IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA

SOUTH CAROLINA COASTAL CONSERVATION LEAGUE; CENTER FOR BIOLOGICAL DIVERSITY; DEFENDERS OF WILDLIFE; NATURAL RESOURCES DEFENSE COUNCIL, INC.; NORTH CAROLINA COASTAL FEDERATION; OCEANA; ONE HUNDRED MILES; SIERRA CLUB; and SURFRIDER FOUNDATION,

Plaintiffs,

v.

WILBUR ROSS, in his official capacity as the Secretary of Commerce; the NATIONAL MARINE FISHERIES SERVICE; and CHRIS OLIVER, in his official capacity as the Assistant Administrator for Fisheries,

Defendants.

Civ. No. 2:18-cv-3326-RMG

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

INTRODUCTION

1. Oil and gas exploration companies are poised to begin seismic airgun blasting in coastal waters from Delaware to Florida. These blasts, which are used to detect oil and gas reserves beneath the ocean floor, are a precursor to offshore oil and gas drilling. They are also disruptive industrial activities in their own right. Seismic surveys for oil and gas blast the water column with dozens of high-volume airguns, generating some of the loudest sounds that humans produce in the ocean. Airguns are fired as often as every ten seconds, twenty-four hours a day, for months at a time. Each blast can produce effective sound levels in excess of 260 decibels. Noise from these blasts can disturb, injure, or even kill animals across the entire marine ecosystem, from the smallest zooplankton to the largest whales.

2. On November 30, the National Marine Fisheries Service (NMFS) authorized five companies to conduct seismic airgun surveys for oil and gas in coastal waters of the Mid- and South Atlantic Ocean. These surveys cover overlapping territory and will likely be simultaneous: the five authorizations allow nearly 850 combined days of around-the-clock activity, amounting to more than five million total seismic airgun blasts. By NMFS's own estimates, the authorized surveys will injure and disturb whales and dolphins hundreds of thousands of times, including critically endangered North Atlantic right whales.

3. The ocean is an acoustic world. Sound travels far more efficiently underwater than through the air. Whales, dolphins, and other marine species depend on sound to find mates, forage, avoid predators, navigate, and communicate—in short, for virtually every vital life function. Ocean species are acutely sensitive to acoustic disturbance, which can disrupt or prevent these vital activities.

4. Seismic surveys for oil and gas disrupt acoustic habitats across a wide geographic scale. The blasts they produce are powerful enough to be heard underwater for thousands of miles; over vast distances, their repetitive noise interferes with essential animal behavior including feeding, mating, and raising young. At close range, airgun blasts can kill and injure marine life.

5. For the North Atlantic right whale, one of the most endangered marine mammals in the world, these blasts could mean extinction. Approximately 400 right whales remain, with little more than 100 breeding females left to recover the population. The last twenty months have been devastating for the species. Twenty North Atlantic right whales have been found dead since April 2017—an unprecedented number of deaths in modern times—and new births have slowed. Only five calves were detected in the 2016-17 calving season; in the 2017-18 calving season, not a single right whale calf was detected. NMFS's own Right Whale Recovery Program Coordinator Barb Zoodsma has stated: "It's a pivotal moment for right whales . . . . [I]t very well could be the beginning of the end." In a statement made on November 15—just weeks before the approval of the seismic surveys at issue here—Ms. Zoodsma further explained that "[t]he number of right whale deaths is troubling for a population of a little more than 400 animals, particularly because we estimate that there are only about 100 breeding females who are producing fewer calves each year."

6. The seismic airgun blasts NMFS has authorized will take place in and near the North Atlantic right whales' migration path and calving grounds. Each year, many right whales migrate from feeding grounds off New England and Canada to their only known calving grounds off Florida, Georgia, and the Carolinas; others are present in the Mid- and South Atlantic year-round. Loud, repetitive airgun blasts may disrupt these whales' use of sound to communicate,

separate mothers from their calves, and reduce the fitness of animals that are already struggling to survive. Experts have warned that the large-scale seismic airgun blasting that NMFS has authorized is likely to push right whales closer to extinction.

