service irrationally ignored the impacts of at least two other commercial fisheries that incidentally catch and kill dusky sharks. The Fisheries Service compounded its errors by underestimating incidental catch even within the “highly migratory species” fishery that was the focus of its management measures, and failed to rationally explain how the modest measures it did impose could achieve the amount of bycatch reduction the Fisheries Service identified as needed in order to end overfishing and rebuild the dusky shark population.

5. Further, the Fisheries Service, in its final environmental impact statement (“FEIS”) for Amendment 5b, failed to take a “hard look” at the impacts that its proposed measures would have on dusky shark mortality, and failed to evaluate a reasonable range of

alternatives to effectively reduce mortality. Instead, the Service focused on a narrow suite of alternatives that are unlikely to achieve the amendment's purpose.

6. As a result of the defects in Amendment 5b and the associated FEIS, the Fisheries Service cannot rationally conclude that the measures in Amendment 5b will end overfishing or rebuild the dusky shark population. The Fisheries Service's violations of the Magnuson-Stevens Act, NEPA, and the APA harm Oceana's interests in a healthy population of dusky sharks and in protecting and restoring the species' role as a top predator in maintaining a balanced, healthy ecosystem. This harm will continue in the absence of action by this Court.

PARTIES

7. Plaintiff Oceana, Inc. is a non-profit, international conservation organization dedicated to maintaining and protecting the world's oceans, including the northwest Atlantic, Gulf of Mexico, and the Caribbean. Oceana's mission includes making oceans vibrant and healthy by obtaining protection and conservation for Atlantic marine ecosystems and wildlife, like sharks. Oceana has over 740,000 members and supporters worldwide, including over 250,000 members and supporters in the Atlantic, Gulf, and Caribbean coastal states and territories. The Fisheries Service has appointed marine scientists from Oceana to serve on the HMS Fishery Management Plan Advisory Panel on multiple occasions, including most recently from 2009 through 2011 and from 2014 to 2016. Oceana's efforts concerning dusky sharks include numerous public comments regarding the species to the Fisheries Service. Oceana has been involved in public awareness events concerning dusky sharks and alerts its membership on issues involving the protection of dusky sharks. Oceana's headquarters are located in Washington, D.C. It has offices or staff in North Carolina, South Carolina, Florida, New York, Massachusetts, California, Oregon, and Alaska in addition to the District of Columbia; as well as

worldwide offices in Madrid, Spain; Brussels, Belgium; Copenhagen, Denmark; Geneva, Switzerland; Belmopan, Belize; Santiago, Chile; Manila, Philippines; Brasilia, Brazil; and Toronto, Canada.

8. Oceana's members observe and interact with dusky sharks and their habitat in the northwest Atlantic for recreational, aesthetic, and commercial purposes, including scuba diving, wildlife watching, and studying dusky sharks. In order for Oceana's members to engage in these activities, the Fisheries Service must foster and maintain a viable population of dusky sharks in the northwest Atlantic and the Gulf of Mexico that contributes to a healthy, functioning ecosystem. Consequently, Oceana's members are directly affected by the Fisheries Service's failure to end the overfishing of dusky sharks and rebuild the population.

9. Oceana's members suffer direct and immediate injury caused by the Fisheries Service's continued failure to end overfishing and rebuild the dusky shark population. Oceana's members plan to continue their observations and interactions with dusky sharks and their habitat in the future, but their activities are impaired by the Fisheries Service's failures to limit the number of dusky sharks killed each year and rebuild the population. Unless the Court grants the relief requested, the Fisheries Service's failure to fulfill its obligations will continue to harm Oceana's members. The Fisheries Service's actions and inactions are unlawful and arbitrary, in violation of the Magnuson-Stevens Act, NEPA, and the APA, and are causing irreparable injury to Oceana for which it has no other adequate remedy at law.

10. Defendant Wilbur L. Ross is Secretary of the United States Department of Commerce ("Secretary"). He is sued in his official capacity as the chief officer of the Department charged with overseeing the proper administration and implementation of the Magnuson-Stevens Act, including provisions of that Act that require implementation of annual

catch limits, accountability measures, and others actions necessary to end overfishing and rebuild overfished populations of fish.

11. Defendant National Oceanic and Atmospheric Administration (“NOAA”) is an agency of the United States Department of Commerce with supervisory responsibility for the Fisheries Service. The Secretary of the Department of Commerce has delegated responsibility to implement and enforce compliance with the Magnuson-Stevens Act to NOAA, which in turn has sub-delegated that responsibility to the Fisheries Service.

12. Defendant National Marine Fisheries Service is an agency of the United States Department of Commerce that has been delegated the responsibility to implement and enforce fishery management plans and amendments to those plans, and to issue implementing regulations. The Fisheries Service is the United States government agency with primary responsibility to ensure that the requirements of the Magnuson-Stevens Act are followed and enforced, including the requirements to implement annual catch limits, accountability measures, and others actions necessary to end overfishing and rebuild overfished populations of fish.

JURISDICTION AND VENUE

13. This action arises under the Magnuson-Stevens Act, 16 U.S.C. §§ 1801-1891d, NEPA, 42 U.S.C. §§ 4321-4370h, and the APA, 5 U.S.C. §§ 701-706.

14. This Court has jurisdiction over this action pursuant to the Magnuson-Stevens Act, which provides that “[t]he district courts of the United States shall have exclusive jurisdiction over any case or controversy arising under” the Magnuson-Stevens Act. 16 U.S.C. § 1861(d). The Magnuson-Stevens Act also provides that actions taken by the Secretary of Commerce under regulations implementing a fishery management plan shall be subject to judicial review “if a petition for such review is filed within 30 days after the date on which the

regulations are promulgated or the action is published in the Federal Register, as applicable.” 16 U.S.C. § 1855(f). Defendants published the final rule implementing Amendment 5b on April 4, 2017, in the Federal Register. 82 Fed. Reg. 16478. Plaintiff Oceana is filing this Complaint within thirty (30) days of publication of the Final Rule.

15. This Court further has jurisdiction over this action pursuant to the APA, 5 U.S.C. §§ 701-706, which provides that final agency action for which there is no other remedy in a court is subject to judicial review; 28 U.S.C. § 1331 (federal question jurisdiction), which grants the district courts “original jurisdiction of all civil actions arising under the . . . laws . . . of the United States;” and 28 U.S.C. § 1361, which grants the district courts “original jurisdiction of any action in the nature of mandamus to compel an officer or employee of the United States or any agency thereof to perform a duty owed to the plaintiff.”

16. This Court has the authority to grant declaratory relief pursuant to the Declaratory Judgment Act, 28 U.S.C. §§ 2201-2202, and may grant relief pursuant to the Magnuson-Stevens Act, 16 U.S.C. § 1861(d) and 1855(f), as well as the APA, 5 U.S.C. § 706. An actual controversy exists between the parties within the meaning of 28 U.S.C. § 2201.

17. Venue is properly vested in this judicial district under 28 U.S.C. § 1391(b), (e), where the Defendants are officers or employees of the United States and reside in this district, and a substantial part of the events and omissions which gave rise to this action occurred in this district.

LEGAL BACKGROUND

Magnuson-Stevens Act

Definitions and General Requirement to End Overfishing

18. The Magnuson-Stevens Act is designed to conserve and manage fish populations in the United States territorial waters and in the exclusive economic zone, which extends from the boundaries of state waters to 200 miles offshore or to an international boundary with neighboring countries. 16 U.S.C. § 1801(b)(1). The Magnuson-Stevens Act gives the Secretary, acting through the Fisheries Service, authority to regulate fishing in federal waters.

19. The Magnuson-Stevens Act gives the Fisheries Service authority over fisheries for Atlantic highly migratory species, 16 U.S.C. § 1852(a)(3), and requires the Fisheries Service to prepare and implement fishery management plans for all Atlantic highly migratory fisheries under its authority, *id.* § 1854(g)(1). The Act defines “highly migratory species” to include sharks, swordfish, tuna, marlin, and sailfishes. *Id.* § 1802(21).

20. The Fisheries Service also has the responsibility to carry out any fishery management plan or amendment approved or prepared by the Secretary in accordance with the Magnuson-Stevens Act. 16 U.S.C. § 1855(d). The Fisheries Service may promulgate regulations, pursuant to APA rulemaking procedures, as may be necessary to carry out fishery management plans or to carry out any other provisions of the Magnuson-Stevens Act, including the preeminent requirement to prevent or end overfishing. *Id.* §§ 1851(a)(1), 1855(d).

