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**UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA**

NATURAL RESOURCES DEFENSE COUNCIL,
INC.; CETACEAN SOCIETY INTERNATIONAL;
ANIMAL LEGAL DEFENSE FUND; PACIFIC
ENVIRONMENT AND RESOURCES CENTER;
and MICHAEL STOCKER,

Plaintiffs,

v.

NATIONAL MARINE FISHERIES SERVICE;
PENNY PRITZKER, in her official capacity as the
Secretary of the Department of Commerce;
KATHRYN SULLIVAN, in her official capacity as
the Acting Administrator of the National Oceanic
and Atmospheric Administration; EILEEN
SOBECK, in her official capacity as the Assistant
Administrator for Fisheries; DEPARTMENT OF
THE NAVY; and RAY MABUS, in his official
capacity as the Secretary of the Navy,

Defendants.

Case No. _____

**COMPLAINT FOR
DECLARATORY AND
INJUNCTIVE RELIEF**

1 **INTRODUCTION**

2 1. Whales and other marine mammals depend on their hearing to survive. They
3 need it to communicate, navigate, find food, and avoid predators. For this reason, marine
4 mammals are acutely sensitive to acoustic disturbance.

5 2. The U.S. Navy is just beginning a five-year battery of training and testing
6 exercises using high-powered sonar and explosives in the waters off southern California
7 and Hawaii. Although the Navy has trained in these waters for years, it is now increasing
8 its activities significantly. The National Marine Fisheries Service (the "Service") has
9 authorized the Navy's new round of exercises, and the Navy is proceeding, even though
10 the agencies' own analysis reveals that these exercises will have unprecedented impacts on
11 marine mammals: 155 deaths, more than 2,000 permanent injuries, and nearly 9.6 million
12 instances of temporary hearing loss and significant disruptions of vital behaviors.
13 Combined, these numbers represent a 1,100 percent increase over the harm the Navy
14 estimated to have been caused by its last five years of training.

15 3. During its exercises, the Navy will broadcast high-intensity sound waves
16 into the ocean using "mid-frequency" sonar systems. The Navy will operate its most
17 powerful sonar systems for nearly 60,000 hours over the next five years, more than triple
18 the number of hours it was authorized to use these systems in the last five years. There is
19 no dispute that the Navy's use of mid-frequency sonar can kill, injure, and disturb marine
20 mammals. Both the Service and the Navy acknowledge that the use of mid-frequency
21 sonar during Navy exercises has contributed to mass strandings of whales and other
22 marine mammals. During the next five years, the Navy will also detonate more than
23 250,000 explosives. At least 7,000 of these detonations will be more powerful than the
24 charge that killed at least three dolphins during a Navy training exercise in southern
25 California in 2011.

26 4. Two groups of marine mammals that will be particularly harmed by the
27 Navy's exercises are beaked whales and endangered blue whales. In a new study, Service
28 biologists have found that beaked whale populations off the California coast are declining

1 precipitously. The authors identify Navy sonar and other human-made noise as one of
2 only two “plausible explanations” for this trend. Another new series of studies, conducted
3 in part by Service and Navy scientists, reveals that sonar exposure affects the behavior of
4 beaked whales in serious ways, causing them to abandon feeding and flee from the source
5 of the noise. A researcher who compared two populations of beaked whales—one that was
6 frequently exposed to Navy sonar and another, nearby population that was not—found
7 that the exposed population was smaller in number and had far fewer juveniles and
8 calves.

9 5. Exposure to mid-frequency sonar also disrupts the foraging behavior of
10 endangered blue whales, according to another recent study authored in part by Navy
11 scientists. The researchers conclude that frequent exposure to mid-frequency sonar “may
12 pose significant risks to the recovery rates of endangered blue whale populations,
13 which . . . have not shown signs of recovery off the western coast of North America in the
14 last 20 years.”

15 6. Despite this and other evidence of harm to vulnerable populations of marine
16 mammals, the Service issued a Final Rule and Letters of Authorization allowing the Navy
17 to conduct its training and testing exercises. The Service authorized 10 beaked whale
18 mortalities and more than 450,000 “takes” of beaked whales by harassment (which
19 includes temporary hearing loss and significant disruption of vital behaviors). It
20 authorized up to 13 blue whale mortalities (from vessel strikes) and more than 23,000 takes
21 of blue whales by harassment. The Service’s finding that these takes will have a “negligible
22 impact” on beaked whale and blue whale populations violates the Marine Mammal
23 Protection Act, 16 U.S.C. §§ 1361-1423, because the Service did not adequately consider the
24 best available science, much of which was conducted by Service and Navy scientists.

25 7. Additionally, the Service violated the Marine Mammal Protection Act by
26 failing to prescribe adequate mitigation for the Navy’s exercises. With only one exception,
27 the Service refused to restrict the Navy’s training in certain areas and at certain times of
28 particular biological importance, despite the acknowledgment of the Service’s parent

1 agency, the National Oceanic and Atmospheric Administration (“NOAA”), that protecting
2 important marine mammal habitat is “generally recognized to be the most effective
3 mitigation measure currently available.”

4 8. The Service also violated the Endangered Species Act, 16 U.S.C. §§ 1531-1544,
5 by issuing an unlawful Biological Opinion and Incidental Take Statement for the Navy’s
6 training and testing exercises. Once again, the Service did not adequately consider the best
7 available science, including studies authored in part by Navy and NOAA scientists, when
8 it evaluated the impact of the Navy’s exercises on endangered blue whales. The Service
9 also failed to analyze whether the Navy’s exercises would reduce the likelihood of
10 recovery of blue whales. Accordingly, the Service’s conclusion that the Navy’s activities
11 are “not likely to jeopardize the continued existence” of blue whales is arbitrary and
12 capricious.