7. Effects on other species will also be severe. For example, the authorized surveys will be conducted in areas in the Mid-Atlantic that have one of the highest concentrations of beaked whales observed anywhere in the world. These whales, which are among the most sensitive of all marine mammal species to acoustic disturbances, are known to react strongly to loud anthropogenic (human-made) noises. In their most severe form, these behavioral reactions can lead beaked whales to strand on beaches or dive abnormally, causing serious injury or death. More commonly, beaked whales flee from disruptive noise, abandoning productive habitat. NMFS has authorized seismic companies to harm beaked whales more than 23,000 times.

8. In total, the authorized seismic surveys could harm thirty-four species of marine mammals, including five endangered and threatened whale populations, four species of endangered sea turtles, and many species of fish and invertebrates. A substantial body of research shows that seismic airguns adversely affect marine species through disruption of vital behaviors, damage to sensory organs, and even death. As a group of marine scientists warned in 2015, the introduction of large-scale seismic surveys for oil and gas along the Atlantic coast is likely to have "significant, long-lasting, and widespread impacts" on marine mammals and other species in the region.

9. The Marine Mammal Protection Act (MMPA) prohibits activities like seismic surveys that can disturb, injure, or kill marine mammals, unless NMFS authorizes the activities after making certain findings. NMFS may give its authorization only if it finds, among other

things, that activities will injure or disturb "small numbers" of marine mammals and will have no more than a "negligible impact" on each marine mammal species or stock.

10. NMFS's conclusions that the authorized seismic surveys in the Atlantic meet these requirements defy science, law, and common sense. NMFS violated the "small numbers" requirement by authorizing each of the five companies to harm, or "take," up to 33 percent of each marine mammal population. Applying this threshold, NMFS authorized 91,000 instances of harassment for just one species of dolphin, and aggregate takes of more than 50 percent for at least eight whale and dolphin species. These numbers do not comport with any reasonable definition of "small." NMFS also violated the "negligible impact" requirement by failing to determine that the five overlapping seismic surveys, considered in the aggregate, will have no more than a negligible impact on each marine mammal species or stock. Instead, the agency arbitrarily considered each company's activities in isolation. NMFS's analysis failed to adhere to additional statutory requirements imposed by the MMPA, as is detailed below.

11. The Endangered Species Act (ESA) prohibits NMFS from issuing harassment authorizations for seismic airgun blasting unless the agency issues a Biological Opinion that either (1) concludes that the activity is not likely to jeopardize the survival and recovery of any endangered or threatened species, specifies the amount of permissible take, and requires reasonable measures to minimize the action's effects; or (2) concludes that the action is likely to jeopardize the survival and recovery of one or more endangered or threatened species and specifies reasonable and prudent alternatives that avoid jeopardy.

12. NMFS violated the ESA by deciding, contrary to the best available science, that the authorized seismic airgun blasts are not likely to jeopardize the continued existence of the North Atlantic right whale and other threatened and endangered species such as fin whales,

sperm whales, and four species of sea turtles that will be harmed by the authorized seismic airgun blasting.

13. Under the National Environmental Policy Act (NEPA), NMFS may authorize an activity like seismic airgun blasting only if it has fully analyzed the activity's direct, indirect, and cumulative environmental impacts; informed the public and decision makers about those impacts *before* making its decisions; and based its authorization on reliable information and accurate scientific analysis.

14. The agency failed to prepare an Environmental Impact Statement (EIS) analyzing the significant adverse impacts of the authorized seismic surveys. Instead, it relied on flawed, outdated portions of a Programmatic Environmental Impact Statement from 2014 and an inadequate Environmental Assessment. These analyses failed to consider critical recent information, including the increasingly precarious state of the endangered North Atlantic right whale and new scientific research on the harms seismic airgun blasts cause to a variety of marine life. The agency also failed to consider the cumulative impacts of the surveys, failed to consider reasonable alternatives, and otherwise failed to take the legally required "hard look" at the impacts of the surveys.

15. In approving the surveys, NMFS defied the dictates of the MMPA, the ESA, and NEPA. These violations threaten hundreds of thousands of marine mammals and the very survival of at least one species. Plaintiffs ask this Court to declare that NMFS and its named officials are violating federal law; vacate the harassment authorizations, Biological Opinion, Environmental Assessment, and Finding of No Significant Impact; and prohibit the authorized seismic airgun blasting unless and until Defendants comply with their obligations under law.