21. When a population of fish (called a “stock” in the terminology of the Magnuson-Stevens Act) is caught in more than one fishery, the Fisheries Service guidelines state that the conservation and management measures for that population should be included in a single “primary” fishery management plan. 50 C.F.R. § 600.305(c)(6). *See also* 16 U.S.C. § 1851(a)(3)

(“To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range.”).

22. The Magnuson-Stevens Act requires fishery management plans to “contain the conservation and management measures . . . necessary . . . to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery.” 16 U.S.C. § 1853(a)(1)(A).

23. The Magnuson-Stevens Act defines the terms “overfishing” and “overfished” to mean “a rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce the maximum sustainable yield on a continuing basis.” 16 U.S.C. § 1802(34).

24. The Magnuson-Stevens Act defines “fishery” to mean “one or more stocks of fish . . . and any fishing for such stocks.” 16 U.S.C. § 1802(13). A “stock of fish” is defined as “a species, subspecies, geographical grouping, or other category of fish capable of management as a unit.” *Id.* § 1802(42). “Fishing” includes “the catching, taking, or harvesting of fish;” “the attempted catching, taking, or harvesting of fish;” and “any other activity which can reasonably be expected to result in the catching, taking, or harvesting of fish.” *Id.* § 1802(16).

25. The Magnuson-Stevens Act requires the Secretary to report annually to the Congress on the status of fish populations. In these reports, the Secretary must identify fish populations that are overfished as well fish populations that are subject to overfishing. 16 U.S.C. § 1854(e)(1); 50 C.F.R. § 600.310(j)(1).

26. The Magnuson-Stevens Act requires that fishery management plans, fishery management plan amendments, and any regulations promulgated to implement such fishery management plans must be consistent with the “National Standards” for fishery conservation and management. 16 U.S.C. § 1851(a). Preeminent among these standards is National Standard 1 of

the Magnuson-Stevens Act, which requires that “[c]onservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery.”

Id. § 1851(a)(1).

27. National Standard 2 of the Magnuson-Stevens Act requires the Fisheries Service to base management measures on the best scientific information available. 16 U.S.C. § 1851(a)(2).

28. Pursuant to the Magnuson-Stevens Act, 16 U.S.C. § 1851(b), the Fisheries Service has promulgated guidelines for implementing the ten national standards for fishery conservation and management measures. The guidelines reflect the Fisheries Service’s interpretation of the national standards. 50 C.F.R. § 600.305(a)(3).

Requirement to Establish Annual Catch Limits and Accountability Measures

29. In 2006, Congress amended the Magnuson-Stevens Act to require the Fisheries Service to specify, in its fishery management plans, annual catch limits that prevent overfishing of populations and measures to ensure accountability with respect to those catch limits. Pub. L. No. 109-479, § 104(a)(10), 120 Stat. 3575, 3584 (Jan. 12, 2007) (Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (“Magnuson-Stevens Reauthorization Act”)), 16 U.S.C. § 1853(a)(15).

30. The Magnuson-Stevens Reauthorization Act required the Fisheries Service to implement those annual catch limits and accountability measures “in fishing year 2010 for fisheries determined by the [Fisheries Service] to be subject to overfishing.” Pub. L. No. 109-479, § 104(b)(1)(A), 120 Stat. 3575, 3584, 16 U.S.C. § 1853 note.

31. The National Standard 1 Guidelines define “annual catch limit” as “a limit on the total annual catch of a stock or stock complex . . . that serves as the basis for invoking

[accountability measures].” 50 C.F.R. § 600.310(f)(1)(iii). “Catch” is defined as “the total quantity of fish . . . taken in commercial, recreational, subsistence, tribal, and other fisheries,” including “mortality of fish that are discarded.” *Id.* § 600.310(f)(1)(i).

32. Under the National Standard 1 Guidelines, accountability measures are defined as “management controls to prevent [annual catch limits] . . . from being exceeded, and to correct or mitigate any overages of the [annual catch limit] if they occur . . . in as short a time as possible.” 50 C.F.R. § 600.310(g)(1). If an annual catch limit is exceeded in any given year, accountability measures “must be implemented as soon as possible.” *Id.* § 600.310(g)(3).

33. These two requirements work together to ensure that “[annual catch limits] in coordination with [accountability measures] must prevent overfishing.” 50 C.F.R. § 600.310(f)(4)(i). “The system of [annual catch limits] and [accountability measures] designed must be effective in protecting the stock or stock complex as a whole.” *Id.* § 600.310(f)(4)(ii).

Requirement to Immediately End Overfishing and Rebuild Overfished Stocks

34. The Magnuson-Stevens Act requires that, within two years of identifying a stock as overfished, the Fisheries Service must implement a fishery management plan, fishery management plan amendment, or regulations to end overfishing “immediately” and rebuild the stock. 16 U.S.C. § 1854(e)(3)(A). This plan, amendment, or regulation (often called a “rebuilding plan”) must specify a time for rebuilding the population that must be “as short as possible,” taking into account, among other things, the status and biology of the overfished species. *Id.* § 1854(e)(4)(A)(i). The Act requires that the rebuilding period may not exceed 10 years, unless the biology of the stock, other environmental conditions, or management measures under an international agreement dictate otherwise. *Id.* § 1854(e)(4)(A)(ii).

35. The Magnuson-Stevens Act requires the Fisheries Service to review rebuilding plans at least every two years to determine whether they have resulted in adequate progress toward ending overfishing and rebuilding the population. 16 U.S.C. § 1854(e)(7). In the case of Atlantic highly migratory species such as the dusky shark, if the Fisheries Service determines that adequate progress has not been made, the Fisheries Service must “immediately make revisions necessary to achieve adequate progress.” *Id.* § 1854(e)(7)(A).

National Environmental Policy Act

36. The National Environmental Policy Act is our “basic national charter for protection of the environment.” 40 C.F.R. § 1500.1(a). Its purpose is to “promote efforts which will prevent or eliminate damage to the environment.” 42 U.S.C. § 4321. Regulations promulgated by the Council on Environmental Quality (“CEQ”) implement NEPA and govern the Fisheries Service’s decision making. *See* 40 C.F.R. §§ 1500-1508; 33 C.F.R. Part 230.

37. Congress enacted NEPA to require federal agencies to incorporate environmental concerns into the decision-making process. 42 U.S.C. § 4331(a)-(b). In furtherance of this goal, NEPA compels federal agencies to evaluate prospectively the environmental impacts of proposed actions that they carry out, fund, or authorize and to ensure that the public is given a meaningful opportunity to participate in the decision-making process.

38. NEPA requires federal agencies to fully consider and disclose the environmental consequences of an agency action before proceeding with that action—to take a “hard look.” 42 U.S.C. § 4332(2)(C); 40 C.F.R. §§ 1501.2, 1501.4, 1502.5. An agency’s evaluation of environmental consequences must be based on “accurate scientific” information of “high quality.” 40 C.F.R. § 1500.1(b). If there are not sufficient data available, the agency must follow the

requisite procedure for addressing or evaluating the impacts in view of incomplete or unavailable information. *Id.* § 1502.22.

39. NEPA requires federal agencies to prepare an environmental impact statement (“EIS”) for all “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1501.4. The EIS “shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. § 1502.1.

40. In an EIS, the federal agency must identify the direct, indirect, and cumulative impacts of the proposed action, consider alternative actions and their impacts, and identify all irreversible and irretrievable commitments of resources associated with the proposed action. 42 U.S.C. § 4332(2)(C); 40 C.F.R. §§ 1508.7, 1508.8, 1502.14.

41. NEPA requires agencies to consider “alternatives to the proposed action.” 42 U.S.C. § 4332(2)(C)(iii) & (E); 40 C.F.R. § 1508.25. The analysis of alternatives is the “heart” of the NEPA process and must provide “a clear basis for choice among options by the decisionmaker and the public.” 40 C.F.R. § 1502.14.

42. In the EIS analysis of alternatives, the agency shall “[r]igorously explore and objectively evaluate *all* reasonable alternatives.” 40 C.F.R. § 1502.14(a) (emphasis added).

43. CEQ regulations require federal agencies “to the fullest extent possible,” to “[u]se the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.” 40 C.F.R. § 1500.2 and 1500.2(e).

