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UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

NATURAL RESOURCES DEFENSE COUNCIL, INC.; INTERNATIONAL FUND FOR ANIMAL WELFARE; CETACEAN SOCIETY INTERNATIONAL; LEAGUE FOR COASTAL PROTECTION; OCEAN FUTURES SOCIETY; AND JEAN-MICHEL COUSTEAU, Plaintiffs, v. GORDON R. ENGLAND, Secretary of the Navy; AND UNITED STATES DEPARTMENT OF THE NAVY, Defendants.	Case No. COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF [ENVIRONMENTAL]

NATURE OF THE ACTION

1. This action challenges the United States Department of the Navy's (the "Navy") testing and training with a battery of high-intensity "active sonar" systems, known to cause the death and injury of whales, porpoises and other marine species, in United States waters and on the high seas. Active sonar systems and, in particular, the "mid-frequency" sonar systems at issue in this action, work by generating extremely loud underwater sound—sound of such intensity that it is capable of flooding thousands of square miles of ocean with dangerous levels of noise pollution. Active sonar uses the echoes produced by these intense sounds to detect objects in the marine environment, especially submarines.

2. For decades, the Navy has conducted extensive testing and training using active sonar systems without complying with the requirements of United States environmental law. This action challenges the Navy's[1] conduct of certain individual sea exercises and training activities in disregard of the requirements of the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321-4370, the Marine Mammal Protection Act ("MMPA"), 16 U.S.C. §§ 1361-1421, and the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531- 1544.[2]

3. There is no dispute that the Navy's use of mid-frequency active sonar can kill, injure, and disturb many species, including marine mammals. Even the Navy acknowledges that its use of mid-frequency active sonar has very likely resulted in the stranding and death of whales. The Scientific Committee of the International Whaling Commission—the preeminent international body of scientists studying whale populations—agrees, reporting in 2004 that "[t]he weight of accumulated evidence now associates mid-frequency, military sonar with atypical beaked whale mass strandings. This evidence is very convincing and appears overwhelming."

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[1] The term "Navy" as used herein includes each Defendant.

[2] ESA requires notice to be given to alleged violators and to the Secretary of Commerce 60 days prior to the commencement of suit. 16 U.S.C. § 1540(2)(A). Plaintiffs sent such notice to Defendants and to the Secretary of Commerce on October 19, 2005, the date this Complaint was filed. *See* Plaintiffs' letter dated October 19, 2005, attached hereto as Exhibit A. Upon expiration of the statutory notice period, Plaintiffs intend to seek leave to amend this complaint to add an ESA claim against the Defendants.

Nor are whales and other marine mammals the only type of sea life affected by active sonar. Scientific evidence also strongly suggests that intense undersea noise can have significant adverse effects on fish populations, sea turtles, and other marine life.

4. Despite this evidence, the Navy regularly fails to comply with federal environmental law in connection with its use of mid-frequency sonar. Specifically, in conducting certain naval training activities in United States waters and around the world as detailed further below, the Navy has:

(a) Failed to prepare an adequate (or, in many cases, any) environmental assessment ("EA") or an environmental impact statement ("EIS") for individual Navy exercises that employ mid-frequency active sonar, or for the use of such sonar as a whole, as required by NEPA;

(b) Failed to seek or obtain a "small take permit" or an "incidental harassment authorization" from the National Marine Fisheries Service ("NMFS"), as required by the MMPA, for individual Navy exercises that employ mid-frequency active sonar, or for its use of such sonar as a whole; and

(c) Upon information and belief, continues regularly to plan and conduct Navy exercises that employ mid-frequency active sonar without complying with NEPA, MMPA, or ESA.

5. We bring this lawsuit to seek an order declaring that the Navy has conducted and is conducting particular exercises and training activities in violation of NEPA, MMPA, and ESA, to remedy past violations of the law, and to prevent future violations of the law by ensuring that future mid-frequency active sonar testing and training is undertaken in compliance with these statutes—all of which are designed to help the Navy understand the environmental impacts of its actions, and to mitigate those impacts, before flooding vast areas of marine habitat with intense, harmful noise. Among other forms of relief, we seek an order directing the Navy to propose within 60 days a plan to remedy the violations of law alleged in this Complaint, including a mitigation plan for uses of its mid-frequency active sonar during testing and training activities.

6. This complaint addresses only the Navy's testing and training activities. On information and belief, the vast majority of the Navy's use of mid-frequency active sonar occurs during routine testing and training. This complaint does not address the Navy's use of mid-frequency active sonar in combat.

JURISDICTION AND VENUE

7. This Court has subject matter jurisdiction over the claims set forth in this Complaint pursuant to 28 U.S.C. § 1331 (Federal Question Jurisdiction), 5 U.S.C. § 702 (Administrative Procedure Act), and 28 U.S.C. § 1361 (Mandamus). The relief sought is authorized by 28 U.S.C. § 2201 (Declaratory Relief) and 28 U.S.C. § 2202 (Injunctive Relief).

8. Venue is proper in the Central District of California under 28 U.S.C. § 1391(e) as this civil action is brought against an agency of the United States and officers and employees of the United States acting in their official capacities and under the color of legal authority, as at least one Plaintiff resides in the Central District of California, and as no real property is involved in this action.

9. An actual and substantial controversy exists between Plaintiffs and Defendants. Upon information and belief, Defendants claim that, despite their failure to prepare required EAs and EISs and to seek authorization under MMPA, the Navy has complied with all applicable laws and regulations.

10. Plaintiffs have no adequate remedy at law. The Navy's continuing failure to comply with federal law will result in irreparable harm to the environment; to multiple species of animals, including marine mammals protected by federal laws, species listed as endangered or threatened under ESA, and fish stocks; to Plaintiffs and Plaintiffs' members and constituents; and to the public. No monetary damages or other legal remedy can adequately compensate Plaintiffs, their members and constituents, or the public, for this harm.

11. Plaintiffs and their members and constituents are adversely affected or aggrieved by federal agency action and are entitled to judicial review of such action within the meaning of the Administrative Procedure Act ("APA"). Plaintiffs' interests and the interests of

their members and constituents are directly and significantly harmed by Defendants' continuing violations of law. The relief requested will fully redress those injuries.

THE PARTIES

B. The Plaintiffs

12. Plaintiff Natural Resources Defense Council, Inc. ("NRDC") is a national environmental advocacy group organized as a New York not-for-profit membership corporation. The NRDC is registered to do business in California and maintains offices in San Francisco and Los Angeles. The NRDC supports the enforcement of NEPA, MMPA, and ESA. The NRDC has over 550,000 members nationwide, over 100,000 of whom reside in the State of California.

13. Plaintiff International Fund for Animal Welfare ("IFAW") is a non-profit, non-governmental organization that works to improve the welfare of wild and domestic animals throughout the world by reducing commercial exploitation of animals, protecting wildlife habitats, and assisting animals in distress. It seeks to motivate the public to prevent cruelty to animals and to promote animal welfare and conservation policies that advance the well-being of both animals and people. IFAW has two million members worldwide and fourteen offices around the world, with its headquarters located on Cape Cod, Massachusetts. Over the past two decades, IFAW has made significant contributions to marine conservation and science and has campaigned for measures to protect cetaceans and other marine life from threats such as ocean noise pollution.