JURISDICTION AND VENUE

16. This Court has jurisdiction over these claims under 28 U.S.C. § 1331 (federal question) and 5 U.S.C. § 702 (Administrative Procedure Act). The relief sought is authorized by 28 U.S.C. § 2201(a) (declaratory relief) and 5 U.S.C. § 705 and 28 U.S.C. § 2202 (injunctive relief).

17. Venue is proper in the District of South Carolina under 28 U.S.C. § 1391(e)(1) because this civil action is brought against agencies of the United States and officers of the United States acting in their official capacities, and Plaintiff South Carolina Coastal Conservation League resides in the District of South Carolina. No real property is involved in this action.

18. Pursuant to Local Rule 3.01(A)(2), assignment to the Charleston Division is appropriate because Plaintiff South Carolina Coastal Conservation League resides in Charleston.

PARTIES

I. Plaintiffs

19. South Carolina Coastal Conservation League is a nonprofit organization founded in 1989. The League is incorporated under the laws of South Carolina, maintains its headquarters office in Charleston, South Carolina, and currently has nearly 2,700 active donors. The mission of the League is to protect the threatened resources of the South Carolina Coast—its natural landscapes, abundant wildlife, clean water, and quality of life. For years, the League has actively worked to prevent seismic surveying and offshore drilling off the coast of South Carolina, due to the many harms that these activities would cause the marine environment and wildlife.

20. Center for Biological Diversity is a nonprofit organization with offices across the United States. The Center works through science and environmental law to advocate for the

protection of endangered, threatened, and rare species and their habitats both in the United States and abroad. The Center has over 68,000 active members. Through its Oceans Program, the Center has worked for years to protect North Atlantic right whales and other marine mammals that are threatened by industrial activities in our oceans, including offshore oil and gas activities and seismic airgun blasting.

21. Defenders of Wildlife is a nonprofit, science-based conservation organization dedicated to the protection and restoration of all native wild animals and plants in their natural communities and the preservation of the habitat that they depend on. Founded in 1947, it is one of the nation's leading advocates for imperiled species, such as the endangered North Atlantic right whale, and their habitats. Defenders of Wildlife has more than 408,000 members and donors nationwide, including more than 4,500 in South Carolina.

22. Natural Resources Defense Council, Inc. ("NRDC") is a national, nonprofit environmental organization with nearly 400,000 members, including over 53,000 members in the Mid- and South Atlantic states from Delaware to Florida. NRDC is dedicated to the preservation of the environment, its wildlife, and its natural resources; and actively pursues effective enforcement of environmental laws and regulations on behalf of its members. For more than two decades, NRDC has worked to protect marine mammals and other wildlife from the harmful effects of ocean noise.

23. North Carolina Coastal Federation is a membership-supported, nonprofit organization with over 5,000 members. For more than thirty years, the Federation has worked to protect the quality of North Carolina's coastal environment, including its beaches, fisheries, and coastal and marine wildlife through advocacy, education, and coastal restoration projects.

24. Oceana is a nonprofit international advocacy organization dedicated to protecting and restoring the world's oceans through policy, advocacy, science, law, and public education. Oceana has over 817,000 members worldwide, including over 207,000 members along the Atlantic Coast. For the past six years, Oceana has supported coastal communities in South Carolina in opposing offshore drilling and seismic surveying in the Atlantic.

25. One Hundred Miles is a membership-based, nonprofit organization with over 660 members. The mission of One Hundred Miles is to preserve, protect, and enhance Georgia's 100-mile coastline and the waters that lie offshore. The preservation of marine wildlife and fisheries is a critical component of One Hundred Miles's mission, and the organization works to protect and preserve the integrity of these resources throughout coastal Georgia.

26. Sierra Club is a national environmental organization founded in 1892 and devoted to the study and protection of the earth's scenic and ecological resources—mountains, wetlands, woodlands, wild shores and rivers, deserts, plains, and their wild flora and fauna. Sierra Club has approximately 782,000 members and some sixty chapters in the United States and Canada, including over 114,000 members from Delaware to Florida. For decades, Sierra Club's chapters have been working to protect the Mid- and South Atlantic coastline from oil and gas development, including seismic airgun surveys.

27. Surfrider Foundation is a nonprofit organization dedicated to the protection and enjoyment of the world's oceans, waves, and beaches. Surfrider has approximately 39,000 members nationwide and maintains twenty-seven chapters on the east coast of the United States. Since 2015, Surfrider has been working to protect the Mid- and South Atlantic coast, including working with over 1,000 coastal recreation industry businesses to oppose offshore drilling and seismic surveying in the Atlantic.