13 9. Finally, the Navy has violated the Coastal Zone Management Act, 16 U.S.C.
14 §§ 1451-1465. This Act requires federal agencies to coordinate with California to ensure
15 that federal actions that may affect California’s coastal zone are consistent to the maximum
16 extent practicable with the state’s Coastal Management Program. Here, the California
17 Coastal Commission voted unanimously to reject the Navy’s determination that its
18 exercises were consistent with California coastal protection law. As the Commission
19 found, the Navy’s analysis was incomplete and was not supported by substantial
20 evidence. The Navy informed the Commission that it would proceed anyway. The Navy’s
21 decision to submit an incomplete analysis to the Commission, as well as its decision to
22 overrule the Commission’s objections with its own, inadequate determination of
23 consistency, violates the Coastal Zone Management Act.

24 10. In authorizing the Navy’s training and testing activities, the Service and the
25 Navy have committed these and other specific violations of the Marine Mammal
26 Protection Act, the Endangered Species Act, the Coastal Zone Management Act, and the
27 Administrative Procedure Act, 5 U.S.C. §§ 551-706. To remedy these violations of law,
28 Plaintiffs seek (1) a declaration that the United States and each of its named subdivisions

1 and officials are violating federal law in the respects set forth herein; (2) an order
2 remanding the Final Rule, Letters of Authorization, Biological Opinion, and Incidental
3 Take Statement to the Service to comply with the Marine Mammal Protection Act and the
4 Endangered Species Act by a date certain; and (3) a tailored injunction prohibiting the
5 Navy from using mid-frequency sonar or conducting underwater detonations in specific
6 areas and at specific times of biological importance to vulnerable species of marine
7 mammals, unless the Commander of the Pacific Fleet determines that such activities are
8 necessary, until the Navy and the Service have taken the steps required to bring the
9 challenged exercises and authorizations into full compliance with federal law. In
10 recognition of the importance of military readiness, Plaintiffs do not seek to halt the
11 Navy's exercises. Unless the Court orders the limited relief that Plaintiffs seek, however,
12 beaked whales, blue whales, and other marine mammals risk unprecedented, irreparable
13 harm.

14 JURISDICTION

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

19 VENUE AND INTRADISTRICT ASSIGNMENT

20 12. Venue is proper in the Northern District of California under 28 U.S.C.
21 § 1391(e) because this civil action is brought against agencies of the United States and
22 officers and employees of the United States acting in their official capacities and under the
23 color of legal authority, three Plaintiffs reside in the Northern District of California, and no
24 real property is involved in the action.

25 13. Pursuant to Local Rule 3-2(c) and (d), assignment to the San Francisco
26 Division or the Oakland Division is appropriate because Plaintiff Animal Legal Defense
27 Fund resides in Sonoma County, Plaintiff Pacific Environment and Resources Center
28 resides in San Francisco County, and Plaintiff Michael Stocker resides in Marin County.

THE PARTIESThe Plaintiffs

14. Plaintiff Natural Resources Defense Council, Inc. (“NRDC”) is a national environmental advocacy group organized as a New York not-for-profit membership corporation. NRDC has six U.S. offices, including offices in San Francisco and Los Angeles. Of NRDC’s more than 330,000 members, more than 60,000 live in California, and nearly 2,000 live in Hawaii. NRDC’s mission is to “safeguard the Earth; its people, its plants and animals, and the natural systems on which all life depends.” Defending endangered wildlife and wild places is one of NRDC’s six strategic priorities. For two decades, NRDC has worked to protect marine mammals and other marine resources from the detrimental effects of ocean noise.

15. Plaintiff Cetacean Society International (“CSI”) is a not-for-profit corporation organized under the laws of the state of Connecticut. CSI’s members include professionals from the scientific and conservation communities, both in the United States and abroad. CSI is dedicated to the benefit of whales, dolphins, porpoises, and the marine environment generally through conservation, education, and research.

16. Plaintiff Animal Legal Defense Fund (“ALDF”) is a nonprofit organization headquartered in Cotati, California. Dedicated to protecting the lives and advancing the interests of animals through the legal system, ALDF files civil actions on behalf of animals, including marine mammals. ALDF has more than 100,000 members nationwide, including more than 14,000 members in California and more than 300 in Hawaii.

17. Plaintiff Pacific Environment and Resources Center is a nonprofit corporation organized under the laws of the state of California and headquartered in San Francisco. Pacific Environment partners with local and indigenous communities in Russia, China, California, and the Alaskan Arctic to protect the living environment of the Pacific Rim. One of the organization’s priorities is to protect whales, dolphins, and other marine wildlife from human-made ocean noise in our marine sanctuaries off the coast of

1 California. Pacific Environment has also worked to conserve critically endangered Western
2 North Pacific gray whales.

3 18. Plaintiff Michael Stocker is a bioacoustician who resides in Forest Knolls,
4 California, and who has studied anthropogenic undersea noise since 1992. He is the
5 founder and director of Ocean Conservation Research, a research-based, California
6 nonprofit organization focused on understanding the impacts of anthropogenic noise on
7 marine life. Mr. Stocker is the author of numerous publications on marine bioacoustics. He
8 has a professional and personal interest in observing, enjoying, and studying marine
9 mammals and their habitats.

10 19. Plaintiffs and their members and constituents regularly use, enjoy, and
11 benefit from a healthy marine ecosystem and the presence of diverse marine life, including
12 the marine mammals that have been, or are likely to be, killed, injured, harassed, or
13 disturbed by the Navy's training exercises in southern California and Hawaii. Plaintiffs
14 and their members and constituents derive recreational, aesthetic, economic, and scientific
15 benefits from marine life by engaging in activities including boat touring, deep-sea fishing,
16 scientific study, whale-watching, bird-watching, kayaking, surfing, and underwater diving
17 in the waters affected by the Navy's exercises. Defendants' failure to comply with federal
18 law and the resulting harm to the marine environment, including the disturbance, injury,
19 and death of marine mammals that is likely to result from that failure, harm the interests
20 of Plaintiffs and their members and constituents. Plaintiffs' injuries will be redressed by
21 the requested relief.

22 The Defendants

23 20. Defendant National Marine Fisheries Service is an agency of the United
24 States Government and is a subdivision of NOAA within the Department of Commerce.
25 The Service is responsible for administering the Marine Mammal Protection Act and the
26 Endangered Species Act, and is the agency that issued the Final Rule, Letters of
27 Authorization, and Biological Opinion challenged here.