14. Plaintiff Cetacean Society International ("CSI") is a not-for-profit corporation organized under the laws of the state of Connecticut. Headquartered in the United States, it is currently represented in 24 countries and maintains an international membership that includes professionals from the scientific and conservation communities. CSI is dedicated to the benefit of whales, dolphins, porpoises, and the marine environment generally through conservation, education, and research.

15. Plaintiff Ocean Futures Society ("Ocean Futures") is a not-for-profit corporation organized under the laws of the State of California. On behalf of itself and its members, the mission of Ocean Futures is to explore our global ocean, inspiring and educating

people throughout the world to act responsibly for its protection, documenting the critical connection between humanity and nature, and celebrating the ocean's vital importance to the survival of all life on our planet.

16. Plaintiff Jean-Michel Cousteau is an explorer, environmentalist, educator, and film-maker. He is also President of the Ocean Futures Society, a not-for-profit marine conservation and education organization. He has produced over 70 films, and continues to produce environmentally oriented programs and television specials, public service announcements, multi-media programs for schools, web-based marine content, books, articles for magazines and newspaper columns, and public lectures.

17. Plaintiff League for Coastal Protection ("LCP") is a California non-profit public benefit corporation incorporated in 1982. LCP consists of a coalition of public interest and environmental organizations and individuals created to protect and support coastal resources. The goals and objectives of LCP are to: (1) support an effective, strong program of coastal protection for California; (2) protect, enhance and restore natural coastal resources, and the right of citizen access to them; (3) maintain sufficient funding for strong coastal programs; (4) increase public awareness of California's coastal protection program; (5) provide reliable, timely information about coastal issues; (6) monitor Federal, State and local agency actions on State coastal matters; (7) establish a legislative program to support the Coastal Act, propose new strengthening legislation and resist weakening legislation; and (8) establish coastal protection advocates as an effective political constituency. LCP and its members have an interest in the protection of coastal resources.

18. Plaintiffs' members and constituents regularly use, enjoy, and benefit from a healthy marine ecosystem and the presence of diverse marine life, including the marine mammals that have been, or are likely to be, killed, injured, harassed or disturbed by the Navy's uses of mid-frequency active sonar alleged herein. Plaintiffs' members and constituents derive recreational, aesthetic, economic and scientific benefits from marine life by engaging in activities including boat touring, deep-sea fishing, scientific study, whale-watching, bird-watching, and underwater diving. The Navy's failure to follow federal law and the resulting harm to the marine

environment, including the disturbance, injury, and death of marine life that is likely to result from that failure, harms the interests of Plaintiffs' members and constituents.

C. The Defendants

19. Defendant Secretary of the Navy Gordon R. England is the highest-ranking official within the United States Department of the Navy. The Secretary is responsible for the implementation of the mid-frequency active sonar operations at issue in this Complaint and for ensuring compliance with applicable federal laws, including NEPA, MMPA, and ESA. The Secretary is sued in his official capacity.

20. Defendant United States Department of the Navy is one of the armed services of the United States Government. As a federal agency, the United States Department of the Navy is responsible for ensuring its compliance with NEPA, MMPA, and ESA.

STATUTORY BACKGROUND

21. The Navy's conduct of testing and training activities employing mid-frequency active sonar must comply with, among others, the following three statutes: NEPA (42 U.S.C. §§ 4321-4370), MMPA (16 U.S.C. §§ 1361-1421), and ESA (16 U.S.C. §§ 1531-1544).

A. National Environmental Policy Act (NEPA)

22. NEPA is "our basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). It was enacted in 1970 to put in place procedures to insure that, before irreversibly committing resources to a project or program, federal agencies "encourage productive and enjoyable harmony between man and his environment," "promote efforts which will prevent or eliminate damage to the environment," and "enrich understanding of the ecological systems and natural resources important to the nation." 42 U.S.C. § 4321.

23. Section 102(2)(C) of NEPA requires federal agencies to prepare, consider, and approve an environmental impact statement ("EIS") for any "major Federal action significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). The fundamental purpose of an EIS is to force the decision-maker to ensure that the policies and goals defined in NEPA are infused into the actions of the federal government. 40 C.F.R.

§ 1502.1. An EIS analyzes the potential environmental impacts, alternatives and mitigation opportunities for major federal actions.

24. "In determining whether to prepare an environmental impact statement the Federal agency shall . . . prepare an environmental assessment." 40 C.F.R. § 1501.4(b). An environmental assessment ("EA") is "a concise public document" that serves, *inter alia*, to "provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact." *Id*. As with any document prepared under NEPA, an environmental assessment is intended to "ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 C.F.R. 1500.1(b). If the environmental assessment concludes that a proposed action will not have a significant effect on the environment, the federal agency prepares a "finding of no significant impact." 40 C.F.R. § 1508.13.

B. Marine Mammal Protection Act (MMPA)

25. MMPA was enacted in 1972 pursuant to a congressional finding that "certain species and population stocks of various marine mammals are, or may be, in danger of extinction or depletion as a result of man's activities." 16 U.S.C. § 1361(l). In order to protect against further depletion and extinction, MMPA established a "moratorium on the taking . . . of marine mammals." 16 U.S.C. § 1371.

26. The term "take" means "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture or kill any marine mammal." 16 U.S.C. § 1362(13). "Harassment" is further defined, for the activities at issue in this suit, as "any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild," or "any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered." 16 U.S.C. § 1362(18).

27. All takings of marine mammals (except for certain specific activities such as subsistence hunting or commercial fishing) are prohibited by MMPA unless first authorized

by the Secretary of Commerce through the issuance of either a "small take permit" or an "incidental harassment authorization." 16 U.S.C. § 1371(a); 50 C.F.R. 216.107. MMPA and its accompanying regulations set forth standards and procedures, including public notice, that must be satisfied before either a small take permit or an incidental harassment authorization may issue. *Id.*

C. Endangered Species Act (ESA)

28. Congress passed ESA, 16 U.S.C. §§ 1531-1544, in 1973 in response to growing concern over the extinction of fish, wildlife, and plants stemming from "economic growth and development untempered by adequate concern and conservation." 16 U.S.C. § 1531(a)(1). Recognizing the aesthetic, ecological, educational, historical, recreational, and scientific value of these species, Congress enacted ESA with the express purpose of "provid[ing] a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, [and] … provid[ing] a program for the conservation of such endangered species and threatened species." *Id.* § 1531(b).

29. The U.S. Fish and Wildlife Service ("FWS") and NMFS share responsibility for administering ESA. 50 C.F.R. § 402.01(b).

30. ESA requires each federal agency to "insure that any action authorized, funded, or carried out by [a federal] agency . . . is not likely to jeopardize the continued existence of any endangered species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary [of the Interior or of Commerce] . . . to be critical." 16 U.S.C. § 1536(a)(2). Both NMFS and FWS have defined federal "actions" subject to the Section 7 requirements as "all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas." 50 C.F.R. § 402.02.