28. For years, Plaintiffs have written to and met with NMFS and other federal agencies about the grave environmental effects of seismic airgun surveys. In comments dated July 21, 2017, they detailed for NMFS the ways in which allowing these seismic surveys would harm marine life and violate federal law.

29. Plaintiffs' members live along and visit Mid- and South Atlantic coastal waters. They fish, whale-watch, scuba dive, snorkel, kayak, boat, swim, surf, and conduct scientific research in the affected waters. They look for, study, and enjoy marine species, including North Atlantic right whales, beaked whales, and sea turtles. Plaintiffs' members derive recreational, aesthetic, and economic benefits, and gain valuable scientific knowledge, from the ocean and the diverse marine life that resides there, including marine species that are likely to be harmed by seismic surveys. Plaintiffs' members' future use and enjoyment of the affected waters depends on healthy and sustainable populations of marine mammals and other marine life.

30. NMFS's failure to comply with federal law, and the resulting harm to the marine environment, including the disturbance, injury, and death of marine mammals and other marine life, irreparably harms the interests of Plaintiffs and their members.

31. Plaintiffs' injuries will be redressed by the relief they request. Plaintiffs have no other adequate remedy at law.

II. Defendants

32. NMFS is an agency of the U.S. Government and a subdivision of the National Oceanic and Atmospheric Administration within the U.S. Department of Commerce. NMFS administers the MMPA and ESA, and is the agency that issued the harassment authorizations, Biological Opinion, Environmental Assessment, and Finding of No Significant Impact challenged here. NMFS also adopted the environmental review document that is challenged here,

which was prepared by the Bureau of Ocean Energy Management (BOEM) under the National Environmental Policy Act.

33. Chris Oliver, Assistant Administrator for NMFS, is the highest-ranking official within NMFS, and is sued in his official capacity.

34. Wilbur Ross is the Secretary of Commerce and oversees NMFS's compliance with the MMPA, ESA, and NEPA. Secretary Ross is sued in his official capacity.

STATUTORY AND REGULATORY BACKGROUND

35. To authorize seismic airgun blasting, NMFS must comply with the MMPA, ESA, and NEPA. Judicial review of NMFS's actions is governed by the Administrative Procedure Act (APA).

I. Marine Mammal Protection Act

36. In 1972, Congress enacted the MMPA because "certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man's activities." 16 U.S.C. § 1361(1). Congress intended to build a "conservative bias" into the Act, so that "no steps should be taken regarding these animals that might prove to be adverse or even irreversible in their effects until more is known." H.R. Rep. No. 92-707, at 15 (1971), *reprinted in* 1972 U.S.C.C.A.N. 4144, 4148. NMFS is responsible for implementing the MMPA.

37. Central to the MMPA is a prohibition on the "take"—the harassment, hunting, capturing, or killing—of any marine mammal. 16 U.S.C. §§ 1362(13), 1371(a), 1372(a). Harassment includes any act that has the potential to (1) injure a marine mammal or marine mammal stock or (2) disturb a marine mammal or marine mammal stock by disrupting behavioral patterns such as migration, breeding, feeding, or sheltering. *Id.* § 1362(18)(A).

38. Under a limited exception to this prohibition, NMFS may authorize the take of marine mammals incidental to a specified activity other than commercial fishing. Activities that will harass marine mammals through injury or disturbance may be permitted for a period of up to one year under an incidental harassment authorization. *Id.* § 1371(a)(5)(D). Activities that will last more than a year, or that have the potential to seriously injure or kill marine mammals, cannot be authorized with an incidental harassment authorization; NMFS may only permit these activities by promulgating a regulation and issuing a letter of authorization. *Id.* § 1371(a)(5)(A)(i); 50 C.F.R. §§ 216.105-06.