28

1 21. Defendant Penny Pritzker, Secretary of Commerce, is the head of the United
2 States Department of Commerce and is responsible for ensuring compliance with the
3 Marine Mammal Protection Act and the Endangered Species Act. Secretary Pritzker is
4 sued in her official capacity.

5 22. Defendant Kathryn Sullivan, Acting NOAA Administrator, is head of
6 NOAA, an agency of the United States Government that encompasses the Service and is
7 itself a subdivision of the Department of Commerce. Acting Administrator Sullivan is
8 responsible for ensuring compliance with the Marine Mammal Protection Act and the
9 Endangered Species Act. Acting Administrator Sullivan is sued in her official capacity.

10 23. Defendant Eileen Sobeck, Assistant Administrator for Fisheries, is the
11 highest-ranking official within the Service. Assistant Administrator Sobeck is sued in her
12 official capacity.

13 24. Defendant United States Department of the Navy is one of the armed
14 services of the United States Government. The Navy is proposing to conduct the training
15 and testing exercises that are the focus of this action. As a federal agency, the United States
16 Department of the Navy is responsible for ensuring its compliance with the Marine
17 Mammal Protection Act, the Endangered Species Act, and the Coastal Zone Management
18 Act.

19 25. Defendant Ray Mabus, Secretary of the Navy, is the highest-ranking official
20 within the United States Department of the Navy. The Secretary is responsible for the
21 training and testing exercises at issue in this Complaint and for ensuring compliance with
22 applicable federal laws, including the Marine Mammal Protection Act, the Endangered
23 Species Act, and the Coastal Zone Management Act. Secretary Mabus is sued in his official
24 capacity.¹

25
26
27 ¹ Defendants National Marine Fisheries Service, Penny Pritzker, Kathryn Sullivan,
28 and Eileen Sobeck are referred to as the "Service Defendants." Defendants United States
Department of the Navy and Ray Mabus are referred to as the "Navy Defendants."

STATUTORY AND REGULATORY BACKGROUND

1
2 26. The Navy's conduct of the training and testing exercises at issue, and the
3 Service's authorization of those exercises, must comply with the following federal statutes,
4 among others: the Marine Mammal Protection Act, the Endangered Species Act, and the
5 Coastal Zone Management Act.

6 Marine Mammal Protection Act

7 27. Congress enacted the Marine Mammal Protection Act because "certain
8 species and population stocks of marine mammals are, or may be, in danger of extinction
9 or depletion as a result of man's activities." 16 U.S.C. § 1361(1). Among other things,
10 Congress was concerned that "there is inadequate knowledge of the ecology and
11 population dynamics of such marine mammals and of the factors which bear upon their
12 ability to reproduce themselves successfully." *Id.* § 1361(3). Legislative history confirms
13 that Congress intended to build a "conservative bias" into the Act "[a]s far as could be
14 done," so that "no steps should be taken regarding these animals that might prove to be
15 adverse or even irreversible in their effects until more is known." H.R. Rep. No. 92-707, at
16 5 (1971), *reprinted in* 1972 U.S.C.C.A.N. 4144, 4148.

17 28. To protect against further depletion and extinction of marine mammals, the
18 Marine Mammal Protection Act establishes a "moratorium on the taking . . . of marine
19 mammals." 16 U.S.C. § 1371(a). The term "take" means "to harass, hunt, capture, or kill, or
20 attempt to harass, hunt, capture, or kill any marine mammal." *Id.* § 1362(13). All takings of
21 marine mammals (except for certain specific activities not relevant here) are prohibited by
22 the Act unless first authorized by the Secretary of Commerce. *Id.* § 1371(a).

23 29. Relevant here, the Service may authorize the taking of marine mammals
24 incidental to a specified activity, for periods of five years or less, if it finds that the total
25 taking will have a "negligible impact" on "species or stock" of marine mammals. *Id.*
26 § 1371(a)(5)(A)(i)(I). "Negligible impact" means "an impact resulting from the specified
27 activity that cannot be reasonably expected to, and is not reasonably likely to, adversely
28 affect the species or stock through effects on annual rates of recruitment or survival." 50

1 C.F.R. § 216.103. The Service’s negligible impact finding must be based on “the best
2 scientific evidence available.” *Id.* § 216.102(a).

3 30. If the Service makes the required findings, it must issue regulations setting
4 forth the “permissible methods of taking . . . and other means of effecting the least
5 practicable adverse impact” on the species or stock and its habitat. 16 U.S.C.
6 § 1371(a)(5)(A)(i)(II)(aa). For military readiness activities, the “least practicable adverse
7 impact” determination “shall include consideration of personnel safety, practicality of
8 implementation, and impact on the effectiveness of the military readiness activity.” *Id.*
9 § 1371(a)(5)(A)(ii). The Service’s regulations must be “based on the best available
10 information.” 50 C.F.R. § 216.105(c).

11 31. A “Letter of Authorization” is required to conduct activities under any
12 regulations established by the Service under 16 U.S.C. § 1371(a)(5)(A). 50 C.F.R.
13 § 216.106(a). The Service will issue a Letter of Authorization “based on a determination
14 that the level of taking will be consistent with the findings made for the total taking
15 allowable under the specific regulations.” *Id.* § 216.106(b).

16 Endangered Species Act

17 32. Congress enacted the Endangered Species Act out of concern that human
18 activities had caused the extinction of numerous species of wildlife, and additional species
19 “have been so depleted in numbers that they are in danger of or threatened with
20 extinction.” 16 U.S.C. § 1531(a)(2). Congress declared that “all Federal departments and
21 agencies shall seek to conserve endangered species and threatened species.” *Id.*
22 § 1531(c)(1).

23 33. Section 7 of the Act requires all federal agencies to “insure that any action
24 authorized, funded, or carried out by such agency . . . is not likely to jeopardize the
25 continued existence of any endangered species or threatened species or result in the
26 destruction or adverse modification” of critical habitat designated for such species. *Id.*
27 § 1536(a)(2). “Jeopardize” means “to engage in an action that reasonably would be
28

1 expected, directly or indirectly, to reduce appreciably the likelihood of both the survival
2 and recovery of a listed species in the wild” 50 C.F.R. § 402.02.