44. NEPA requires that an agency incorporate its environmental analysis into its decision-making process. “NEPA’s purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action.” 40 C.F.R. § 1500.1(c); *see also id.* (“Ultimately . . . it is not better documents but better decisions that count.”); *id.* § 1502.1 (“primary purpose” of an EIS is to “serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government. . . . An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions.”).

Administrative Procedure Act

45. The Administrative Procedure Act grants a right of judicial review to “[a] person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action.” 5 U.S.C. § 702.

46. Under the APA, a court must “hold unlawful and set aside agency action . . . found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” *Id.* § 706(2)(A). An agency action is “arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *Motor Vehicle Mfrs. Ass’n. v. State Farm Mutual Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

47. Under the APA, a court must also “hold unlawful and set aside” any agency action taken that is “in excess of statutory jurisdiction, authority, or limitations, or short of statutory right.” 5 U.S.C. § 706(2)(C).

48. The Fisheries Service's promulgation of the final rule implementing Amendment 5b is an "agency action" subject to judicial review under the APA.

FACTUAL BACKGROUND

The Biology of the Dusky Shark Makes the Species Highly Vulnerable to Overfishing

49. The dusky shark (*Carcharhinus obscurus*) is a large, highly migratory shark averaging about twelve feet long that inhabits warm temperate and tropical ocean waters around the globe. The northwest Atlantic population of dusky sharks occurs from southern Massachusetts to Florida, the Caribbean Sea, and the Gulf of Mexico. These sharks live in both inshore and offshore ocean waters, ranging from shallow water of about 30 feet or less to as deep as 1,300 feet. They undertake lengthy migrations up and down the coast in summer and fall.

50. The dusky shark is an apex predator with a diverse diet that includes most fish species, squid, octopus, other sharks and rays, crustaceans, mollusks, and occasionally marine mammals.

51. Dusky sharks can live as long as 40 years, but they do not reach sexual maturity until they are about 20 years old. Mature females reproduce only every two to three years, accommodating a nearly 18-month gestation period and a one-year period of rest in between pregnancies. They give birth to between two and sixteen live pups. The dusky shark's slow growth, late maturity, and relatively infrequent reproduction render it highly vulnerable to overfishing.

The Decline of Dusky Sharks and Past Management Measures

52. Dusky sharks became a popular target for commercial and recreational fishing off the U.S. Atlantic and Gulf coasts in the late 1970s, in part because dusky sharks are a highly desired species in the international shark fin trade. As a result, the population experienced a steep

decline over the next two decades. In response, the Fisheries Service identified dusky sharks as a “Species of Concern” in 1997. It remains a Species of Concern today, meaning that the agency recognizes that proactive conservation measures are necessary to address threats to the species.

53. The Fisheries Service manages the dusky shark fishery under its HMS Fishery Management Plan as part of the prohibited shark complex. There are a total of 19 species of sharks in the complex. Intentionally catching and retaining these species is prohibited. While dusky sharks are managed as part of the HMS fishery, other commercial and recreational fisheries that are managed under other fishery management plans also catch dusky sharks.

54. A primary objective of the HMS Fishery Management Plan is to “[r]ebuild overfished Atlantic HMS stocks, and monitor and control all components of fishing mortality, both directed and incidental, so as to ensure the long-term sustainability of the stocks.” Fisheries Service, Consolidated HMS Fishery Management Plan (July 2006) at 1-13, Table 1.3.

55. In 2000, the Fisheries Service prohibited commercial and recreational fishermen from retaining dusky sharks, meaning that fishermen are not allowed to keep any dusky sharks that they catch. The Fisheries Service adopted the measure because it determined that the dusky shark was experiencing severe population declines and could no longer support a direct, sustainable fishery.

56. Prohibiting the retention of dusky sharks does not prevent dusky sharks from being caught and killed, however. Dusky sharks are hooked by bottom longline gear used to target other shark species and reef fish species, including snappers and groupers, as well as pelagic longline gear used to target tuna, swordfish, and other fish. When prohibiting retention, the Fisheries Service noted that it was concerned that even bycatch mortality alone may prevent the species from rebuilding to sustainable levels.

57. Dusky sharks often do not survive being hooked and hauled up, even if they are released as bycatch. Scientists have estimated that more than 80 percent of immature dusky sharks and more than 40 percent of adults caught on bottom longlines die by the time they are hauled to the fishing vessel. Forty percent of dusky sharks caught on pelagic longlines die by the time they are brought to the vessel. The physiological stress of being hooked for long periods of time further compromises the dusky shark's post-release survival. The Fisheries Service has estimated that 10-42 percent of sharks caught by bottom longlines that are alive at the time they are released die afterward, depending on how long the hooks (and thus the sharks) were left in the water. A recent study found that as many as 97 percent of sharks die, either on the vessel or post-release, after spending more than three hours hooked on a line. The average "soak" time for gear in the shark bottom longline fishery and many reef fish fisheries is more than three hours.

58. The Fisheries Service completed its first formal stock assessment of dusky sharks in 2006, concluding that the stock was overfished and subject to overfishing. In 2008, the Fisheries Service implemented Amendment 2 to the HMS Fishery Management Plan, part of which was designed to rebuild the population of dusky sharks in response to the 2006 stock assessment. Amendment 2 estimated it would take 100-400 years to rebuild the dusky shark population and established a target date of 2108 for rebuilding the dusky shark population to a sustainable level.

59. Amendment 2 established limits on targeted fishing for other shark species, which the Fisheries Service theorized would lead to less bycatch of dusky sharks and established limited time/area closures for certain fisheries. It did not establish a limit on the number of dusky sharks that could be caught or killed every year as bycatch.

60. In 2011, the Fisheries Service completed another stock assessment of dusky sharks and again concluded that the dusky shark was overfished and subject to overfishing. The assessment estimated that the biomass of reproductive-aged dusky sharks had decreased 85 percent since the late 1980s. It estimated that overfishing on the population started in the mid-1980s and that the dusky shark stock first became overfished in 1999. It concluded that the prohibition on directed catch had reduced, but not ended, overfishing. That assessment also concluded that the likelihood of achieving the Fisheries Service's target rebuilding date of 2108 with current levels of fishing mortality on dusky sharks was low. The analysis showed that fishing mortality would need to be cut by more than half in order to achieve a 70 percent likelihood of rebuilding the dusky shark population by 2108.

61. In 2016, the Fisheries Service completed an update to the 2011 stock assessment. The results mirrored the 2011 analysis, finding that although fishing mortality had declined since overfishing began occurring in the 1980s, fishing mortality had slightly increased in the six additional years of data it evaluated since completing the 2011 assessment. The 2016 update also concluded that the combination of life-history factors and the vulnerability of dusky sharks to various fishing gears suggest that the population can only sustain a small amount of mortality. The update estimated that the target rebuilding years ranged from 2084-2204, with a median of 2107. The update concluded that the stock remained overfished and subject to overfishing, and that in order to achieve a 70 percent probability of rebuilding the stock by 2107, the Fisheries Service would still need to reduce fishing mortality by more than half.

62. The Fisheries Service completed a short addendum to the update in 2016 in order to address comments from reviewers. The addendum confirmed that the dusky shark stock is still overfished with overfishing occurring. However, the addendum reran models to account for

management changes in the shark bottom longline fishery that were not considered in the update. The new projections showed that there was a lower degree of overfishing than in previous assessments, but noted that the results were “very uncertain.” The addendum still concluded that mortality needed to be reduced from 2015 levels by half to achieve a 70 percent probability of rebuilding the stock by 2107 and also estimated that mortality would need to be reduced by 35 percent in order to achieve a 50 percent probability of rebuilding by 2107.

The Continuing Problem of Dusky Shark Bycatch

63. Despite the Fisheries Service prohibiting the directed fishing and retention of dusky sharks for nearly 20 years, the dusky shark population remains overfished and subject to continued overfishing. These problems persist because substantial numbers of dusky sharks continue to be caught and killed as bycatch in both commercial and recreational fisheries.

64. In non-HMS commercial fisheries, dusky sharks are caught by bottom longlines and pelagic longlines, and are also caught in gillnets and other net gear.

65. Within the HMS fishery, dusky sharks are most often caught by the pelagic longline fishery, the shark bottom longline fishery, and the shark recreational fishery.

HMS Pelagic Longline Fishery

66. The HMS pelagic longline fishery primarily targets tuna and swordfish in both the Atlantic and Gulf of Mexico. The primary fishing line, or mainline, on a pelagic longline boat can vary from 5 to 40 miles in length with approximately 20 to 30 hooks per mile.