31. Section 7(a)(2) further requires that each agency make a determination regarding its impact on species "in consultation with and with the assistance of the Secretary." 16 U.S.C. § 1536(a)(2). The consultation referred to in Section 7(a)(2) requires each agency

contemplating an action likely to affect a listed species to confer with NMFS and/or FWS before taking the action. 16 U.S.C. § 1536(a)(2).

32. Consultation pursuant to Section 7 can take place in two forms: informal consultation and formal consultation. Informal consultation is defined as "an optional process that includes all discussions, correspondence, etc., between [NMFS and/or FWS] and the Federal agency . . . prior to formal consultation, if required." 50 C.F.R. §§ 402.02, 402.13. "If during informal consultation it is determined by the Federal agency, with the written concurrence of [NMFS and/or FWS], that the action is not likely to adversely affect listed species or critical habitat, the consultation process is terminated and no further action is necessary." *Id.* § 402.13. With limited exceptions, if it is determined that an action "may affect listed species or critical habitat, formal consultation is required." *Id.* § 402.14.

33. Formal consultation is defined as "a process between [NMFS and/or FWS] and the Federal agency that commences with the Federal agency's request for consultation under Section 7(a)(2) of the Act and concludes with the . . . issuance of a biological opinion under Section 7(b)(3)." *Id.* §§ 402.02, 402.14; *see also* 16 U.S.C. § 1536(b)(3). Among other things, biological opinions indicate "whether or not the Federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat." 50 C.F.R. § 402.02.

FACTUAL BACKGROUND

A. Overview of Mid-Frequency Sonar Systems and Exercises

34. The Navy employs mid-frequency, high-intensity active sonar as an element of its anti-submarine warfare program. Active sonar involves the generation of sound—in this case, sound of extraordinary intensity—for the purpose of detecting objects in the marine environment. Mid-frequency active sonar systems are conventionally defined as those that emit sound at frequencies between 1 and 10 kilohertz (kHz), which is a measure of the frequency of the oscillation of the sound wave (or its "pitch").

35. Navy vessels are widely equipped with mid-frequency sonar systems. Mid-frequency active systems are also air-deployed via helicopter and fixed-wing aircraft and are placed on floating platforms known as sonobuoys.

36. On information and belief, the Navy's current battery of mid-frequency systems includes the following:

- The AN/SQS-53 A/B, C and D, a hull-mounted system. The "C" version of this system, commonly known as "53-Charlie," is deployed aboard several classes of Navy frigates and destroyers as part of the AN/SQQ-89 sonar suite.
- The AN/SQS-56, another hull-mounted system that operates at somewhat higher frequencies than AN/SQS-53.
- The AN/SSQ-62 B, C, D, & E Directional Command Activated Sonobuoy System (known as DICASS).
- The Airborne Low Frequency System (known as ALFS). Notwithstanding the reference to "low frequency" in its name, ALFS operates in the mid-frequency range between 3 and 5 kHz.

37. Many of these systems employ technology capable of generating sounds well in excess of 215 decibels (dB re 1 μPa (RMS)).[3] For example, during a March 2000 mass stranding of whales in the Bahamas, which a joint NMFS and Navy report concludes was most likely caused by its use of the AN/SQS-53C sonar system, sound levels generated by the sonar were reported to exceed 235 decibels, and even tens of kilometers away from the source sound levels remained at 160 decibels. Exactly how loud some of these systems operate is not publicly known.

[3] The decibel scale is like the Richter scale for earthquakes: it expresses force in logarithmic terms, rising in increasing orders of magnitude from a baseline value. Each ten-decibel rise along the scale corresponds to a ten-fold increase in power; thus, a sound measuring 130 dB is considered ten times more intense than a 120 dB sound, a sound of 140 dB is 100 times more intense, and a sound of 150 dB is 1,000 times more intense. Unless otherwise noted, all decibel levels (dB) cited in this Complaint represent the root mean square (RMS) of the acoustic pressure of the sound source, calculated in reference to one microPascal (re 1 μPa), at one meter's distance.

38. The Navy's use of this technology is geographically extensive, ranging through canyons and other underwater habitat across the world's oceans, including, on information and belief, extensive operations in United States waters. As described in this Complaint, the Navy has used and continues to use mid-frequency sonar systems in locations around the globe.

39. The Navy regularly conducts testing and training activities in which mid-frequency active sonar is employed. These activities involve Navy ships, submarines, and/or aircraft and, sometimes, non-Navy contract vessels. On information and belief, these activities regularly occur in U.S. territorial waters, in the Exclusive Economic Zones of the U.S. and other countries, and on the high seas. On information and belief, many or most of these activities are decided upon and planned well in advance.

40. The Navy conducts much of its mid-frequency sonar training in the same biogeographic areas, repeatedly exposing the same marine mammal populations, fish stocks, and ecosystems to high intensity sound and potentially subjecting the same individuals to multiple exposures, thus creating the potential for cumulative impacts on these populations, individuals and habitats. For example, at least every two years since 1971 the Navy has conducted a major training exercise, known as RIMPAC (Rim of the Pacific), in waters off the Hawaiian Islands. The exercise routinely involves dozens of vessels and employs mid-frequency active sonar in some of the most biologically rich and unique waters in the world.

B. Environmental Impact of Mid-Frequency Active Sonar on Marine Mammals

41. There is no serious scientific dispute that the mid-frequency active sonar systems used by the Navy can kill, injure, and disturb marine mammals. The Scientific Committee of the International Whaling Commission—the preeminent international body of scientists studying whale populations—considered the most current evidence on the question of the impact of military sonar on beaked whale populations and reported, in 2004, that "[t]he weight of accumulated evidence now associates mid-frequency, military sonar with atypical beaked whale mass strandings. This evidence is very convincing and appears overwhelming."

42. A group of scientists hired by the Navy to examine the impacts of active sonar on cetaceans recently came to the same conclusion, writing in 2004 in their report to the Navy as follows: "[We were] tasked by the [Office of Naval Research ("ONR")] to investigate the reported incidents of marine mammal beachings in apparent response to mid-frequency (2-6 kHz) active sonar. . . . We would like to state at the outset that the evidence of sonar causation is, in our opinion, completely convincing and that therefore there is a serious issue of how best to avoid/minimize future beaching events. . . . Given the variety of different beaching events, it is hard to argue that there is some very special confluence of acoustic events that uniquely trigger beaked whale beachings; instead the trauma, whatever its cause, seems to be a robust consequence of mid-frequency ensonification."

43. Naval exercises employing mid-frequency sonar have definitively caused or been associated with multiple stranding events of whales and other marine mammals around the world. These stranding incidents include, but are not limited to, the following:

(a) *Greece 1996*—A mass stranding of Cuvier's beaked whales occurred along the west coast of Greece in 1996 and was correlated, in an analysis appearing in the scientific journal *Nature*, with the movements of an active sonar system operated by NATO. A subsequent NATO investigation found the strandings to be closely timed with the movements of a vessel employing intense mid- and low-frequency active sonar and ruled out all other physical environmental factors as a cause.