3 34. When an agency proposes an action that is likely to have an adverse effect on
4 endangered or threatened species or their designated critical habitat, the agency must
5 engage in “formal consultation” with the Service. *Id.* § 402.14(a), (b).

6 35. During formal consultation, the Service prepares a Biological Opinion, based
7 on the “best scientific and commercial data available,” which evaluates the proposed
8 action and its direct, indirect, and cumulative effects, and decides whether the action is
9 likely to jeopardize the continued existence of any listed species or result in the destruction
10 or adverse modification of designated critical habitat. *Id.* § 402.14(g)(8), (h)(3).

11 36. Section 9 of the Endangered Species Act prohibits any person from “taking”
12 species listed as endangered, and empowers the Service to issue regulations prohibiting
13 the taking of any species listed as threatened. 16 U.S.C. §§ 1533(d), 1538(a)(1)(A)-(B), (G).
14 “Take” means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect,
15 or to attempt to engage in any such conduct.” *Id.* § 1532(19).

16 37. When the Service issues a Biological Opinion concluding that a federal
17 agency’s proposed action will not jeopardize any listed species, the Service must include in
18 the Biological Opinion an Incidental Take Statement that authorizes the taking of listed
19 species incidental to the proposed action. *Id.* § 1536(b)(4).

20 38. In the case of endangered or threatened marine mammals, the Service may
21 authorize incidental take under the Endangered Species Act only if “the taking is
22 authorized pursuant to section 1371(a)(5) of [the Marine Mammal Protection Act].” 16
23 U.S.C. § 1536(b)(4)(C).

24 39. When the Service’s Permits Division proposes to take an action that may
25 adversely affect a listed species, such as issuing the Final Rule and Letters of
26 Authorization for the Navy exercises challenged here, the Permits Division is considered
27 an “action agency” subject to the requirements of section 7, and it must engage in formal
28

1 consultation with the Service's Endangered Species Act Interagency Cooperation Division
2 (the "consulting agency").

3 Coastal Zone Management Act

4 40. Congress enacted the Coastal Zone Management Act to "preserve, protect,
5 develop, and where possible, to restore or enhance, the resources of the Nation's coastal
6 zone for this and succeeding generations." 16 U.S.C. § 1452(1). The intent of the legislation
7 was to "enhance state authority by encouraging and assisting the states to assume
8 planning and regulatory powers over their coastal zones." S. Rep. No. 92-753, at 1 (1972),
9 *reprinted in* 1972 U.S.C.C.A.N. 4776, 4776.

10 41. The Act requires that each federal agency activity "within or outside the
11 coastal zone" that affects a state's coastal zone "shall be carried out in a manner which is
12 consistent to the maximum extent practicable with the enforceable policies of approved
13 State management programs." 16 U.S.C. § 1456(c)(1)(A). Implementing regulations define
14 "consistent to the maximum extent practicable" as "fully consistent with the enforceable
15 policies of management programs unless full consistency is prohibited by existing law
16 applicable to the Federal agency." 15 C.F.R. § 930.32(a)(1). In other words, "[f]ederal
17 agencies shall consider the enforceable policies of [state] management programs as
18 requirements to be adhered to in addition to existing Federal agency statutory mandates."
19 *Id.* § 930.32(a)(2).

20 42. California's Coastal Act, Cal. Pub. Res. Code §§ 30000-30900, sets forth
21 enforceable policies of the California Coastal Management Program, an approved state
22 management program within the meaning of 16 U.S.C. § 1456(c)(1)(A). The Coastal Act
23 provides that "[m]arine resources shall be maintained, enhanced, and, where feasible,
24 restored. Special protection shall be given to areas and species of special biological or
25 economic significance. Uses of the marine environment shall be carried out in a manner
26 that will sustain the biological productivity of coastal waters and that will maintain
27 healthy populations of all species of marine organisms adequate for long-term
28 commercial, recreational, scientific, and educational purposes." Cal. Pub. Res. Code

1 § 30230. The Act further provides that environmentally sensitive habitat areas shall be
2 protected against any significant disruption of habitat values. *Id.* § 30240(a).

3 43. For all of the California coast except the San Francisco Bay, the California
4 Coastal Commission has been designated as the state agency responsible for implementing
5 the Coastal Zone Management Act. *Id.* § 30330; 16 U.S.C. § 1455(d)(6). The Commission is
6 responsible for reviewing proposed federal activities to assess their consistency with the
7 Coastal Act. Cal. Pub. Res. Code § 30330.

8 44. Federal agencies planning to conduct activities that may have reasonably
9 foreseeable effects on California's coastal resources must apply to the Commission for a
10 determination that their planned activities are consistent to the maximum extent
11 practicable with the Coastal Act. 16 U.S.C. § 1456(c)(1)(C); 15 C.F.R. § 930.36. After receipt
12 of this application, the Commission "shall inform the Federal agency of its concurrence
13 with or objection to the Federal agency's consistency determination." 15 C.F.R. § 930.41.

14 45. If the Commission determines that a proposed action is not "consistent to the
15 maximum extent practicable" with its state management program, "the Federal agency
16 shall not proceed with the activity over a State agency's objection" unless the federal
17 agency concludes that: (1) full consistency with the state coastal plan is prohibited by law;
18 or (2) the proposed action is fully consistent with the state coastal plan even though the
19 state agency objects. *Id.* § 930.43(d).

20 46. The Coastal Zone Management Act was amended in 1990 to clarify that,
21 contrary to prior case law, even a federal activity taking place outside a state's coastal zone
22 is subject to the Act's consistency requirement, so long as it "affects any land or water use
23 or natural resource of the coastal zone." 16 U.S.C. § 1456(c)(1)(A).

24 **FACTUAL BACKGROUND**

25 The Navy's Training and Testing Activities in Southern California and Hawaii

26 47. The Navy conducts training and testing exercises in three "ranges" in southern
27 California and Hawaii: its southern California ("SOCAL") range, which covers 120,000 square
28 nautical miles off the coast of southern California; its Silver Strand complex, in San Diego Bay;

1 and its Hawaii range, which covers more than 2.1 million square nautical miles around the
2 main and northwest Hawaiian Islands. The Navy also conducts exercises in a transit corridor
3 stretching between the SOCAL and Hawaii ranges.