39. The MMPA imposes specific limitations on the issuance of incidental harassment authorizations. First, NMFS can authorize the take of only "small numbers of marine mammals of a species or population stock." *Id.* § 1371(a)(5)(D)(i). Second, the authorized take must have no more than "a negligible impact on such species or stock." *Id.* § 1371(a)(5)(D)(i)(I); 50 C.F.R. § 216.103. Third, if NMFS authorizes a take, it must also prescribe "means of effecting the least practicable impact" on the marine mammal species or stock and its habitat, "paying particular attention to rookeries, mating grounds, and areas of similar significance." 16 U.S.C. § 1371(a)(5)(D)(ii)(I). Finally, in determining whether to authorize incidental harassment, NMFS must employ "the best scientific evidence available." 50 C.F.R. § 216.102(a).

II. Endangered Species Act

40. Congress enacted the ESA because human activities have caused many species to go extinct, and other species "have been so depleted in numbers that they are in danger of or threatened with extinction." 16 U.S.C. § 1531(a)(1)-(2). Under the ESA, "all Federal departments and agencies shall seek to conserve endangered species and threatened species." *Id.* § 1531(c)(1).

41. Section 7 of the ESA prohibits federal agency actions that are likely to jeopardize the survival and recovery of any threatened or endangered species. Each federal agency must "insure" that "any action authorized, funded, or carried out by [the] agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species." *Id.* § 1536(a)(2). To "jeopardize" a species means to engage in an action that could reduce appreciably the likelihood of survival or recovery. *See* 50 C.F.R. § 402.02.

42. A federal agency's grant of permits or authorizations constitutes agency action subject to the requirements of Section 7. *Id.* § 402.02(c).

43. Section 7 of the ESA establishes a consultation process that agencies must follow to fulfill their substantive mandate to avoid jeopardizing endangered or threatened species and adversely affecting their habitat. 16 U.S.C. § 1536(a)(2). Under this process, an agency proposing an action that may affect such species must consult with NMFS (for most marine species) or with the U.S. Fish and Wildlife Service (for land-based species) to evaluate the current status of the species and the environmental baseline, as well as the proposed action and its direct, indirect, and cumulative effects. 50 C.F.R. §§ 402.02, 402.14(a), (g). The agency proposing the action is termed the "action agency," and NMFS or the Fish and Wildlife Service is termed the "consulting agency."

44. As part of the consultation process, the consulting agency must make a determination as to whether the action is likely to jeopardize the continued existence of a species or result in the destruction or adverse modification of critical habitat. 16 U.S.C. § 1536(b)(3)-(4); 50 C.F.R. §§ 402.02, 402.14(g)(3)-(4). This determination is set forth in a biological opinion. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(h)(3).

45. The biological opinion must include a summary of the information upon which the opinion is based and an evaluation of "the current status of the listed species," the "effects of the action," and the "cumulative effects." 50 C.F.R. § 402.14(g)(2), (3).

46. "Effects of the action" include both direct and indirect effects of an action "that will be added to the environmental baseline." *Id*. § 402.02. The "environmental baseline" includes "the past and present impacts of all Federal, State or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early Section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process." *Id*. "Cumulative effects" include "future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area." *Id*. The consulting agency must evaluate and determine whether the action, when added to the environmental baseline and together with any cumulative effects, will jeopardize the continued existence of any listed species or destroy or adversely modify any species' critical habitat. *Id*. § 402.14(g)(3)-(4).

47. During the consultation process, each agency must use the best scientific and commercial data available. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(g)(8).

48. If the consulting agency concludes that the action is likely to jeopardize an endangered or threatened species or destroy or adversely modify critical habitat, it must list

"reasonable and prudent alternatives" that would avoid jeopardy. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(h)(3).

49. On the other hand, if the consulting agency concludes that the action is not likely to jeopardize an endangered or threatened species or destroy or adversely modify critical habitat, but could "take" listed species, it must issue an incidental take statement that: (1) describes the amount or extent of anticipated take, (2) specifies reasonable and prudent measures to minimize adverse impacts, and (3) prescribes mandatory terms and conditions for the action. 16 U.S.C. § 1536(b)(4); 50 C.F.R. § 402.14(i)(1).

50. Under Section 9 of the ESA, 16 U.S.C. § 1538(a)(1)(B), it is illegal for any person—including governmental agencies—to take any endangered species except in compliance with an incidental take statement or other authorization.