(b) *Bahamas 2000*—During a U.S. Navy exercise, seventeen marine mammals of four different species stranded along the shores of the channels through which several Navy ships traveled. Among the stranded animals were Blainville's beaked whales (*Mesoplodon densirostris*), Cuvier's beaked whales (*Ziphius cavirostris*), a Gervais' beaked whale (*Mesoplodon europaeus*), and minke whales (*Balaenoptera acutorostrata*). *Post mortem* examinations overseen by NMFS, or "necropsies," were performed on some of the whales, and each of these found evidence of tissue damage consistent with an intense acoustic or

pressure event. All of the animals examined had hemorrhaging in and around the ears, and other tissues related to sound conduction or production, such as the larynx and auditory fats, had minor to severe damage. A joint task force headed by NMFS and the Navy subsequently concluded that the whale deaths were due to "acoustic or impulse trauma" that was "most likely" caused by the Navy's mid-frequency active sonar.

(c) *Canary Islands 2002*—During a Spanish naval exercise in which U.S. ships participated, at least fourteen whales of three species were found stranded on the nearby islands of Lanzanote and Fuerteventura. Eleven dead whales were recovered and examined for a cause of death, and findings published in the scientific journal *Nature* concluded that the whales showed organ damange and other internal injuries consistent with the condition known in human divers as "the bends." The authors of the study suggest that the injuries were caused either by a direct physiological effect of the mid-frequency sonar, or by a startle response to the sonar that caused the whales to ascend too quickly.

(d) *Haro Strait 2003*— During a Navy "swept channel" exercise in United States waters near Seattle employing mid-frequency sonar, observers on land and in boats saw dozens of porpoises stampeding from the area; a pod of orcas (killer whales) broke off their feeding behavior and milled in the shallows before fleeing; and, in the days following this exercise, fourteen harbor porpoises were found beached along nearby shores. A NMFS report analyzing this incident concluded that acoustic trauma could not be ruled out as a cause of death, although freezer artifacts and other problems incidental to the preservation of tissue samples made the cause of death in most specimens difficult to determine and precluded a definitive link to sonar. The report also concluded that harbor porpoises throughout the area were exposed to levels of sound much greater than those known to strongly disrupt their behavior, and that the number of porpoise strandings observed in this period was statistically significantly higher than in

other years.

(e) *Gulf of Alaska 2004*—Coincident with Northern Edge, a joint training exercise conducted by the Navy in the Gulf of Alaska in June 2004, at least six beaked whales stranded on nearby shores. No analysis of the injuries to these whales has yet been released.

(f) *Canary Islands 2004*—About one hundred nautical miles north of the Canary Islands in July 2004, the Navy conducted a joint training exercise known as "Magestic Eagle 2004." U.S ships involved reportedly included two aircraft carriers, three submarines, two Aegis cruisers, and an Aegis destroyer. Just after the exercise concluded, at least four whales were found stranded or dead in nearby waters. Tissue analysis of the dead whales indicates acoustic trauma similar to that found in other sonar-related strandings—namely, organ damage and other internal injuries consistent with the condition known in human divers as "the bends."

(g) *North Carolina 2005*—During and just after a U.S. training exercise off North Carolina in which the *USS Kearsarge* Expeditionary Strike Group was engaged in anti-submarine training involving the use of mid-frequency active sonar, at least thirty-seven whales of three different species stranded and died along North Carolina's Outer Banks, including numerous pilot whales (six of which were pregnant), one newborn minke whale and two dwarf sperm whales. NMFS is investigating the possibility that the Navy's use of sonar caused these strandings and deaths and has overseen a series of necropsies on the whales, but has not released its analysis of the injuries.

44. The available scientific data also strongly suggest a long-standing correlation between naval exercises and the mass stranding of beaked whales, going back decades. Following the Bahamas 2000 stranding incident described above, a historical record of beaked whale strandings since the year 1914 was compiled by researchers at the Smithsonian Institution. The record demonstrates a strong statistical correlation between naval activities in

general (which would include the use of active sonar) and mass mortalities of beaked whales. The International Whaling Commission's Standing Working Group on Environmental Concerns, in reporting these data, observed that every mass stranding on record that has involved multiple species of beaked whales occurred with naval activities in the vicinity.

45. A historical record of beaked whale strandings has also been compiled for the Pacific coast of Japan and reported to the Scientific Committee of the International Whaling Commission. The authors found a concentration of mass beaked whale strandings along the Japanese coast near Yokosuka, one of the primary bases for U.S. naval activity in the western Pacific. Eleven mass strandings of beaked whales were reported in the bays around this U.S. naval base from the late 1950s to 2004. By comparison, only two other possible mass strandings of beaked whales are known to have occurred over the rest of the entire Pacific coast of Japan. The authors of this analysis conclude that a relationship between these mass strandings and the Navy's use of acoustics is "strongly suggest[ed]" by this record.

46. Reviewing these and other incidents, the chairs of a 2003 scientific workshop on the topic of active sonar and cetaceans wrote, in their concluding remarks, that "[t]he results of post-mortem examinations of mass stranded cetaceans, immediately following naval activities using mid-frequency long-range tactical sonar, provide compelling evidence that acoustic trauma from those activities, or at least injuries stimulated by behavioural responses to them, has in some way led to their deaths. Deep-diving medium-sized odontocetes particularly of the family *Ziphiidae* appear to be the most susceptible, with Cuvier's beaked whale *Ziphius cavirostris* making up more than three-quarters of the total number of animals recorded stranding in four major incidents (May 1996 – September 2002)."

47. Reports of whales that strand due to Navy sonar may underestimate the scale of the problem. Many whales may be affected far from shore yet remain undiscovered, as most dead whales sink. NMFS recognized this point in a recent stock assessment of a particular species of beaked whales, writing that "unknown levels of injuries and mortalities of Cuvier's beaked whales may occur as a result of anthropogenic noise, such as military sonars (U.S. Dept. of Commerce and Secretary of the Navy 2001) or other commercial and scientific activities

involving the use of air guns. Such injuries or mortalities would rarely be documented, due to the remote nature of many of these activities and the low probability that an injured or dead beaked whale would strand."

48. This fear is echoed by members of the Scientific Committee of the International Whaling Commission, who in 2004 expressed concern that "assessments of stranding events do not account for animals that are severely affected or died but did not strand."

49. For example, the whales that stranded and died along the shore in the Bahamas 2000 stranding event may represent only a fraction of those that died because of that training exercise. According to biologists at the Bahamas Marine Mammal Survey, the Cuvier's beaked whales that had been consistently photo-identified over many years as resident in that area have all but disappeared since the Navy training exercise, leading researchers who have studied the population for years to conclude that nearly all of the animals either died of physical injury caused by the Navy sonar transmissions, or were driven to permanently abandon their habitat.