67. The Fisheries Service uses both self-reported logbook data and observer data to monitor bycatch in the pelagic longline fishery. Data from the logbooks of a subset of pelagic longline vessels fishing in certain areas show that these vessels caught an average of at least 539

dusky sharks per year. These estimates do not include logbook data from the entire pelagic longline fishery, and, moreover, not all catches that occur are reported in logbooks.

68. Observer data for the pelagic longline fishery are limited, as only 5-17 percent of the fishing trips have carried an observer between 2001 and 2015. In other words, between 83 and 95 percent of pelagic longline trips did not carry an observer. In that small percentage of the fishery, observed vessels have caught an average of 32 dusky sharks per year, a third of which were likely dead by the time they were hauled to the vessel and some of which likely died after release.

69. The Fisheries Service has not estimated overall dusky shark bycatch and mortality in the entire pelagic longline fishery using available observer reports. If it were to do so, the numbers could easily be an order of magnitude higher than the observed numbers the agency reports.

HMS Shark Bottom Longline Fishery

70. The HMS shark bottom longline fishery targets large and small coastal sharks in the Atlantic and Gulf of Mexico. Bottom longline gear consists of a mainline between 1 and 9 miles long, with approximately 50-500 hooks attached. The lines are typically set in the water anywhere from 2 to 20 hours, with an average soak time of 7.5 hours.

71. Approximately 210 vessels are permitted to target sharks and approximately 250 additional vessels are permitted to incidentally catch sharks as part of the shark bottom longline fishery. Very few fishers have both shark bottom longline permits and other commercial permits. For example, approximately 6-7 percent of the approximately 800 vessels in the Gulf of Mexico reef fish fishery have both directed reef fish and directed shark permits.

72. The Fisheries Service uses both self-reported logbook data and observer data to monitor bycatch in the shark bottom longline fishery.

73. The Fisheries Service selects a limited number of HMS shark bottom longline boats to participate in a smaller shark research fishery every year to collect life history data on sharks and catch data for future stock assessments. In 2015, seven shark vessels participated in the shark research fishery. Observer coverage for the shark research fishery is 100 percent.

74. In 2015, observers in the shark research fishery reported the fishery caught 248 dusky sharks. In total, observers for the shark research fishery reported about 1,200 dusky sharks caught between 2008 and 2015, with an average of 150 caught per year. Approximately 45 percent of those sharks were kept or discarded dead. At least some of the sharks released alive likely died of their injuries later. This represents totals for all boats and fishing sets in the shark research fishery because observer coverage is 100 percent.

75. Observer coverage for the rest of the shark bottom longline fishery (including boats that have both reef fish and directed shark permits) is approximately 5-10 percent. Because approximately 90 to 95 percent of the shark bottom longline trips do not carry an observer, data on bycatch is only recorded for 5-10 percent of the thousands of fishing trips these vessels make per year. In that small percentage of the fishery, observed vessels have caught a total of approximately 55 dusky sharks between 2008 and 2015, half of which were dead when they were released and more of which likely died after release.

76. As with the pelagic longline fishery, the Fisheries Service has not estimated overall dusky shark bycatch and mortality in the entire shark bottom longline fishery using available observer reports. The raw data shows relatively small numbers of observed catch (55 sharks caught between 2008 and 2015). If these data were used to estimate the total number of

dusky sharks caught during all fishing trips rather than the 5-10 percent that are observed, the bycatch numbers would likely be substantial.

HMS Shark Recreational Fishery

77. The recreational shark fishery uses rod and reel and handline gear. Recreational fishers do not have to report most recreational shark landings and misidentification is a problem in the fishery, so it is difficult to obtain an accurate estimate of bycatch.

78. The Fisheries Service obtains data about bycatch in the fishery from a number of surveys, which mainly collect data provided by recreational anglers and captains. One survey also includes data from dockside interviews and phone surveys.

79. From these surveys, the Fisheries Service estimates that the recreational fishery caught approximately 73,000 dusky sharks between 2008 and 2015, with an average of 9,000 dusky sharks caught per year in the entire recreational fishery. These figures represent estimates of catch in the entire shark recreational fishery based on the survey data. The Fisheries Service estimates that approximately 4,000 of these dusky sharks were kept or discarded dead between 2008 and 2015 in the recreational fishery, with an average of 500 dusky sharks per year kept or discarded dead.

Bycatch in Fisheries Other than the HMS Fishery

80. In addition to the HMS commercial and recreational fisheries, a number of other commercial fisheries in the Gulf of Mexico and South Atlantic also incidentally catch dusky sharks as bycatch. These include the Gulf of Mexico reef fish bottom longline and vertical line fisheries, the Southeastern Atlantic coastal migratory pelagic troll fishery, the South Atlantic snapper-grouper bottom longline fishery and vertical line fishery, and the South Atlantic dolphin/wahoo fishery.

81. The Fisheries Service's First Edition of the U.S. National Bycatch Report estimated that the Gulf of Mexico reef fish bottom longline and vertical line fisheries caught 2,700 dusky sharks per year in 2005 and 2006. A more recent update to the report, completed in 2013, estimated that the Gulf of Mexico reef fish bottom longline, Gulf of Mexico reef fish vertical line, Southeastern Atlantic coastal migratory pelagic troll, South Atlantic snapper-grouper bottom longline, and the South Atlantic snapper-grouper vertical line fisheries caught a combined estimate of 3,872 dusky sharks in 2010. Of those, the report documented the highest bycatch levels in the South Atlantic snapper-grouper bottom longline fishery (approximately 2,700) and the Gulf of Mexico reef fish bottom longline fishery (approximately 800).

82. The Fisheries Service used data primarily from self-reported logbooks to estimate the number of dusky sharks caught in the Gulf of Mexico reef fish bottom longline fishery and the South Atlantic snapper-grouper bottom longline fishery for the National Bycatch Reports.

83. In addition to logbook data, a voluntary observer program has been in place in the Gulf of Mexico reef fish fishery since 1993. In 2006, the Fisheries Service implemented a mandatory observer program in the fishery.

84. The mandatory observer program in the Gulf of Mexico reef fish fishery had between 1 and 2 percent coverage from 2006 to 2009 and 5 percent coverage from 2010 to 2011 for the fishery, meaning that the bycatch numbers reported from observer data represent the sharks caught in only 1-5 percent of the approximately 190,000 "sea days" (i.e. a day of fishing for a vessel that can include multiple fishing sets) that vessels in the fishery operated between 2006-2011, or only approximately 4,700 sea days.

85. There are approximately 800 vessels in the Gulf of Mexico reef fish fishery that are permitted to use bottom longline and vertical line gear to target snappers, groupers, and other reef fish.

86. From July 2006 to December 2009, observers reported 11 dusky sharks caught by bottom longline gear in the Gulf of Mexico reef fish fishery. From January 2010 through December 2011, observers reported 16 dusky sharks caught in bottom longline gear in the Gulf of Mexico reef fish fishery. The Fisheries Service has not estimated overall dusky shark bycatch and mortality in the entire Gulf of Mexico reef fish fishery using available observer reports. Were the agency to account for dusky shark bycatch in the other 95 percent of the fishery, the bycatch numbers would likely be substantial.

87. In the South Atlantic, fishers in the snapper-grouper fishery primarily use either bottom longline or vertical line gear. There are approximately 650 vessels that have a snapper-grouper permit. Although there has been a voluntary observer program in place for the vertical line snapper-grouper fisheries (North Carolina through Florida) since 2007 as well as a mandatory observer program in that fishery beginning in 2013, there is no standardized, regular observer program in place for the South Atlantic snapper-grouper bottom longline fishery.

Amendment 5b to the Highly Migratory Species Fishery Management Plan

88. In 2012, the Fisheries Service proposed Amendment 5 to the HMS Fishery Management Plan, which included management measures for multiple shark species, including the dusky shark. Amendment 5 evaluated several measures to reduce dusky shark mortality, including prohibiting the use of bottom and pelagic longline gear altogether in the HMS fishery, prohibiting the use of pelagic and bottom longline gear in certain areas at certain times of the year when bycatch is likely to be higher, limiting soak times for bottom longline gear (amount of time

the line can remain in the water), limiting the number of hooks in bottom longline gear, and placing caps on the number of dusky sharks that HMS fisheries could catch as bycatch every year. After receiving public comments from the fishing industry opposing management measures for dusky sharks, the Fisheries Service then split Amendment 5 into Amendments 5a and 5b. Amendment 5a included all species except for the dusky shark, and was finalized on July 3, 2014. Amendment 5b addresses dusky sharks.