51. The ESA defines "take" as "to harass, harm, . . . wound, [or] kill." 16 U.S.C. § 1532(19).

III. National Environmental Policy Act

52. NEPA, 42 U.S.C. §§ 4321 *et seq*., is "our basic national charter for protection of the environment." 40 C.F.R. § 1500.1. NEPA requires federal agencies to take a hard look at the environmental consequences of an agency action before proceeding with that action. *See* 42 U.S.C. §§ 4321, 4332(2)(C); 40 C.F.R. §§ 1501.2, 1502.5. Agencies must "insure 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). Agencies' evaluations must incorporate "[a]ccurate scientific analysis" and be based on "high quality" scientific information. *Id.*

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

"Significan[ce]" depends on a number of factors, including the level of controversy surrounding the impact of the action, the presence of unique or uncertain risks, the potential for the action to establish precedent for future actions, whether the action has cumulatively significant impacts, and the possibility for adverse effects on an endangered or threatened species. 40 C.F.R. § 1508.27. The presence of any one of these factors is sufficient to require an EIS.

54. When an agency is uncertain whether an impact will be significant, it may prepare an environmental assessment (EA) to evaluate these criteria and determine whether a full EIS is required. *Id.* § 1508.9(a)(1). If, through preparation of an EA, the agency concludes that an EIS is not necessary, it must issue a finding that adequately explains why the project will "not have a significant effect on the human environment." 40 C.F.R. § 1508.13. If an action *may* have a significant effect on the environment, or if there are substantial questions about whether it may, an agency must prepare an EIS.

55. An agency's NEPA analysis must, among other things, include a "full and fair discussion" of all direct and indirect environmental impacts, 40 C.F.R. §§ 1502.1, 1508.8, and consider the cumulative effects of past, present, and reasonably foreseeable activities in combination with the proposed action. *Id*. § 1508.7. Direct effects are "caused by the action and occur at the same time and place," whereas indirect effects are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." *Id*. § 1508.8. Cumulative effect is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." *Id*. § 1508.7.

56. An agency's NEPA analysis must also analyze reasonable alternatives that would avoid or minimize the action's adverse impacts, *id*. § 1502.1, and set out measures to mitigate

those adverse effects, *id*. § 1502.14(f). The agency's alternatives analysis must "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." *Id*. § 1502.14.

57. Both EAs and EISs must specify the underlying purpose and need to which the agency is responding in proposing the action. *Id*. §§ 1502.13, 1508.9(b).

58. When a group of actions will occur in the same geographical area, or are similar in timing, impacts, or subject matter, federal agencies may prepare a programmatic EIS to consider the activities together. *See* 40 C.F.R. §§ 1502.4. The agency can then incorporate by reference, or "tier to," relevant portions of that programmatic analysis when it analyzes the impacts of specific actions within that group of proposed actions. *Id*. §§ 1502.20, 1502.28. An agency cannot use tiering to avoid taking a hard look at the impacts of specific actions.

59. An agency may adopt another agency's EIS, but only after undertaking an independent review to ensure the EIS is adequate. *Id*. § 1506.3(a). An agency's adoption of an inadequate EIS does not satisfy NEPA. *See id.*

60. Even after a NEPA process is completed, if the agency becomes aware of new information or the proposed action changes in ways that will affect the environment in a significant manner or to a significant extent not already considered, the agency is required to prepare a supplemental EIS. 42 U.S.C. § 4332(C); 40 C.F.R. § 1502.9(c)(1).

IV. Administrative Procedure Act

61. The APA grants a right of judicial review of final agency actions to any person "suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action." 5 U.S.C. § 702.

62. Under the APA, a reviewing court must "hold unlawful and set aside agency action, findings, and conclusions" found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law," or adopted "without observance of procedure required by law." *Id*. § 706(2)(A), (D). The APA grants to a reviewing court the authority to "compel agency action unlawfully withheld or unreasonably delayed." *Id.* § 706(1). A reviewing court may "issue all necessary and appropriate process" to "preserve status or rights pending conclusion of the review proceedings." *Id.* § 705.

FACTUAL BACKGROUND

I. Marine Resources off the Mid- and South Atlantic Coast

63. The waters of the Mid- and South Atlantic—from the mouth of Delaware Bay to Cape Canaveral, Florida—include some of the most biologically productive marine ecosystems in the world. The region provides important habitat for countless marine species, including in long deep-water canyons and along the continental shelf break where the shallow waters of the coastal shelf give way to the deeper waters of the open ocean. Two major currents meet in the region, creating an oceanic front that fosters extraordinary biodiversity. At least thirty-four species of marine mammals live in or migrate through the region, including several endangered species of large whales. Four of the world's seven sea turtle species live in the region's waters and nest on its beaches. The area also contains thousands of species of invertebrates and at least 600 species of fish, many of which support commercially and recreationally important fisheries.