50. Nor are impacts of Navy mid-frequency sonar on marine mammals limited to stranding and death. Marine mammals depend on sound to navigate, find food, locate mates, avoid predators, and communicate with each other. Flooding their habitat with man-made, high-intensity noise can interfere with these and other activities. Intense noise, such as that generated by mid-frequency active sonar, has been demonstrated or is believed to induce a range of adverse effects in marine mammals. These adverse effects include, but are not limited to, the following:

(a) mortality resulting from damage to organ tissue, hemorrhaging of air cavities or other structures of the body, or beaching of animals;

(b) temporary or permanent loss of hearing;

(c) abandonment of habitat;

(d) disruption of mating, feeding, nursing, and migrating;

(e) induction of aggressive (or agonistic) behavior, which can result in injury;

(f) induction of stress, which compromises breeding and may leave

animals vulnerable to disease, parasitism, and other environmental harms;

(g) masking of biologically meaningful sounds, such as the call of predators; and

(h) declines in the productivity of prey species, such as fish, whose eggs have been shown to lose viability on exposure to intense sound.

51. The Navy concedes that man-made sounds introduced into the ocean can have a range of disturbing effects on marine mammals. In an EIS prepared in advance of the deployment of "SURTASS Low Frequency Active (LFA)" sonar, a low-frequency active sonar system, the Navy wrote:

> There is growing evidence that man-made sounds can sometimes disturb marine mammals. . . . Many marine mammals rely on sound for communication, navigation, or detection of predators and prey. Disruption of any of these biologically important functions could interfere with normal activities and behavior, and thereby might impact the reproductive success of individuals and eventually the size of a population.

52. From September 1997 through May 1998, the Navy sponsored research into some of the potential behavioral impacts of SURTASS LFA on marine mammals. The research was limited in the species it considered, the exposure levels it tested, the numbers of animals it observed, and the responses it focused on; nonetheless, it demonstrated the ability of active sonar to disrupt the communication, navigation, and breeding behavior of whales at even moderate intensities. For example, at intensity levels of 130 and 140 decibels, levels of sound that animals could experience many miles from some of the high-intensity sources used in mid-frequency sonar exercises, roughly one-quarter of male humpback whales tracked by researchers stopped their singing (an activity related to mating behavior) and remained silent for the duration of the sonar signal. The same report concluded that, according to the Navy's own models, half the marine mammals exposed to signals of 165 decibels would undergo a "significant disruption" of a "biologically important activity."

C. Environmental Impact of Mid-Frequency Active Sonar on Fish and Other Species

53. In addition to its demonstrated effects on marine mammals, a substantial body of evidence suggests that intense underwater noise, such as active sonar, may be harmful or deadly to other marine wildlife, including fish, giant squid, and sea turtles.

54. High-intensity sound has been shown to reduce the viability of fish eggs and to cause developmental damage in young fish. It has also been shown to injure the ears and lateral lines necessary for hearing in adult fish. Intense sound may also have harmful resonance impacts on fish with swim bladders, particularly larger pelagic fish such as tuna.

55. A series of studies in Australia showed that pink snapper sustained extensive damage to the hair cells located at the sensory epithelia of the inner ear after they were exposed to impulsive high-intensity noise. The damage, described as "blebbing" and "blistering" on the surface of the epithelia, "suggest that hair cells had been 'ripped' from the epithelia (immediate mechanical damage) or, alternatively, had 'exploded' after exposure (physiological damage)." This study is particularly significant because the inner ear of species examined (pink snapper) "is typical of the majority of commercially important species (e.g., salmon, tuna, cod, haddock)." Because fish rely on hearing to locate prey and avoid predators, environmental changes that affect their hearing both impair their ability to find food and increase their vulnerability to predation.

56. Nor is physical injury the only effect that ocean noise may have on fish. Many fish species are acutely sensitive to sound, and many have been shown to use sound for feeding, mating, avoiding predators, and maintaining the integrity of their schools. At least one study suggests that ocean noise from outboard motor engines is capable of temporarily impairing the ability of fish to hear a full range of sounds—a form of temporary deafness. And other studies have shown that underwater noise can temporarily deafen goldfish, tilapia, and sunfish. Again, hearing loss can both impair fish species' ability to find food and increase their vulnerability to predation. As a number of fish specialists have noted, "[f]ishes with impaired

hearing would have reduced fitness, potentially leaving them vulnerable to predators, possibly unable to locate prey, sense their acoustic environment, or, in the case of vocal fishes, unable to communicate acoustically."

57. Like marine mammals, some fish also demonstrate behavioral responses to intense sound. A Norwegian study, for example, documented dramatic declines in the catch rates for both cod and haddock (between 45 and 70%) in the vicinity of a seismic airgun array, a technology that produces intense underwater noise. Fishermen were affected across an area of nearly 2,000 square miles. Catch rates did not recover within five days after operations ended. A similar experiment showed a 52% decline in a rockfish fishery exposed to a single airgun array. Not only can such disruption of normal behavior potentially have widespread effects on the health of individual populations, but the decline in catch rates demonstrated by these studies has direct economic ramifications.

58. Moreover, intense sound may be detrimental to important prey species for many fish stocks, and thus further impair the biological components of fish habitat. A recent report by the National Academy of Sciences observed that "[i]ncreases in noise (above ambient levels) have been implicated in reduced growth and reproduction in a variety of marine organisms." For example, extended exposure to man-made sound has been shown to significantly reduce growth and reproduction rates in the brown shrimp (*Crangon crangon*). It has also been shown to prevent settling in the larvae of some species of crustaceans thus preventing development to adulthood. Because the larvae of many species are viable only for a few hours to a few weeks, a poorly-timed exposure to intense sound could significantly impair local populations of these important prey species.

59. Sea turtles and giant squid are among the other species that may also be affected by intense mid-frequency active sonar. In the last five years there have been two documented strandings of multiple giant squid—a mysterious species that is rarely seen or recorded alive—on the Spanish coast. In both cases, the squid strandings coincided with nearby seismic airgun operations. According to scientists who studied the events, five giant squid

washed up dead on Spanish beaches shortly after two seismic survey vessels conducted operations in the area. Two years later, four additional strandings were recorded under similar circumstances. The dead squid all were found with lesions on their skin, damaged internal organs, and badly damaged ears, all of which, according to the scientists, "suggest lethal or sublethal effects of the shock acoustic waves." Scientists speculate that the squid, whose metabolisms are adapted for life in the deep ocean, may have died of suffocation from surfacing after being disoriented by the intense noise.

60. There is also evidence that the behavior and stress levels of sea turtles—nearly all of which are highly endangered—may be affected by ocean noise. Avoidence responses of sea turtles to intense sounds have consistently been demonstrated by scientists. Australian researchers have shown that sea turtles will display a general "alarm" response to seismic surveys as much as two kilometers away. And behavior responses among turtles, such as rising to the surface and altered swimming patterns, may be elicited with exposure to as little as 166 dB re 1 μPa mean squared pressure. Researchers have also shown alterations in the blood chemistry of juvenile sea turtles exposed to intense sound, indicating increased stress levels. Turtles' ability to hold their breath—a key to their survival as adult sea turtles spend most of their lives submerged—may be compromised by increased stress.