4 48. The waters in and around the Navy's southern California and Hawaii ranges
5 are home to an unusually rich diversity of marine life. At least thirty-nine species of
6 marine mammals occur in the Navy's training areas, including several species of beaked
7 whales, as well as endangered blue whales, fin whales, Western North Pacific gray whales,
8 humpback whales, sei whales, and sperm whales.

9 49. Although the Navy has trained in these waters for decades, it is now
10 increasing the frequency and intensity of its training and testing exercises. Over the next
11 five years, the Navy will conduct numerous amphibious warfare exercises, anti-surface
12 warfare exercises, anti-submarine warfare exercises, mine warfare exercises, naval special
13 warfare exercises, and other training and testing exercises.

14 50. During its anti-submarine warfare exercises, the Navy uses mid-frequency,
15 high-intensity active sonar. Active sonar involves the generation of sound—in this case,
16 sound of extraordinary intensity—for the purpose of detecting objects in the marine
17 environment. Mid-frequency active sonar systems are conventionally defined as those that
18 emit sound at frequencies between 1 and 10 kilohertz (kHz), which is a measure of the
19 frequency of the oscillation of the sound wave (or its "pitch").

20 51. Navy vessels are widely equipped with hull-mounted, mid-frequency sonar
21 systems. Mid-frequency active systems are also deployed from the air via helicopter and
22 fixed-wing aircraft and are placed on floating platforms known as sonobuoys.

23 52. Some of the Navy's sonar systems employ technology capable of generating
24 sounds in excess of 235 decibels (dB re 1 μ Pa (RMS)).² For example, during a mass

25
26 ² The decibel scale is like the Richter scale for earthquakes: it expresses force in
27 logarithmic terms, rising in increasing orders of magnitude from a baseline value. Each
28 ten-decibel rise along the scale corresponds to a tenfold 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

1 stranding of whales in the Bahamas in 2000, which the Service and Navy have concluded
2 was most likely caused by the Navy's use of the hull-mounted AN/SQS-53C sonar system,
3 sound levels generated by the sonar were reported to exceed 235 decibels, and even tens of
4 kilometers away from the source, sound levels remained at 160 decibels—levels that, the
5 Service and Navy agree, have significant impacts on marine mammals. Exactly how loud
6 some of these systems operate is not publicly known.

7 53. Each year, for the next five years, the Navy plans to operate its most
8 powerful, hull-mounted, mid-frequency active sonar systems for more than 11,000 hours,
9 and it plans to use other mid-frequency active sonar for more than 13,000 hours.

10 54. During its exercises, the Navy will also detonate underwater explosives and
11 conduct torpedo tests, ship-sinking events, bombing exercises, and more. Each year, for
12 the next five years, the Navy plans to detonate more than 52,000 explosives, more than 250
13 of which will have a net explosive weight that is greater than 500 pounds and will be used,
14 for example, to sink ships.

15 Harm to Marine Mammals from the Navy's Exercises

16 55. According to the Navy and the Service's own analysis, the Navy's exercises
17 will cause unprecedented harm to marine mammals. The Navy has requested, and the
18 Service has authorized, nearly 9.6 million takes of marine mammals over the next five
19 years. These takes include 155 deaths, more than 2,000 permanent injuries, and millions of
20 instances of temporary hearing loss and significant disruptions of vital behaviors, such as
21 migration, surfacing, nursing, breeding, feeding, and sheltering.

22 56. There is no dispute that the Navy's use of mid-frequency active sonar and
23 underwater explosives can kill and injure marine mammals. Military sonar activities have
24 been linked to dozens of mass strandings of marine mammals around the world, including
25 at least five events in which the Service and the Navy acknowledge that sonar used during

26
27 otherwise noted, all decibel levels (dB) cited in this Complaint represent the root mean
28 square (RMS) of the acoustic pressure of the sound source, calculated in reference to one
micropascal (re 1 μ Pa), at one meter's distance.

1 exercises involving the Navy was a contributing factor. The Navy's underwater
2 detonations have also killed marine mammals, as happened during a Navy training event
3 at the Silver Strand Complex in San Diego in 2011, when at least three dolphins were killed
4 in an explosion.

5 57. Besides killing and injuring marine mammals, the Navy's use of mid-
6 frequency active sonar and explosives can disrupt vital behaviors, such as foraging for
7 food. Behavioral disruptions, if repeated, can have serious impacts on individual animals
8 and, ultimately, on populations. As the Service explains, "long-term and intense
9 disturbance stimuli can cause population declines by reducing the body condition of
10 individuals that have been disturbed, followed by reduced reproductive success, reduced
11 survival, or both."

12 58. Recent studies, conducted in part by Navy and Service scientists, reveal that
13 behavioral disruptions resulting from exposure to mid-frequency active sonar may have
14 particularly serious consequences for vulnerable populations of beaked whales and
15 endangered blue whales.

16 Harm to Beaked Whales from Mid-Frequency Active Sonar

17 59. Beaked whales comprise a diverse but little understood group of toothed
18 whale species ("odontocetes"). They are deep divers, frequently foraging for prey at
19 depths exceeding 1,000 meters, and when they surface, their inconspicuous behavior
20 makes them difficult to detect.

21 60. Several species of beaked whales occur in and around the Navy's training
22 ranges in southern California and Hawaii: Baird's beaked whales, Blainville's beaked
23 whales, Cuvier's beaked whales, Longman's beaked whales, and five species grouped
24 together as Mesoplodon beaked whales. One such species, Perrin's beaked whale, is
25 known to exist only off southern California. Indeed, the Navy's southern California range
26 contains some of the densest beaked whale habitat that has been found anywhere.

27 61. Beaked whales are especially sensitive to sonar exposure. Of the five mass
28 strandings in which the Navy and the Service acknowledge that sonar played a role, all

1 five involved beaked whales. In each of these events, the stranded whales exhibited
2 similar injuries, including hemorrhaging around the brain and auditory systems and
3 severe lesions in organ tissue. The leading theory to explain these injuries is that sonar
4 exposure provokes a behavioral response in beaked whales (such as an unusually rapid
5 ascent to the surface) that causes their tissues to become supersaturated with nitrogen gas,
6 leading to decompression sickness, or the “bends.”