89. The Fisheries Service published a pre-draft of Amendment 5b for public comment in March 2014, but did not publish a proposed rule or indicate when it intended to do so. Plaintiff Oceana filed suit in this Court on October 27, 2015, challenging the Fisheries Service's failure to set an annual catch limit and accountability measures for dusky sharks and the Fisheries Service's delays taking action to end overfishing and rebuild the dusky shark population. The Fisheries Service and Oceana reached a settlement under which the Fisheries Service agreed to complete the final amendment and implementing regulations by a date certain.

90. The Fisheries Service published a draft EIS to evaluate the amendment, as well as a proposed rule, in October of 2016.

91. The draft EIS for Amendment 5b evaluated some of the same alternatives as the Fisheries Service included in the original Amendment 5, except, most notably, alternatives that would establish a hard limit on the number of dusky sharks that could be caught and killed as a result of bycatch.

92. The Fisheries Service finalized the EIS for Amendment 5b in February 2017 and published the final rule for Amendment 5b on April 4, 2017.

93. In the FEIS for the final rule, the Fisheries Service stated that the purpose of Amendment 5b is to develop and implement management measures that would end overfishing

and rebuild the dusky shark population. The Fisheries Service's purpose and need statement included the following objectives: (1) to end overfishing; (2) to modify the rebuilding plan to ensure that mortality will result in the rebuilding timeframe; and (3) "clarify" the annual catch limits and monitoring measures for the prohibited shark complex and establish accountability measures for dusky sharks.

94. Specifically, the Fisheries Service stated as part of its purpose and need that it aimed to achieve a 35 percent reduction in mortality relative to 2015 levels and rebuild the dusky shark population by 2107. In the FEIS, the Fisheries Service concluded that the 35 percent reduction in mortality relative to 2015 levels would be sufficient to end overfishing and rebuild the stock by 2107, based on results from the 2016 update to the stock assessment. The Fisheries Service also cited the 2016 update to the stock assessment to conclude that dusky sharks can only sustain small amounts of mortality during rebuilding.

95. The 35 percent figure that the Fisheries Service relies on is likely an underestimate of the reduction in bycatch mortality needed to rebuild the dusky shark population because the stock assessment found that reducing mortality by 35 percent only has a 50 percent chance of rebuilding the population by 2107. In other words, even if Amendment 5b's measures were fully successful, they are equally likely to fail as they are to succeed in rebuilding the population within the required timeframe. In order to achieve a 70 percent chance of achieving its goal, the Fisheries Service would need to reduce 2015 mortality by half.

96. Even assuming that reducing bycatch mortality by 35 percent is sufficient, the Fisheries Service did not examine the full extent of bycatch mortality that currently exists, and did not demonstrate that Amendment 5b could even achieve such reductions.

Management Measures Added and Omitted by Amendment 5b

97. In the final rule, the Fisheries Service “clarified” that the annual catch limit for the prohibited shark complex, which includes dusky sharks, is zero. Notwithstanding this “clarification,” the Fisheries Service acknowledged that total dusky shark catch will almost certainly exceed zero every year due to bycatch.

98. The Fisheries Service asserted that the main accountability measure for the entire prohibited shark complex is the closure of the commercial fishery—meaning that vessels will continue fishing as before, without any appreciable change in behavior, and that directly fishing for and retaining these species continues to be prohibited. However, the Fisheries Service did not restrict the catch of these sharks as bycatch or establish any trigger or requirement for actually closing the multiple commercial and recreational fisheries that catch dusky sharks as bycatch if the catch limit is exceeded. Essentially, this is the same approach to limiting dusky shark mortality that the Fisheries Service has employed unsuccessfully since 2000.

99. The Fisheries Service established six additional measures for dusky sharks that it contends are “accountability measures,” including two recreational measures and four commercial measures, all of which are focused on gear modifications and outreach in the HMS fishery. For the shark recreational fishery, Amendment 5b requires the following:

- Permit requirements and outreach: Shark recreational fishery permit holders must obtain a shark endorsement, which includes an online shark identification course. This measure also includes recreational fisheries outreach.
- Circle Hook Requirement: Recreational shark fisheries must use circle hooks.

For HMS commercial fisheries, Amendment 5b requires the following:

- Shark Release Protocol: HMS pelagic longline fishermen must release all sharks using a dehooker or cutting the gangion less than three feet from the hook.

- Circle Hook Requirement: The HMS shark bottom longline fishery must use circle hooks.
- Additional Training Requirements: All HMS commercial fishermen must complete a shark identification course.
- Outreach and Fleet Communication Protocol: All HMS commercial fishermen must abide by a shark fleet communication and relocation protocol. It also requires the development of outreach materials aimed at increasing shark outreach and awareness in the HMS commercial fleet.

100. The Fisheries Service did not adopt any accountability measures for dusky sharks that would prevent the annual catch limit of zero from being exceeded or “correct or mitigate overages” if mortality does exceed the annual catch limit of zero. 50 C.F.R. § 600.310(g)(1). In fact, none of the purported accountability measures the Fisheries Service adopted as part of Amendment 5b caps the number of dusky sharks that may be caught and killed as bycatch. Under Amendment 5b, no amount of bycatch above zero, whether in single or triple digits, triggers any change in management to ensure that excessive catch does not continue.

The Fisheries Service Did Not Address Bycatch of Dusky Sharks in Non-HMS Fisheries in Amendment 5b

101. Amendment 5b does not include any measures to address dusky shark bycatch in non-HMS fisheries.

102. The Fisheries Service rationalized its decision not to address bycatch in other fisheries largely by asserting that bycatch in these non-HMS fisheries is “rare” or “appear[s] to be low.” FEIS at 1-21; 2-21; 11-2. In making that assertion, the Fisheries Service ignored and misused the bycatch data available to it.

103. Instead of evaluating its own *direct* observations of dusky shark bycatch in the *non-HMS* fisheries, the Fisheries Service instead relied on *indirect* observer data from the *HMS* shark bottom longline fishery to assert that bycatch of dusky sharks in *non-HMS* fisheries is low.

Some of the HMS shark vessels that are being observed also have non-HMS reef fish permits, so will occasionally put out longlines or “sets” that are directed primarily to catch those non-HMS species rather than sets that are directed to catch sharks. However, the indirect data from these non-HMS sets represents only a very small fraction of fishing effort, and therefore of bycatch, in the non-HMS fisheries. The overlap of vessels that have permits in both the HMS shark bottom longline fishery and in the non-HMS Gulf of Mexico reef fish and South Atlantic snapper-grouper fisheries is less than 10 percent. Further, from 2013-2015, the observer program for the HMS shark bottom longline fishery did not report observations from any non-HMS fishery sets, and thus provided no data representative of those years for the non-HMS fisheries.

104. The Fisheries Service has access to *direct* bycatch data available for these non-HMS fisheries, including logbook data and observer reports from the Gulf of Mexico reef fish fishery and the South Atlantic snapper-grouper fishery. The Fisheries Service has an observer program for both the Gulf of Mexico reef fish fishery (bottom longline and vertical line) and the South Atlantic snapper-grouper vertical line fishery. The Fisheries Service also collects self-reported logbook data on bycatch in both the Gulf of Mexico reef fish and South Atlantic snapper-grouper fishery. Yet, the Fisheries Service did not consider reports from those observer programs or logbook data from these fisheries when evaluating dusky shark bycatch mortality.

105. Available data from the observer programs for these fisheries demonstrates that dusky shark bycatch is likely substantial, particularly when added to the limited sources of bycatch mortality the Fisheries Service did consider. For example, observer reports from a small portion of the Gulf of Mexico reef fish bottom longline fishery indicate that the fishery caught at least 27 dusky sharks over the course of five years. Those reports represent observed catches from

only 5 percent of total sea days in the fishery; the total number of dusky sharks caught by the entire fishery is likely much higher.

106. In addition, the Fisheries Service did not consider logbook data on dusky shark bycatch in the South Atlantic dolphin/wahoo fishery, which uses pelagic longline gear and fishes in areas where dusky shark bycatch is known to occur.

107. The Fisheries Service similarly dismissed evidence from its own U.S. National Bycatch Reports, indicating that bycatch in these non-HMS fisheries is potentially high, stating that the data in the First Update to the National Bycatch Reports represented “overestimations.”