64. These waters are home to the endangered North Atlantic right whale, one of the world's most iconic—and imperiled—whale species. Each year, right whales migrate south from their feeding grounds off New England and Canada to their only known calving grounds in coastal and offshore waters running from the Carolinas south of Cape Hatteras through northern

Florida. More than half of their migratory route occurs within the Mid- and South Atlantic. In the spring months, some right whales migrate back north, although recent research reveals that right whales are present in the Mid- and South Atlantic year-round.

65. North Atlantic right whales are one of the most endangered marine mammal species in the world. Once considered the "right whale" to hunt, the whales were decimated by whaling in the nineteenth and early twentieth centuries. After showing signs of a slow recovery, in 2010 the whales began again to decline.

66. Scientists estimate that approximately 400 North Atlantic right whales remain, with around 100 females capable of reproduction left in the population. Since April 2017, at least twenty right whale deaths have been reported, including at least nine females. In total, nearly 5 percent of the extant population is known to have died in the last two years. The world's foremost right whale experts and NMFS's own staff have publicly stated that the species is on the path towards extinction.

Image of a North Atlantic right whale mother and calf Credit: NOAA

67. NMFS has previously stated that North Atlantic right whales are in such a precarious condition that "the death or survival of one or two individual animals is sufficient to

determine whether North Atlantic right whales are likely to accelerate or abate the rate at which their population continues to decline." NMFS has also acknowledged that the small population dynamics of North Atlantic right whales "amplify the potential consequences of human-related activities on this species," and that "the longer North Atlantic right whales remain in these circumstances, the greater their extinction probability becomes."

68. Many other marine mammal species also reside in these waters. The area off Cape Hatteras, North Carolina, where the warm Gulf Stream meets the cold Labrador Current, is the most biodiverse marine mammal habitat off the U.S. east coast and likely in the entire Northwest Atlantic Ocean. It is home to one of the highest concentrations of beaked whales ever observed. These deep-diving whales, which are highly sensitive to anthropogenic noise, are remarkably faithful to this habitat and depend on it for foraging. Other vulnerable marine mammal species in the region include humpback whales, pilot whales, Atlantic spotted dolphins, and endangered blue, fin, and sperm whales.

69. Four species of threatened and endangered sea turtles swim these waters to nest on coastal beaches from Florida to Virginia. Many South Carolina beaches have been designated "critical habitat" for endangered sea turtles under the ESA.

70. Fish and invertebrate populations form the foundation of recreational and commercial fisheries up and down the eastern seaboard. Economically important invertebrate populations within the survey area include the Atlantic sea scallop, northern quahog and Atlantic surf clams, blue crab, shrimp, and spiny lobster. Economically important fish populations include the menhaden, swordfish, blue and white marlin, skipjack tuna, summer flounder, and red grouper.

71. Coastal economies depend on these marine species to drive billion-dollar tourism industries. For states like South Carolina, the ocean tourism industry is a critical component of the local economy.

II. Seismic Airgun Surveys

72. Seismic airgun surveys are used to prospect for offshore oil and gas deposits as a precursor to development and drilling. Large-scale surveys use dozens of high-volume airguns towed behind vessels. The airguns fire simultaneously at regular intervals, as often as every ten seconds, blasting the water with compressed air. Sound pressure waves from seismic arrays travel down through the water column, penetrate deep into the seafloor, and rebound to the surface, where vessel receivers record the sound. Because these "deep-penetration" seismic surveys are designed to identify subsurface oil and gas deposits, the blasts must be loud enough to penetrate the seabed. Large seismic airgun arrays like those at issue here can produce effective sound levels more powerful than those of any other underwater human source except explosives.

73. The noise from seismic airgun blasts reverberates and spreads, until, at distance, the noise becomes virtually continuous. These blasts propagate through the ocean across enormous distances. Biologists listening for whale calls in the mid-Atlantic Ocean have heard seismic airguns firing off the coasts of South America and West Africa, at distances of approximately 4,000 kilometers (2,485 miles) away. Even at that distance, noise levels from seismic airgun blasts are loud enough to drown out whale calls.