7 62. A recent study, conducted by a group of researchers including Navy
8 scientists, found that exposure to mid-frequency active sonar can also disrupt beaked
9 whales’ foraging behavior. When exposed to simulated sonar signals, tagged beaked
10 whales initiated a “strong and sustained” avoidance response that included energetic
11 fluking (i.e., lifting their tails), “vigorous” swimming away from the source, and ceasing
12 foraging for up to 7.5 hours. The researchers characterized the whales’ responses as
13 “intense, consistent, [and] long-lasting,” and they noted that these responses occurred at
14 sound levels that are orders of magnitude below what the Navy currently considers
15 harmful. The researchers concluded that the energetic costs of these responses, if repeated,
16 could reduce individual whales’ fitness.

17 63. The evidence from three additional studies, taken together, suggests that
18 behavioral disruptions caused by sonar exposure may already be having an adverse
19 impact on beaked whale populations. First, researchers (including a Navy scientist)
20 developed an energetics model to predict how disruptions to feeding might affect the
21 survival and reproduction of beaked whales. The model showed that female beaked
22 whales are able to survive, but not reproduce, when their habitat quality is degraded. The
23 researchers concluded that “anthropogenic disturbances that cause a consistent, minor
24 reduction in energy intake over an extended period of time” could have serious
25 consequences for beaked whale reproduction.

26 64. Second, a Navy-funded Ph.D. dissertation offers real-world evidence to
27 support the predictions from the energetics modeling. The researcher compared the
28 abundance and age composition of two populations of beaked whales in the Bahamas—

1 one on a Navy range that is regularly exposed to sonar, and one off the Navy range that is
2 rarely exposed to sonar. The study revealed a substantially lower abundance of beaked
3 whales on the Navy range than at the control site. Most troubling, the proportion of
4 juveniles and calves to adult females was far lower on the Navy range. After ruling out
5 several other possible causes for these disparities, the researcher concluded that “[i]ndirect
6 impacts associated with chronic stress from acoustic disturbance could be affecting
7 reproductive success, resulting in lower abundance at the navy range.”

8 65. Finally, a new study by two Service biologists has found a sharp decline in
9 almost all beaked whale populations in the California Current ecosystem over the past
10 twenty years. The authors identify Navy sonar and other anthropogenic noise as one of
11 only two “plausible explanations” for this trend. They posit that “Navy ranges occurring
12 in high-quality beaked whale habitat,” such as the Navy’s southern California range, could
13 act as “population sinks,” areas to which beaked whales are drawn, but where they cannot
14 reproduce well.

15 Harm to Endangered Blue Whales from Mid-Frequency Active Sonar

16 66. Blue whales are the largest animals ever to have lived on earth. Decimated
17 by whaling in the nineteenth and early twentieth centuries, blue whales are listed as
18 endangered throughout their range.

19 67. The International Whaling Commission banned all hunting of blue whales in
20 1966. Scientists expected population growth following the ban, but blue whales have
21 shown no evidence of recovery in the last twenty years. According to the Service, the
22 number of blue whales in the world’s oceans is now “only a small fraction” of what it was
23 in the early twentieth century.

24 68. The Service issued a Recovery Plan for blue whales in 1998. According to the
25 Recovery Plan, protection of important habitat for blue whales, including waters off
26 California, is “essential to population recovery.”

27

28

1 69. Blue whales are filter feeders, and they feed mainly on krill. They rely on
2 large, dense patches of prey to meet their energy requirements. Southern California is an
3 important feeding area for Pacific blue whales from June to November.

4 70. Because blue whales produce low-frequency vocalizations, it was previously
5 assumed that blue whales did not hear mid-frequency active sonar. Two recent studies
6 demonstrate, however, that not only do blue whales hear mid-frequency sonar, but it can
7 disrupt their foraging behavior.

8 71. The first study, funded by the Navy, found that blue whales in southern
9 California stopped making foraging calls and went silent when mid-frequency sonar was
10 present. Because even low levels of sonar elicited this response, the researchers
11 hypothesized that a single mid-frequency sonar source was capable of affecting blue
12 whales' behavior "over a broad region of the Southern California Bight."

13 72. The second study, conducted by a group of researchers including Navy and
14 NOAA scientists, found that tagged blue whales exposed to simulated mid-frequency
15 sonar and other mid-frequency noise broke off deep-feeding dives and traveled away from
16 the sound source. The researchers concluded that "[s]onar-induced disruption of feeding
17 and displacement from high-quality prey patches could have significant and previously
18 undocumented impacts on baleen whale foraging ecology, individual fitness and
19 population health." They warned that repeated exposure to mid-frequency sonar "may
20 pose significant risks to the recovery rates of endangered blue whale populations."

21 Administrative Proceedings

22 73. In April 2012, the Navy submitted an application to the Service, requesting
23 two Letters of Authorization for the take of thirty-nine marine mammal species incidental
24 to the Navy's training and testing exercises in southern California and Hawaii from
25 January 2014 to January 2019. The Navy supplemented its request in September 2012.

26 74. For its training exercises, the Navy sought authorization to kill up to 57
27 marine mammals, to permanently injure up to 1,314 marine mammals, and to cause nearly
28 8.4 million instances of temporary hearing loss and significant disruptions of vital

1 behaviors. For its testing exercises, the Navy sought authorization to kill up to 98 marine
2 mammals, to permanently injure up to 725 marine mammals, and to cause nearly 1.2
3 million instances of temporary hearing loss and significant disruptions of vital behaviors.

4 75. The Navy proposed limited mitigation measures, including using lookouts to
5 watch for marine mammals; reducing or halting sonar or explosive use if a marine
6 mammal is visually observed within a certain radius; and establishing a “humpback whale
7 cautionary area” in Hawaii, in which high-level clearance is required to use mid-frequency
8 active sonar between December 15 and April 15. No such cautionary areas were proposed
9 for southern California.