108. The Fisheries Service stated that in order to calculate bycatch for the Gulf of Mexico reef fish fishery and the South Atlantic snapper-grouper fishery in the First Update to the National Bycatch Report, it expanded catch rate data from the HMS shark bottom longline fishery observer program. NMFS stated that such extrapolations from the observer data likely overestimated bycatch.

109. However, the National Bycatch Reports indicate that the agency did not use observer data from the shark bottom longline fishery (or any other fishery) to calculate bycatch in the Gulf of Mexico reef fish fishery and the South Atlantic snapper/grouper fishery. Instead, the Fisheries Service used logbook data to calculate those estimates in the National Bycatch Reports.

The Fisheries Service’s Approach to Estimating Current Levels of Dusky Shark Bycatch Mortality

110. The Fisheries Service’s principal purpose and need in Amendment 5b is to end overfishing and rebuild the dusky shark population. The Fisheries Service concluded that it must reduce dusky shark mortality by at least 35 percent relative to 2015 levels in order to rebuild the dusky shark population by 2107 and end overfishing.

111. In order to evaluate the current levels of bycatch mortality for dusky sharks, the Fisheries Service considered some data on reported observed and estimated catches of dusky sharks from 2008 through 2015. The Fisheries Service used a subset of available data from the HMS fishery, including data from the HMS shark bottom longline observer program, data from the HMS pelagic longline observer program, and data from recreational surveys. Based on that data, the Fisheries Service estimated that 141 dusky sharks died in 2015 and that on average 531 dusky sharks die as a result of bycatch each year.

112. The Service concluded that these mortality numbers were small, and so the amount of bycatch mortality that currently exists for dusky sharks is also small.

113. The Fisheries Service relied on this analysis in order to evaluate whether its preferred alternatives could achieve the 35 percent reduction in mortality it determined was necessary. For example, the Fisheries Service concluded that because the catch data demonstrated there are only hundreds of dusky sharks killed every year, the gear modifications measures in Amendment 5b would make a significant contribution towards achieving its 35 percent mortality reduction target.

114. However, in making these estimates and conclusions, the Fisheries Service did not use several available sources of scientific information from commercial fisheries that demonstrate current dusky shark mortality levels may be much higher. As discussed above, the Service did not use its own, available observer and logbook data for *non-HMS* reef fish fisheries to estimate bycatch in those fisheries. In addition, the Fisheries Service only considered a fraction of the dusky shark mortality occurring in the *HMS* fishery that it did evaluate.

115. In order to estimate current levels of dusky shark mortality, the Fisheries Service relied on mostly extrapolated estimates of dusky shark mortality in the HMS shark recreational

fishery, but only used raw (unextrapolated) observer reports to estimate bycatch mortality in the HMS commercial fisheries. Based on the raw observer reports, the Fisheries Service found that up to 252 dusky sharks are killed each year in the HMS commercial fishery.

116. The Fisheries Service's estimate of up to 252 dusky shark deaths in the HMS commercial fishery does not account for the full extent of bycatch occurring in the entire fishery. Observer coverage for most of the HMS commercial fisheries (apart from the shark research fishery) is less than 15 percent, so the raw observer reports only represent a small fraction of the actual mortalities that occur. Though it is common practice to do so—and essential to understand the actual number of dusky sharks caught throughout the entire fishery—the Fisheries Service did not use the observer data from this small portion of the fishery to estimate mortality in the entire fishery. Simply reporting the number of mortalities observed in 5-15 percent of the HMS commercial fisheries does not provide any understanding of what is happening in the other 85-95 percent of the fishery not being observed, and thus how many dusky sharks actually die each year as a result of bycatch.

117. Further, the Fisheries Service only considered raw observer reports of dusky sharks either kept or discarded dead, and excluded all reports of dusky sharks discarded alive. In so doing, the Fisheries Service ignored the large percentage of dusky sharks that are discarded alive, but die after being released. For example, estimates of at-vessel and post-release mortality can be as high as 97 percent for sharks that remain on the line for more than 3 hours after being hooked by commercial bottom longline fisheries.

118. The Fisheries Service also did not consider additional sources of bycatch mortality data that are available for the HMS commercial fisheries, including logbook data from the HMS pelagic longline fishery and logbook data from the HMS shark bottom longline fishery,

even though the Fisheries Service relies on logbook data from these fisheries to monitor bycatch. The logbook data indicates that total mortality in the fisheries is higher than the figure the Fisheries Service estimated using only observer reports.

The Fisheries Service's Consideration of Proposed Measures to Reduce Dusky Shark Mortality and Rebuild the Population

119. The Fisheries Service admitted that it cannot offer any quantitative estimate for the amount of mortality reduction that might be achieved by any of the measures included in Amendment 5b, which include educational outreach, voluntary communication protocols, and limited gear modifications. However, it concluded based on its general scientific judgment, that the preferred alternatives would be sufficient to achieve a 35 percent reduction in dusky shark mortality.

120. For two of the preferred alternatives, the Fisheries Service attempted to provide some estimate of mortality reductions. First, the Fisheries Service concluded that the recreational fishery shark endorsement will achieve mortality reductions of up to 95 percent in the recreational fishery if the programs are successfully implemented. However, the studies the Fisheries Service cited do not support its estimate. One paper generally supports the idea that training fishers in safe handling and release methods can reduce post-release mortality. However, the Fisheries Service did not specify what handling techniques it would include as part of the recreational shark endorsement or explain how the unspecified techniques might address post-release mortality. The other provides an overview of how outreach about skates generally can potentially reduce mortality, but does not provide support for the idea that outreach or training will reduce mortality of dusky sharks, a different and much more difficult species to identify, by any specific amount.

121. With regard to circle hook measures, the Fisheries Service stated that circle hooks (more rounded hooks) result in less mortality of dusky sharks than J-shaped hooks ("J hooks"). It

noted that 25 percent of HMS shark bottom longline boats currently use J hooks. However, the Fisheries Service did not estimate the amount of dusky shark mortality that occurs in the bottom longline fishery as a whole or with respect to the 25 percent of shark bottom longline boats that currently use J hooks. Without such estimates, there is no way to know how much this alternative could reduce mortality overall.

122. Similarly, although the Fisheries Service estimated that switching from J hooks to circle hooks could potentially reduce mortality by up to 60 percent for recreational boats that switch, it did not estimate how many HMS shark recreational vessels currently use J hooks or how much overall mortality reduction could be achieved by the use of circle hooks in the HMS shark recreational fishery.

Alternatives Included in the FEIS for Amendment 5b

123. Though it has long recognized that bycatch is the driving cause of continued overfishing and depletion of dusky sharks, the Fisheries Service did not evaluate alternatives that would limit bycatch in any fisheries outside of the HMS fisheries. While the Fisheries Service briefly considered the use of bycatch caps in non-HMS fisheries, the Fisheries Service eliminated the alternative from further consideration. The Fisheries Service relied largely on its conclusion that bycatch in non-HMS fisheries is low in order to reject the alternative.

124. Thus, the Fisheries Service did not evaluate or adopt any management measures as a part of Amendment 5b that would limit or address bycatch in non-HMS fisheries, despite available evidence that demonstrates bycatch in a number of non-HMS commercial fisheries, including the Gulf of Mexico reef fish and South Atlantic snapper-grouper fisheries, is potentially high.

125. The Fisheries Service only analyzed one alternative that considered the use of “hotspot” or time and area closures as well as bycatch caps within the HMS fishery, specifically with regard to the HMS pelagic longline fishery, but rejected the alternative. The hotspot closures would occur in areas and times where six years of logbook data from the HMS pelagic longline fishery demonstrated that a disproportionate number of dusky shark interactions are occurring. The Fisheries Service concluded that hotspot closures could result in a 28.44 percent reduction in dusky shark bycatch in that fishery. The Fisheries Service rejected this alternative based on its conclusion that the same reductions could be met or exceeded by its preferred alternatives with fewer purported regulatory and enforcement complications.

126. The Fisheries Service did not consider alternatives that would establish numeric limits on bycatch or time and area closures in other HMS fisheries apart from the HMS pelagic longline fishery.

127. The Fisheries Service noted throughout the FEIS for Amendment 5b that data on the bycatch mortality of dusky sharks is uncertain and incomplete, and even cited the uncertainty of bycatch data as a reason not to adopt accountability measures that would ensure the annual catch limit for dusky sharks would not be exceeded year after year. Yet, the Fisheries Service did not consider alternatives that would improve or establish bycatch monitoring, or data collection, quality, and consistency across fisheries to support dusky shark management.