61. The growing evidence of ecosystem-wide impacts of intense man-made sound illustrates the importance of careful planning and compliance with environmental review, consultation, and permit requirements, all of which are designed to help the Navy understand the impacts of its actions, and mitigate those impacts, before flooding vast areas of marine habitat with intense, harmful mid-frequency sonar.

D. Plaintiffs Have Repeatedly Notified the Navy of these Violations, and Have Urged the Navy to Remedy Them, To No Avail

62. In the aftermath of the March 2000 mass mortality of whales in the Bahamas, Plaintiff NRDC wrote to the Navy requesting discussion about the Navy's use of high

intensity sonar. The Navy did not respond. (This letter, dated July 7, 2000, is included as an attachment to Exhibit A.)

63. In the aftermath of a July 2004 stranding in Kauai, Hawaii, in conjunction with a naval exercise there (RIMPAC 2004), Plaintiffs NRDC, IFAW, and Ocean Futures Society wrote to the Secretary of the Navy again about the Navy's use of mid-frequency sonar. The letter detailed the long history of sonar-related strandings, summarized some of the evidence of environmental harm caused by mid-frequency active sonar, and urged the Navy to bring its use of mid-frequency active sonar into compliance with federal environmental law. Specifically, these Plaintiffs urged the Navy to pursue formal consultation under the Endangered Species Act for ongoing and future exercises employing mid-frequency active sonar, and to obtain, if necessary, an Incidental Take Permit under that statute; to obtain a permit or other authorization under the Marine Mammal Protection Act for the same; and to prepare adequate environmental analyses for such exercises (either individually or programmatically) under NEPA. The letter also urged the Navy to adopt a series of common-sense measures during peacetime training to protect marine life from harm caused by mid-frequency active sonar. These Plaintiffs sent an additional letter to the Navy supplementing their request with new information arising from the International Whaling Commission Scientific Committee concerning the link between mid-frequency active sonar and whale deaths. (These letters, dated July 14 and August 5, 2004, are included as attachments to Exhibit A.)

64. The Navy responded in September 2004 with a letter giving general assurances of its commitment to address the impact of its sonar systems on marine life, though without commenting on the protective measures we had urged the Navy to consider, and without indicating that it intended to alter its current practices with respect to those systems. Plaintiffs NRDC, IFAW, and Ocean Futures Society replied with a series of questions to the Navy seeking clarification of its position and further detail on whether it was, or was not, undertaking certain protective measures and other steps to comply with federal law. The Navy has not responded to that letter.

E. Common Sense Measures Can Mitigate the Harm Caused By Mid-Frequency Sonar

65. The harms outlined throughout this Complaint are preventable by reasonable, common-sense mitigation measures that could be adopted by the Navy without unduly impacting its training capabilities. Moreover, compliance with NEPA, ESA, and the MMPA would help to implement such measures, because the environmental review and permitting processes required by law and pressed here are designed precisely to assure that federal actors, such as the Navy, have the information they need to make effective mitigation decisions, and to assure the involvement of sister federal agencies with expertise in designing minimum mitigation measures to prevent needless injuries to animals. Thus, the violations of law alleged herein are not merely procedural.

66. For example, but without limitation, mitigation and monitoring measures like the following, if implemented, would significantly reduce the harm caused by the Navy's use of mid-frequency active sonar during training:

(a) Carefully avoiding important beaked whale habitat in the siting of sonar tests and exercises;

(b) Carefully timing activities so as to avoid seasons and times when sensitive species are present;

(c) Avoiding concentrations of other marine mammals – and other marine species that may also be affected – by identifying low-risk areas for use in routine training, consistent with mission demands;

(d) As a supplement to geographic avoidance, establishing and monitoring a safety zone to the greatest practicable distance around transmit vessels;

(e) Conducting pre-operational surveys of marine mammals and endangered species beyond the safety zone;

(f) Reducing the source level of the sonar signal to the maximum extent practicable; and

(g) Modifying the number or tempo of active sonar exercises to the maximum extent practicable.

The measures listed above are examples of ways in which the Navy could minimize harm to marine mammals and other animals while still training its troops in the use of mid-frequency active sonar.

F. Challenged Mid-Frequency Sonar Activities

67. On information and belief, the following Navy exercises and training activities were conducted in violation of federal law and employed mid-frequency active sonar. For none of these exercises did the Navy, to Plaintiffs' knowledge, prepare an adequate EA or EIS under NEPA, seek or obtain appropriate authorization under MMPA, or engage in required consultations under ESA. The Navy's conduct of each of these training activities is a final agency action that has harmed and aggrieved Plaintiffs in the manners described throughout this Complaint.

(a) *Smart Search 2005*—On information and belief, the Navy conducted an anti-submarine warfare ("ASW") training exercise, called Smart Search '05, off the east coast of the United States beginning on or about April 11, 2005, and continuing for a length of time unknown to Plaintiffs. The exercise was the fifth annual theater ASW exercise of the U.S. Atlantic Fleet and involved submarines and other Navy ships. On information and belief, the exercise employed mid-frequency active sonar.

(b) *North Carolina Exercise, January 2005*—On information and belief, the Navy conducted a training exercise off the coast of North Carolina on and about January 14 and 15, 2005. During the exercise, on information and belief, at least the *USS Kearsarge* Expeditionary Strike Group and perhaps other Navy vessels were engaged in anti-submarine training involving the use of mid-frequency active sonar.

(c) *Smart Search 2004*—On information and belief, the Navy conducted an anti-submarine warfare training exercise, called Smart Search '04, off the east coast of the United States beginning on or about August 29, 2004, and continuing for a length of time unknown to Plaintiffs. The exercise was the fourth annual

theater ASW exercise of the U.S. Atlantic Fleet and involved submarines and at least four Navy ships deployed from Norfolk, Virginia: the *USS Donald Cook*, the *USS Hawes*, the *USS Mitscher*, and the *USS Oscar Austin*. On information and belief, the exercise employed mid-frequency active sonar.

(d) *RIMPAC 2004*—On information and belief, the Navy conducted a training exercise off the shores of Kauai and other Hawaiian islands on and about June 29 through July 27, 2004. The exercise was the latest in the RIMPAC (Rim of the Pacific) series of exercises, which have been held at least biennially since 1971 in waters in and around Hawaii. RIMPAC 2004 involved several U.S. submarines, the aircraft carrier *USS John C. Stennis*, the vessels *USS Paul Hamilton* and *USS Lake Erie*, as well as forces and resources of six allied nations. Both the *USS Paul Hamilton* and the *USS Lake Erie* were equipped with the mid-frequency active sonar system known as AN/SQS-53C, or "53 Charlie," and each of these ships employed its mid-frequency active sonar system on at least July 2 and July 3 as part of the RIMPAC exercise.

(e) *Northern Edge 2004*—On information and belief, the Navy conducted a training exercise, Northern Edge, in waters off Alaska including the Gulf of Alaska. The exercise began on or about June 7, 2004, and continued for a length of time unknown to Plaintiffs. On information and belief, the exercise employed mid-frequency active sonar.