10 76. Plaintiff NRDC submitted comments to the Service on the Navy’s request for
11 Letters of Authorization. Among other comments, NRDC urged the Service to consider
12 limiting or excluding training and testing exercises in areas of biological importance for
13 marine mammals.

14 77. The Service issued a Proposed Rule in January 2013. The Service proposed to
15 find that the Navy’s nearly 9.6 million requested takes of marine mammals would have a
16 negligible impact on marine mammal species and stocks, and it proposed to authorize all
17 the requested takes. Besides the humpback whale cautionary area, the Service proposed
18 not to require the Navy to limit its training and testing exercises in any biologically
19 important areas.

20 78. Plaintiffs NRDC, ALDF, and CSI submitted comments on the Service’s
21 Proposed Rule. Plaintiffs urged the Service to withdraw the Proposed Rule and revise its
22 analysis and mitigation consistent with the requirements of the Marine Mammal
23 Protection Act. Plaintiffs contended that the Service had failed to consider the best
24 available science, that it was proposing to authorize a greater than negligible level of take,
25 and that it had failed to include meaningful mitigation. Plaintiffs expressed particular
26 concern about vulnerable species such as endangered blue and fin whales, and beaked
27 whales. Plaintiffs asked the Service to consider restricting the Navy’s training and testing
28

1 exercises in specific areas, and at specific times, of biological importance to vulnerable
2 marine mammal species.

3 79. The Service issued a Final Rule, and two Letters of Authorization, on or
4 around December 13, 2013. The Service authorized all of the nearly 9.6 million takes
5 requested by the Navy, including up to 10 beaked whale mortalities from stranding, up to
6 13 blue whale mortalities from vessel strikes, more than 450,000 disruptions of beaked
7 whales' vital behaviors, and more than 23,000 disruptions of blue whales' vital behaviors
8 (including more than 14,000 instances of temporary hearing loss). Other than the
9 humpback whale cautionary area off Hawaii, the Service refused to restrict the Navy's
10 training and testing exercises in any biologically important areas.

11 80. The Service and the Navy consulted with the Service's Endangered Species
12 Act Interagency Cooperation Division about the effects of the Navy's training and testing
13 exercises on endangered and threatened species, including endangered blue whales, fin
14 whales, Western North Pacific gray whales, humpback whales, sei whales, and sperm
15 whales.

16 81. On or around December 13, 2013, the Service issued a Biological Opinion
17 concluding that the Navy's proposed training and testing exercises would not jeopardize
18 the continued existence, or adversely modify the critical habitat, of any endangered or
19 threatened species, including endangered blue whales. The Service also issued an
20 Incidental Take Statement authorizing the take of endangered and threatened species
21 incidental to the Navy's exercises, including up to 7 blue whale mortalities from vessel
22 strikes and more than 23,000 disruptions of blue whales' vital behaviors.

23 82. In January 2013, the Navy submitted a consistency determination to the
24 California Coastal Commission. The Navy concluded that its training and testing exercises
25 were consistent to the maximum extent practicable with the enforceable policies of the
26 California Coastal Management Program.

27 83. In March 2013, the California Coastal Commission unanimously objected to
28 the Navy's consistency determination, on the basis that the Navy had provided

1 insufficient information for the Commission to determine whether the Navy's proposed
2 exercises were consistent with the California Coastal Act. The Commission identified
3 several deficiencies in the Navy's consistency determination, including: (1) an incomplete
4 analysis of the requirements of the Coastal Act to maintain, enhance, and restore the
5 overall marine environment; (2) an arbitrary limitation of the Navy's analysis to only ten
6 of thirty-two marine mammals present in the coastal zone; and (3) a population-level
7 effects analysis that was not supported by substantial evidence. The Commission
8 expressed particular concern about the effects of the Navy's proposed exercises on beaked
9 whales, in light of recent studies showing beaked whale populations in California
10 declining, and pointing to sonar as a possible cause.

11 84. The Navy provided limited additional information to the Commission, but it
12 failed to satisfy the Commission, which continued to object to the Navy's determination.

13 85. On December 17, 2013, the Navy informed the Commission that it would
14 proceed with its training and testing exercises over the Commission's objection because
15 the Navy had determined that its exercises were fully consistent with the California
16 Coastal Act.

17 Time-Area Closures Are Needed to Mitigate the Harm Caused by
18 Mid-Frequency Active Sonar

19 86. According to NOAA, the Service's parent agency, protecting important
20 marine mammal habitat is "generally recognized to be the most effective mitigation
21 measure currently available" to reduce the harm that mid-frequency active sonar use
22 inflicts on marine mammals.

23 87. Avoidance of important habitat is effective mitigation because it does not
24 depend on an observer's ability to detect marine mammals during an exercise, which is
25 difficult even under ideal conditions. For example, Service and Navy scientists have
26 estimated that observers conducting mitigation monitoring are likely to detect fewer than
27 2 percent of beaked whales that are directly in the path of the ship. Additionally, habitat
28 avoidance can reduce significant impacts that occur far from the source of the noise.

1 88. NOAA has established a working group on Cetacean Density and
2 Distribution Mapping, which is identifying and mapping biologically important areas for
3 marine mammals throughout the Navy's training and testing ranges. These are areas
4 where species are known to gather for specific behaviors, such as feeding or calving, at
5 specific times, or where small populations are limited to a restricted range.

6 89. NOAA has already published its maps of biologically important areas in
7 Hawaii. Plaintiffs are informed and believe that NOAA has also developed maps of
8 biologically important areas for certain species in southern California, including blue
9 whales, based on years of marine mammal survey efforts.

10 90. Seasonal restrictions on Navy training and testing exercises in areas of
11 biological importance for vulnerable species of marine mammals, such as blue whales and
12 beaked whales, would provide significant mitigation against the harm inflicted by mid-
13 frequency active sonar use.

14 FIRST CLAIM FOR RELIEF

15 **(Unlawful Issuance of Final Rule and Letters of Authorization under the Marine** 16 **Mammal Protection Act and Administrative Procedure Act—against the Service)**

17 91. Plaintiffs reallege and incorporate by reference the allegations contained in
18 Paragraphs 1 through 90 of the Complaint.