CAUSES OF ACTION

COUNT I: THE FISHERIES SERVICE FAILED TO ESTABLISH MEASURES SUFFICIENT TO ENSURE ACCOUNTABILITY TO THE ANNUAL CATCH LIMIT FOR DUSKY SHARKS IN VIOLATION OF THE MAGNUSON-STEVENSON ACT

128. Oceana realleges and incorporates by reference paragraphs 1 through 127 of the Complaint in this First Cause of Action.

129. The Fisheries Service manages the catch of dusky sharks through the HMS Fishery Management Plan. The Fisheries Service has the sole authority to amend and implement the HMS Fishery Management Plan in accordance with the requirements of the Magnuson-Stevens Act. 16 U.S.C. § 1854(g)(1). In addition, the Fisheries Service has authority to promulgate regulations necessary to carry out any other provision of the Magnuson-Stevens Act. *Id.* § 1855(d).

130. National Standard 1 of the Magnuson-Stevens Act requires that “[c]onservation and management measures shall prevent overfishing while achieving on a continuing basis, the optimum yield from each fishery.” 16 U.S.C. § 1851(a)(1).

131. The Magnuson-Stevens Act requires the Fisheries Service to “establish a mechanism for specifying annual catch limits” for dusky sharks “at a level such that overfishing does not occur in the fishery, including measures to ensure accountability” if catch exceeds those limits. 16 U.S.C. §§ 1853(a)(15), 1854(g). This provision requires both a “limit” and “accountability” in the fishery.

132. The Magnuson-Stevens Act requires that the annual catch limits for a fishery constrain all sources of fishing mortality, including bycatch. 16 U.S.C. § 1853(a)(15); 50 C.F.R. § 600.310(f)(1)(i), (iii). The Act defines “fishery” to include both a stock of fish such as the dusky shark and any fishing for that stock. 16 U.S.C. § 1802(13).

133. Accountability measures must “prevent [annual catch limits] . . . from being exceeded” and “correct or mitigate overages of the [annual catch limit] if they occur.” 50 C.F.R. § 600.310(g)(i). If an annual catch limit is exceeded, accountability measures must be triggered and implemented as soon as possible to correct the operational issue that caused the annual catch limit

overage, as well as to address any biological consequences to the stock or stock complex resulting from the overage when it is known. *Id.* § 600.310(g)(3).

134. Amendment 5b continues the existing prohibition on targeted fishing for and landing of dusky sharks, but dusky sharks are still caught as bycatch in both commercial and recreational fisheries.

135. Amendment 5b purports to establish an annual catch limit of zero for dusky sharks, which should limit both intentional catch and bycatch to zero under the Magnuson-Stevens Act.

136. However, despite setting the annual catch limit at zero, the Fisheries Service did not promulgate any management measures in Amendment 5b that cap the number of dusky sharks that may be caught as bycatch each year. In fact, the Fisheries Service predicts that actual catch of dusky sharks, including bycatch, will always exceed the annual catch limit of zero.

137. The Fisheries Service did not provide any management measures in Amendment 5b that would be triggered when catch—including bycatch—of dusky sharks inevitably exceeds the annual catch limit of zero in order to correct the issue that led to the annual catch limit being exceeded or mitigate the effects of it being exceeded.

138. As a result of Amendment 5b's lack of accountability measures, there is *no limit* on the number of dusky sharks that commercial and recreational fisheries can catch and kill as bycatch. While on paper the annual catch limit for dusky sharks is zero, thousands of dusky sharks could die as bycatch in any given year without triggering any management changes to correct the problem.

139. The Fisheries Service has thus failed to meet the specific, non-discretionary requirements of the Magnuson-Stevens Act to establish accountability measures for dusky sharks

that prevent overfishing and ensure that the annual catch limit will not be exceeded, as required under 16 U.S.C. § 1853(a)(15), and National Standard 1 of the Magnuson-Stevens Act, *id.* § 1851(a)(1).

140. These actions and failures to act by the Defendants are arbitrary and capricious, violate the Magnuson-Stevens Act, and are causing irreparable injury to the Plaintiff for which it has no adequate remedy at law.

COUNT II: THE FISHERIES SERVICE’S ESTIMATE OF CURRENT DUSKY SHARK MORTALITY IS NOT BASED ON THE BEST AVAILABLE SCIENCE IN VIOLATION OF THE MAGNUSON-STEVENSON ACT AND THE APA

141. Oceana realleges and incorporates by reference paragraphs 1 through 140 of the Complaint in this Second Cause of Action.

142. The Magnuson-Stevens Act requires the Fisheries Service to base Amendment 5b “upon the best scientific information available.” 16 U.S.C. § 1851(a)(2).

143. In Amendment 5b, the Fisheries Service concluded that it must reduce dusky shark fishing mortality by at least 35 percent *relative to 2015 levels* in order to rebuild the dusky shark population by 2107 and end overfishing.

144. In order to estimate number of dusky sharks that died as bycatch in 2015, the Service considered observer reports and estimates of mortality for the HMS commercial and recreational fisheries. Using this information, the Fisheries Service calculated that on average 531 dusky sharks die as bycatch every year. It estimated that in 2015, 141 dusky sharks died as the result of bycatch. Based on those estimates, the Fisheries Service concluded that the current levels of dusky shark mortality are small.

145. In order to evaluate whether measures included in Amendment 5b would achieve mortality reductions relative to 2015 levels, the Fisheries Service estimated 2015 levels of dusky

shark mortality based on a subset of data from 2008 through 2015. The Fisheries Service relied on these estimates of dusky shark mortality and associated conclusions that mortality numbers are low in evaluating whether the management measures in Amendment 5b would successfully achieve the agency's 35 percent mortality reduction target.

146. The Fisheries Service's estimate of the current mortality levels of dusky sharks, including its estimate of mortality in 2015, however, is based on only a subset of available bycatch data and is not supported by the best available scientific information. The Fisheries Service ignored available data and failed to take into account the full extent of dusky shark mortality occurring both within HMS fisheries and in other non-HMS fisheries.

147. In calculating the current levels of mortality, the Fisheries Service relied on the raw observer reports from the HMS commercial fishery that represented less than 15 percent of the mortality in that fishery, and did not account for the potentially high number of sharks that die after being released alive. Further, the Fisheries Service ignored available direct observer reports and logbook data from non-HMS fisheries like the Gulf of Mexico reef fish and South Atlantic snapper-grouper fisheries that indicate substantial numbers of dusky sharks are also caught and killed outside the HMS fishery.

148. As a result, the Fisheries Service underestimated the current levels of dusky shark bycatch mortality, including the overall number of dusky sharks dying as a result of bycatch in 2015, and thus established an incorrect, artificially low starting point for evaluating whether the measures included in Amendment 5b would reduce overall dusky shark mortality by 35 percent in order to end overfishing and allow the population to rebuild. Because overall dusky shark mortality is likely substantially higher than the Fisheries Service's estimate, the actual amount of mortality that must be eliminated to achieve the 35 percent reduction is also higher.

149. For these reasons, the Fisheries Service's conclusions that Amendment 5b will end overfishing of the dusky sharks and rebuild the dusky shark population are arbitrary and capricious, in violation of the Magnuson-Stevens Act, 16 U.S.C. §§ 1851(a)(1)-(2), 1854(a)(15), 1854(e)(7)(A), and the APA, 5 U.S.C. §§ 701-706.

150. These violations of the Magnuson-Stevens Act and the APA by the Fisheries Service threaten the Plaintiff with irreparable injury for which it has no adequate remedy at law.

COUNT III: THE FISHERIES SERVICE FAILED TO DEMONSTRATE HOW MEASURES INCLUDED IN AMENDMENT 5B WILL REDUCE DUSKY SHARK MORTALITY BY 35 PERCENT, AS IT CONCLUDED WAS NECESSARY TO REBUILD THE SHARK POPULATION AND END OVERFISHING, IN VIOLATION OF THE MAGNUSON-STEVEN'S ACT AND THE APA

151. Oceana realleges and incorporates by reference paragraphs 1 through 150 of the Complaint in this Third Cause of Action.

152. The Fisheries Service failed to demonstrate that the measures it included in Amendment 5b could reduce dusky shark mortality by 35 percent from its own, artificially low estimate of current mortality.

153. Amendment 5b purports to rely on several educational and outreach measures to reduce fishing mortality in the HMS fishery, such as training in shark identification and release protocols; requiring use of circle hooks in the fisheries that do not already use them; and the development of a communication protocol by which commercial fishermen may notify one another that they have caught a dusky shark in a particular area.