(f) *Haro Strait 2003*—The Navy conducted a training exercise off the coast of Washington State, near the San Juan Islands, on and about May 5, 2003. The exercise was undertaken by the destroyer *USS Shoup*, which is equipped with the mid-frequency active sonar system known as AN/SQS-53C, or "53 Charlie." The *USS Shoup* employed its mid-frequency active sonar for several hours during the exercise, emitting sonar signals of approximately 235 dB about once every 28 seconds from 11:23 am until 2:38 pm, according to a NMFS analysis. The sonar was so loud that it could be heard above water by people in boats thousands of

yards from the *Shoup*.

68. Although each of these exercises has concluded, the violations of federal law alleged in Paragraph 67 can yet be remedied. Moreover, the violations of federal law alleged in Paragraph 67 are capable of repetition yet evading review. Each of the exercises described in Paragraph 67 was of short duration. On information and belief, these durations are typical for Navy exercises employing mid-frequency active sonar. On information and belief, Navy exercises employing mid-frequency active sonar regularly occur in U.S. territorial waters, in the Exclusive Economic Zone of the U.S. and other countries, and on the high seas. Only in a few cases is information about such training activities publicly disclosed in advance. The dates, locations, and even existence of many such training activities are never publicly disclosed. In other cases, the dates, locations and existence of such training activities are disclosed only after their commencement or conclusion. Such training activities, and the Navy's use of mid-frequency active sonar in violation of the law, therefore regularly evade review.

69. On information and belief, the Navy is currently planning and conducting particular training activities in which mid-frequency active sonar is used in violation of federal law. The Navy's conduct of some of these training activities is, on information and belief, imminent. On information and belief, the Navy is currently planning and conducting these individual training activities without preparing an adequate EA or EIS under NEPA, without seeking or obtaining appropriate authorization under MMPA, and without engaging in required consultations under ESA. Because the Navy has not disclosed essential information about these activities—and, in particular, because the Navy has not prepared and made public the environmental planning documents and permit applications for these activities required by NEPA and MMPA—Plaintiffs are unable to allege specific information about the timing and location of all such activities. Future individual training activities challenged by the Plaintiffs include, but are not limited to:

(a) *Smart Search 2006*—On information and belief, the Navy is planning and will soon conduct an anti-submarine warfare ("ASW") training exercise, called Smart Search '06, off the east coast of the United States. The exercise will

be the sixth annual theater ASW exercise of the U.S. Atlantic Fleet and, on information and belief, will involve submarines and other Navy vessels engaging in anti-submarine warfare training exercises involving the use of mid-frequency active sonar.

(b) *RIMPAC 2006*—On information and belief, the Navy is planning and will soon conduct a training exercise off the shores of Kauai and other Hawaiian islands. The exercise will be the latest in the RIMPAC series of exercises. The exercise will involve submarines and other Navy vessels which, on information and belief, will engage in anti-submarine warfare training exercises involving the use of mid-frequency active sonar.

(c) *Northern Edge 2006*—On information and belief, the Navy is planning and will soon conduct a training exercise, called Northern Edge, in waters off Alaska including the Gulf of Alaska. The exercise will involve submarines and other Navy vessels which, on information and belief, will engage in anti-submarine warfare training exercises involving the use of mid-frequency active sonar.

(d) Other Navy training activities currently being conducted or to be conducted in U.S. waters or on the high seas, using mid-frequency active sonar, for which the Navy has not prepared appropriate documentation under NEPA or obtained applicable permits under the MMPA. Such exercises occur regularly but are rarely made public—for example, on information and belief, certain classes of Navy vessels are regularly required to conduct mid-frequency training activities known as "swept channel exercises." Activities alleged in this subparagraph include but are not limited to mid-frequency active sonar training activities being conducted out of the Navy's San Diego base in waters off of Southern California under the auspices of the recently-established Fleet Anti-Submarine Warfare Command there. Plaintiffs cannot allege information about the activities in this subparagraph with greater specificity.

70. Each of the testing and training activities discussed in Paragraphs 67 and 69 constitute or encompass final agency actions that have harmed and aggrieved, or will harm and aggrieve, Plaintiffs. The violations of federal law alleged in Paragraphs 67 and 69 can be remedied by a declaration clarifying the Navy's legal obligation to prepare appropriate documentation under NEPA, to obtain applicable permits under the MMPA, and to undertake appropriate mitigation measures with respect to impacts on species and their habitat, and by an order requiring the Navy to take all such actions and fulfill its legal obligations with respect to sonar training activities.

G. Impacts of Specific Mid-Frequency Active Sonar Exercises on Marine Mammals, Fish, and Endangered or Threatened Species

71. Each of the individual mid-frequency active sonar exercises and training activities alleged above, in Paragraphs 67 and 69, had or has the significant potential to injure a marine mammal or marine mammal stock in the wild, and was or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered. Each of the individual mid-frequency active sonar exercises and training activities alleged above, in Paragraphs 67 and 69, had or has the potential to affect species listed as endangered or threatened under ESA.

72. The North Carolina exercise of January 2005 alleged above, in Paragraph 67, took place in the habitat of some of the most rare and endangered whales in the world, the North Atlantic right whales. The waters are inhabited by at least the following marine mammal species: the North Atlantic right whale, Cuvier's beaked whale, humpback whale, blue whale, fin whale, long-finned pilot whale, melon-headed whale, bottlenose dolphin, and Atlantic spotted dolphin. Of these species, the North Atlantic right whale, blue whale, humpback whale, and fin whale are listed as endangered or threatened. Other endangered or threatened species in the area of this exercise include, but are not limited to, the leatherback sea turtle, green sea turtle, loggerhead sea turtle, and shortnose sturgeon. Fish in the area include Atlantic mackerel,

bluefish, and black sea bass. Many of these species have been identified as potentially vulnerable to physiological or behavioral impacts associated with mid-frequency active sonar.

73. The Smart Search exercises of 2004 and 2005 alleged above, in Paragraph 67, took place in or near waters known to be inhabited by at least the following marine mammal species: the North Atlantic right whale, Cuvier's beaked whale, humpback whale, blue whale, fin whale, long-finned pilot whale, melon-headed whale, bottlenose dolphin, and Atlantic spotted dolphin. Of these species, the North Atlantic right whale, blue whale, humpback whale, and fin whale are listed as endangered or threatened. Other endangered or threatened species in the area of this exercise include, but are not limited to, the leatherback sea turtle, green sea turtle, loggerhead sea turtle, and shortnose sturgeon. Fish in the area include Atlantic mackerel, bluefish, and black sea bass. Many of these species have been identified as potentially vulnerable to physiological or behavioral impacts associated with mid-frequency active sonar.