19 92. Before authorizing the Navy's take of marine mammals incidental to its
20 training and testing exercises, the Service was required to find that the take would have a
21 "negligible impact" on "species or stock" of marine mammals. 16 U.S.C.
22 § 1371(a)(5)(A)(i)(I). The Service's "negligible impact" finding was required to be based on
23 "the best scientific evidence available." 50 C.F.R. § 216.102(a).

24 93. Additionally, the Service's Final Rule was required to set forth "means of
25 effecting the least practicable adverse impact" on marine mammal species or stock and
26 their habitat. 16 U.S.C. § 1371(a)(5)(A)(i)(II)(aa). The Service's Final Rule was required to be
27 "based on the best available information." 50 C.F.R. § 216.105(c).

28

1 98. The Service’s issuance of a Biological Opinion for the Navy exercises
2 challenged here violates the requirements of 16 U.S.C. § 1536 and its implementing
3 regulations. The Service failed, among other things, to consider the best available scientific
4 information on the impacts to endangered blue whales from mid-frequency active sonar.
5 The Biological Opinion also fails to analyze impacts on the recovery of blue whales. The
6 conclusions of the Biological Opinion and Incidental Take Statement are contrary to the
7 Service’s findings, do not reflect the best available science, are not based on the evidence,
8 and are arbitrary and capricious.

9 99. The Biological Opinion and Incidental Take Statement therefore constitute
10 final agency action that is “arbitrary,” “capricious,” an “abuse of discretion,” “not in
11 accordance with law,” and “without observance of procedure required by law” under the
12 Administrative Procedure Act. 5 U.S.C. § 706(2)(A), (D).

13 **THIRD CLAIM FOR RELIEF**

14 **(Failure to Carry Out Federal Activities that Affect the Coastal Zone in a Manner**
15 **Consistent with California’s Coastal Management Plan as Required by the Coastal Zone**
16 **Management Act and Administrative Procedure Act—against the Navy)**

17 100. Plaintiffs reallege and incorporate by reference the allegations contained in
18 Paragraphs 1 through 99 of the Complaint.

19 101. The Navy exercises challenged here, including the use of mid-frequency
20 active sonar and underwater explosives, are federal activities that will have reasonably
21 foreseeable (and, indeed, serious and harmful) effects on coastal uses and resources,
22 including marine mammals that are found within California’s coastal zone.

23 102. The exercises challenged here are federal activities that “affect[] any land or
24 water use or natural resource of the coastal zone,” and are therefore required to be
25 “carried out in a manner which is consistent to the maximum extent practicable with the
26 enforceable policies of approved State management programs.” 16 U.S.C. § 1456(c)(1)(A).
27 California’s Coastal Management Program is an approved state management program,
28

1 and Coastal Act policies are enforceable policies of an approved state management
2 program.

3 103. The Navy submitted to the California Coastal Commission a consistency
4 determination that failed to analyze the effects of the Navy's proposed exercises on
5 twenty-two of thirty-two marine mammal species occurring in the coastal zone. The Navy
6 therefore failed to ensure that its exercises challenged here are "carried out in a manner
7 which is consistent to the maximum extent practicable with the enforceable policies of
8 approved State management programs." *Id.*

9 104. Additionally, the California Coastal Commission has objected to the Navy's
10 determination that its proposed exercises are "consistent to the maximum extent
11 practicable" with California's management program. The Navy therefore "shall not
12 proceed with the activity over a State agency's objection unless" the Navy concludes that:
13 (1) full consistency with the state coastal plan is prohibited by law; or (2) the proposed
14 action is fully consistent with the state coastal plan even though the state agency objects.
15 15 C.F.R. § 930.43(d).

16 105. Full consistency with California's Coastal Management Plan is not
17 prohibited by law, nor is the proposed action fully consistent with the California Coastal
18 Management Plan.

19 106. The Navy's determination, contrary to that of the California Coastal
20 Commission, that the challenged exercises are consistent to the maximum extent
21 practicable with California's Coastal Management Plan constitutes final agency action that
22 is arbitrary and capricious, an abuse of discretion, not in accordance with law, and without
23 observance of procedure required by law.

24 107. Because of the Navy's failures to comply with the requirements of the
25 Coastal Zone Management Act and its implementing regulations, the Navy's approval of
26 and conduct of the challenged exercises constitute final agency action that is "arbitrary,"
27 "capricious," an "abuse of discretion," "not in accordance with law," and "without
28

1 observance of procedure required by law” under the Administrative Procedure Act. 5
2 U.S.C. § 706(2)(A), (D).

3 **PRAYER FOR RELIEF**

4 Plaintiffs respectfully request that this Court:

5 1. Declare that the Service Defendants are each in violation of the Marine
6 Mammal Protection Act as described above;

7 2. Declare that the Service Defendants are each in violation of the Endangered
8 Species Act as described above;

9 3. Declare that the Navy Defendants are each in violation of the Coastal Zone
10 Management Act as described above;

11 4. Remand the Final Rule and Letters of Authorization for the Service to
12 prepare a Final Rule and Letters of Authorization that comply with the Marine Mammal
13 Protection Act, on a schedule to be set by the Court;

14 5. Remand the Biological Opinion and Incidental Take Statement for the
15 Service’s Endangered Species Act Interagency Cooperation Division to reinitiate
16 consultation with the Service’s Permits Division and the Navy, and to prepare a Biological
17 Opinion and Incidental Take Statement that comply with the Endangered Species Act, on a
18 schedule to be set by the Court;

19 6. Enjoin Defendants from authorizing or proceeding with training and testing
20 exercises using mid-frequency active sonar or underwater detonations in specific areas of
21 biological importance, at specific times of biological importance, unless the Commander of
22 the Pacific Fleet determines that it is necessary for the Navy to conduct such exercises in
23 those areas and at those times, until Defendants have corrected the violations of law set
24 forth herein;

25 7. Grant Plaintiffs their costs of suit, including reasonable attorney fees;

26 8. Grant Plaintiffs such further relief as is necessary and appropriate.
27
28

1 Dated: January 27, 2014

Respectfully submitted,

2 /s/ Jennifer A. Sorenson

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