154. The Fisheries Service acknowledged that it cannot come up with even an approximate estimate of how much the management measures established in Amendment 5b will reduce dusky shark mortality. Further, the Fisheries Service's qualitative judgments regarding the effectiveness of these measures are unsupported by, and even contradicted by, the evidence before

it. In sum, the Fisheries Service has not demonstrated that Amendment 5b will achieve the reductions in dusky shark mortality that it estimates are necessary for its overall purpose to end overfishing and rebuild the dusky shark population.

155. For these reasons, the Fisheries Service's conclusions that Amendment 5b will end overfishing of the dusky sharks and rebuild the dusky shark population are arbitrary and capricious, in violation of the Magnuson-Stevens Act, 16 U.S.C. §§ 1851(a)(1), 1854(a)(15), 1854(e)(7)(A), and the APA, 5 U.S.C. §§ 701-706.

156. These violations of the Magnuson-Stevens Act and the APA by the Fisheries Service threaten the Plaintiff with irreparable injury for which it has no adequate remedy at law.

**COUNT IV: THE FISHERIES SERVICE FAILED TO ADEQUATELY EVALUATE
THE ENVIRONMENTAL EFFECTS OF ITS ACTION IN VIOLATION OF NEPA AND
THE APA**

157. Oceana realleges and incorporates by reference paragraphs 1 through 156 of the Complaint in this Fourth Cause of Action.

158. NEPA requires that the Fisheries Service take a "hard look" at the environmental consequences of its actions, before action is taken. NEPA's implementing regulations require the Fisheries Service to assess the environmental impacts of the proposed action. 42 U.S.C. § 4332(C); 40 C.F.R. §§ 1502, 1508.7. NEPA further requires the Fisheries Service to use high quality, accurate scientific information and to ensure the scientific integrity of this analysis. 40 C.F.R. §§ 1500.1(b), 1502.24.

159. NEPA requires that before a federal agency takes a major action significantly affecting the quality of the human environment, it must write a detailed statement evaluating "the environmental impact of the proposed action." 42 U.S.C. § 4332(2)(C)(i).

160. In violation of these mandates, the Fisheries Service failed to take a hard look at what impact its preferred alternatives will have on dusky shark mortality levels and whether the alternatives will achieve the 35 percent mortality reduction that the agency estimates is needed.

161. In the FEIS, the Fisheries Service summarily concluded that its preferred alternatives will achieve the 35 percent reduction in dusky shark mortality it identified as necessary to rebuild the population. However, the Fisheries Service did not explain how its preferred alternatives would achieve that reduction; arbitrarily ignored important aspects of the problem; and did not even attempt to estimate what percentage change in mortality will actually result if the preferred measures are adopted.

162. In making its conclusions, the Fisheries Service failed to consider the mortality occurring in non-HMS fisheries, including, but not limited to, the Gulf of Mexico reef fish fishery and the South Atlantic snapper-grouper fishery. The Fisheries Service further ignored available logbook data from the HMS fishery regarding mortality, despite the fact that the Fisheries Service relies on such data to monitor bycatch in the HMS fisheries.

163. The Fisheries Service acknowledged that it cannot come up with even an approximate estimate of how much the management measures established in Amendment 5b will reduce dusky shark mortality. Nonetheless, the Fisheries Service asserted, without adequate explanation or evidence, that the measures will reduce dusky shark mortality by 35 percent.

164. As a result, the FEIS is invalid because the Fisheries Service failed to take a hard look at the mortality reductions that could be achieved under each preferred alternative or under the preferred alternatives collectively, and failed to demonstrate that the preferred alternatives can achieve the Fisheries Service's stated goal of reducing dusky shark mortality by 35 percent relative to 2015 levels.

165. By issuing an EIS that fails to meet the standards laid out in NEPA, its implementing regulations, and governing precedent, the Fisheries Service has acted in a manner that is arbitrary, capricious, an abuse of discretion, and not in accordance with law, and without observance of procedures required by law, in violation of NEPA, 42 U.S.C. § 4332, its implementing regulations, and the APA, 5 U.S.C. §§ 701-706.

166. These violations of NEPA and the APA by the Fisheries Service threaten the Plaintiff with irreparable injury for which it has no adequate remedy at law.

COUNT V: THE FISHERIES SERVICE FAILED TO ANALYZE A REASONABLE RANGE OF ALTERNATIVES IN VIOLATION OF NEPA AND THE APA

167. Oceana realleges and incorporates by reference paragraphs 1 through 166 of the Complaint in this Fifth Cause of Action.

168. NEPA requires all federal agencies to prepare an EIS for all major federal actions significantly affecting the quality of the human environment. *See* 42 U.S.C. § 4332(2)(C).

169. NEPA requires that an agency rigorously explore and objectively evaluate a reasonable range of alternatives and their associated environmental impacts on the environment. 42 U.S.C. § 4332(C); 40 C.F.R. § 1502.14.

170. The Fisheries Service failed to analyze a reasonable range of alternatives, including an alternative to address bycatch in fisheries outside the HMS fishery, such as the Gulf of Mexico reef fish fishery and the South Atlantic snapper-grouper fishery; an alternative to establish numerical limits on bycatch in the both the HMS and non-HMS fisheries; and an alternative to provide adequate monitoring, data collection, and analysis of data on dusky shark bycatch in order to effectively track and limit dusky shark bycatch.

171. Instead, the Fisheries Service only analyzed a narrow range of alternatives focused on providing outreach, communication, and training to HMS commercial and recreational

fishers and establishing limited gear modifications. These alternatives may reduce mortality, but the Fisheries Service did not demonstrate that they are likely to achieve sufficient reductions to end overfishing and rebuild the dusky shark population nor even estimate the amount of mortality reduction these alternatives could hope to achieve.

172. In addition, the Fisheries Service improperly rejected an alternative to limit or prohibit fishing in the HMS pelagic longline fishery in certain areas where dusky bycatch is more likely to occur, even though this was the only alternative for which the Fisheries Service showed demonstrable, quantifiable benefits. The Fisheries Service quantitatively estimated that this alternative could achieve bycatch reductions of approximately 28 percent in that fishery.

173. By failing to analyze a reasonable range of alternatives, the Fisheries Service has acted in a manner that is arbitrary, capricious, an abuse of discretion, and not in accordance with law, and without observance of procedures required by law, in violation of NEPA, 42 U.S.C. § 4332, its implementing regulations, and the APA, 5 U.S.C. §§ 701-706.

174. These violations of NEPA and the APA by the Fisheries Service threaten the Plaintiff with irreparable injury for which it has no adequate remedy at law.

PRAYER FOR RELIEF

WHEREFORE, Oceana respectfully requests this Court to enter the following relief:

1. Declare that the Fisheries Service has violated both the Magnuson-Stevens Act and the APA as described above by approving an amendment to the HMS fishery management plan that fails to establish accountability measures that will limit the incidental mortality of dusky sharks, and failed to demonstrate that the amendment will prevent overfishing, or rebuild the stock.

2. Declare that the Fisheries Service has violated NEPA and the APA by relying on an invalid EIS that fails to take a hard look at the effects of the alternatives on dusky shark mortality and fails to evaluate a reasonable range of alternatives.

3. Order and enjoin the Fisheries Service to do the following within 6 months after this Court's order: (1) establish annual catch limits and accountability measures for dusky sharks that fully address all sources of fishing mortality and ensure that those limits are not exceeded; (2) implement management measures to immediately end overfishing of dusky sharks; and (3) adopt additional or revised rebuilding measures necessary to achieve adequate progress toward rebuilding the stock.

4. Order the Fisheries Service to prepare a new EIS that: (1) takes a hard look at mortality reductions that can be achieved through each alternative; and (2) evaluates a reasonable range of alternatives to address bycatch in all fisheries that catch dusky sharks, including HMS and non-HMS fisheries, and evaluates measures that will improve data quality and collection as well as measures that will limit bycatch.

5. Maintain jurisdiction over this action until the Fisheries Service is in compliance with the Magnuson-Stevens Act, NEPA, the APA, and every order of this Court;

6. Award Oceana its reasonable attorneys' fees and costs pursuant to 28 U.S.C. § 2412; and

7. Provide Oceana such additional and further relief as may be appropriate.

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DATED: May 4, 2017

Respectfully submitted,

/s/ Erica A. Fuller

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