74. The RIMPAC 2004 exercise alleged above, in Paragraph 67, took place in Hawaii, in some of the richest marine areas in the world and very near the Hawaiian Islands Humpback Whale National Marine Sanctuary. The waters near the exercise are known to be inhabited by at least the following marine mammal species: the humpback whale, Blainville's beaked whale, melon-headed whale, blue whale, fin whale, killer whale, sperm whale, bryde's whale, spinner dolphin, bottlenose dolphin, and Hawaiian monk seal. Of these species, the humpback whale, blue whale, fin whale, sperm whale, and Hawaiian monk seal are listed as endangered. Other endangered or threatened species in the area of this exercise include, but are not limited to, the leatherback sea turtle, hawksbill turtle, olive ridley turtle, green sea turtle, and loggerhead sea turtle. Fish in the area include bigeye tuna, bluefin tuna, and pink snapper. Many of these species have been identified as potentially vulnerable to physiological or behavioral impacts associated with mid-frequency active sonar.

75. The Northern Edge exercise of 2004 alleged above, in Paragraph 67, took place off the Alaskan coast in some of the most biologically rich waters in the United States. These waters are known to be inhabited by at least the following marine mammal species: the

humpback whale, blue whale, fin whale, North Pacific right whale, sperm whale, sei whale, gray whale, killer whale, and stellar sea lion. Of these species, the humpback whale, blue whale, fin whale, North Pacific right whale, sperm whale, sei whale and stellar sea lion are listed as endangered or threatened. Other endangered or threatened species in the area of this exercise include, but are not limited to, the leatherback sea turtle, loggerhead sea turtle, green sea turtle, and short-tailed albatross. Fish in the area include Alaska whitefish, Alaska Pollack, Pacific cod and Pacific halibut. Many of these species have been identified as potentially vulnerable to physiological or behavioral impacts associated with mid-frequency active sonar.

76. The Haro Strait exercise of 2003 alleged above, in Paragraph 67, took place in Washington State near Seattle, in a strait that is home to the killer whale, an icon of the Northwest, as well as many other species. The waters near the exercise are known to be inhabited by at least the following marine mammal species: the humpback whale, fin whale, killer whale, gray whale, Baird's beaked whale, Cuvier's beaked whale, harbor porpoise, and bottlenose dolphin. Of these species, the humpback whale and fin whale are listed as endangered. Other endangered or threatened species in the area of this exercise include, but are not limited to, the leatherback sea turtle, Olive ridley turtle, green sea turtle, and Chinook salmon. Fish in the area (in addition to the Chinook salmon) include bocaccio, Coho salmon, and Northern anchovy. Many of these species have been identified as potentially vulnerable to physiological or behavioral impacts associated with mid-frequency active sonar.

77. On information and belief, the mid-frequency exercises and training activities alleged above in Paragraph 69 are planned for or are occurring in waters that are known to be inhabited by marine mammals and by species listed as endangered or threatened under the ESA. For example, Plaintiffs believe and allege that RIMPAC 2006 will be conducted in the biologically rich waters off Hawaii described for RIMPAC 2004, in Paragraph 74, supra. Plaintiffs believe and allege that Smart Search 2006 will be conducted in the biologically rich waters described for Smart Search 2004 and 2005, in Paragraph 73, supra. Plaintiffs believe and allege that Northern Edge 2006 will be conducted in the biologically rich waters described for

Northern Edge 2004, in Paragraph 75, supra. Because the Navy has not disclosed sufficient information about currently planned mid-frequency sonar training activities, Plaintiffs cannot allege facts regarding affected species with respect to these and other activities with greater specificity.

78. Upon information and belief, multiple marine species, including fish, marine mammals protected by MMPA, and species protected by ESA, have been, are being, or will be significantly harmed by each individual Navy training activity alleged in Paragraphs 67 and 69, above, and will be significantly harmed by future mid-frequency sonar training activities undertaken by the Navy.

FIRST CLAIM FOR RELIEF
(Declaratory and Injunctive –NEPA and APA)

79. Plaintiffs repeat and reallege the allegations contained in paragraphs 1 through 78 herein.

80. Each of the individual Navy exercises and training activities alleged in Paragraphs 67 and 69 of this Complaint is a major federal action significantly affecting the quality of the human environment. The Navy has failed to prepare adequate EAs or EISs for these activities, either collectively or individually, in violation of NEPA. Because the Navy has not disclosed sufficient information about these mid-frequency sonar training activities, Plaintiffs cannot allege violations of law with respect to each of these activities with greater specificity.

81. The Navy's failure to prepare adequate EAs or EISs for the mid-frequency sonar exercises and training activities alleged herein constitutes a continuing violation of law and the unlawful withholding or delay of mandatory agency action under APA, and adversely affects and aggrieves Plaintiffs.

82. Each of the individual Navy exercises and training activities alleged in Paragraphs 67 and 69 of this Complaint is and includes final agency actions that adversely affect and aggrieve Plaintiffs. Defendants' failure to comply with NEPA and the regulations promulgated thereunder in its conduct of the mid-frequency sonar training activities alleged

herein is arbitrary and capricious, an abuse of discretion, not in accordance with the law, and without observance of procedure required by law.

SECOND CLAIM FOR RELIEF
(Declaratory and Injunctive – MMPA and APA)

83. Plaintiffs repeat and reallege the allegations contained in paragraphs 1 through 78 herein.

84. Each of the individual Navy exercises and training activities alleged in Paragraphs 67 and 69 of this Complaint had or has the potential to result, or has resulted, in the unlawful take of an unknown number of marine mammals, as the term "take" is defined in MMPA. Because the Navy has not disclosed sufficient information about these mid-frequency sonar training activities, Plaintiffs cannot allege violations of law with respect to each of these activities with greater specificity.

85. The Navy, upon information and belief, has not sought or will not seek a small take permit or other authorization in connection with any of the activities referred to in Paragraphs 67 and 69 of this Complaint, in violation of MMPA.

86. The Navy's failure to apply for and obtain from NMFS a small take permit or other authorization under MMPA for the mid-frequency sonar training activities alleged herein constitutes a continuing violation of law and the unlawful withholding or delay of mandatory agency action under APA, and adversely affects and aggrieves Plaintiffs.

87. Each of the individual Navy training activities alleged in Paragraphs 67 and 69 of this Complaint is and includes final agency actions that adversely affect and aggrieve Plaintiffs. Defendants' conduct of the mid-frequency sonar training activities alleged herein without first complying with MMPA is arbitrary and capricious, an abuse of discretion, not in accordance with the law, and without observance of procedure required by law.

PRAYER FOR RELIEF

Wherefore Plaintiffs respectfully request that this Court:

A. Declare that each Defendant is in violation of the National Environmental Policy Act as described above;

B. Declare that each Defendant is in violation of the Marine Mammal Protection Act as described above;

C. Direct the Navy to comply with NEPA and MMPA in its conduct of all future training activities employing mid-frequency active sonar;

D. Direct the Navy to propose within 60 days a plan to remedy the aforesaid violations, including a mitigation plan for all uses of its mid-frequency active sonar during testing and training activities;

E. Grant Plaintiffs their costs of suit, including reasonable attorneys' fees; and

F. Grant Plaintiffs such further relief as is necessary and appropriate, including such other equitable relief as it deems necessary to remedy any damage incurred from past unlawful action.

Dated: October 19, 2005

Respectfully submitted,

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