74. Each of the five large seismic surveys at issue here would operate twenty-four hours per day, for months at a time.

III. Environmental Impacts of Seismic Surveys

75. Hearing is the most important sense for many marine species. Marine mammals, fish, and other marine species use sound to find mates, forage, communicate, avoid predators, and navigate—that is, for virtually every life function essential to survival. The far-reaching noise produced by seismic airguns disturbs an extraordinary diversity of ocean life, from large whales down to microscopic zooplankton.

76. Seismic surveys for oil and gas can harass, injure, or kill marine mammals. Airgun blasts interfere with a wide range of essential marine mammal behaviors, putting whales and dolphins at risk of both immediate and long-term negative consequences.

77. These disruptions can have acute and deadly effects. For example, loud anthropogenic noises like seismic airguns are known to cause extreme flight reactions in beaked whales; these whales have stranded on land or remained at depth longer than their systems can sustain, causing fatal injuries. For right whales, seismic airgun noise can drown out the calls that keep mothers and calves together, increasing the likelihood that mother-calf pairs will be separated. Premature separation can kill a right whale calf.

78. Even less extreme behavioral and physiological responses have significant consequences for individual animals and populations. Marine mammals are known to flee from approaching airguns, abandoning prime feeding, breeding, and migratory habitat. Noise-induced displacement can cause effects that last long after the noise source has left the area, including decreased reproductive success.

79. Marine mammals also alter diving and foraging patterns in response to airgun blasts. In a diversity of species, airgun blasts have been shown to cause decreased foraging, which can leave animals without sufficient energy reserves to engage in essential behavior.

80. Seismic airgun blasts are known to cause marine mammals to stop or reduce vocalizations, interfering with their ability to mate and communicate with each other. Whales can be silenced at great distances from seismic airgun blasts—on the order of hundreds of kilometers or more. At the same time, seismic airgun blasts elevate background noise over large areas of ocean, making it difficult for marine mammals to hear biologically important calls, including calls between potential mates and between a mother and her calf.

81. Marine mammals that do not flee from seismic airgun blasts are still disturbed and injured by them. At close range, seismic airgun blasts are loud enough to cause permanent and irreversible injury to an animal's hearing, resulting in partial or total deafness. Because marine animals depend on their hearing to forage, communicate, find mates, and avoid predators, hearing loss can compromise their survival and ability to reproduce.

82. Loud noises like seismic airgun blasts are also known to cause stress responses in marine mammals. If noises continue or repeat for extended periods of time, these stress responses become chronic. Chronic stress in mammals is associated with heightened mortality and disease and with reduced reproductive success.

83. Seismic surveys for oil and gas also harm a wide range of other marine species, including sea turtles, fish, and invertebrates.

84. Seismic airgun blasts can kill or injure many fish and shellfish species, including commercially important squid, lobster, and scallops. Anthropogenic noise is known to cause physical impacts to these species, including mortality, damage to internal organs, impairment of hearing and other vital sensory functions, and abnormalities in developing animals. In one recent study, a single airgun caused more than a 50 percent decline in abundance in zooplankton—the

vital prey species at the base of the ocean ecosystem—within a 1.5-mile swath around the source.

85. Additionally, catch rates of some fish species are known to decrease substantially in the wake of seismic airgun blasting for oil and gas. Surveys have been found to cause declines in catch rates for species such as cod, haddock, pollock, and tuna, in some cases by more than 50 percent.

NMFS's Authorization of Seismic Surveys in the Atlantic

I. Prior Rejection of Seismic Surveys

86. For three decades, bipartisan efforts protected the Atlantic coast from oil and gas exploration and development.

87. In 2010, BOEM—a division of the Department of the Interior that manages offshore energy development in federal waters—announced a proposal to open the Atlantic for oil and gas drilling. Several companies sought to conduct deep-penetration seismic surveys to map oil and gas deposits beneath the ocean floor. On March 30, 2012, BOEM released a draft Programmatic EIS analyzing the environmental effects of geological and geophysical exploration activities in the Atlantic OCS area, including seismic surveys for oil and gas resources.

88. In June 2012, pursuant to the ESA, BOEM initiated consultation with NMFS on the effects of proposed seismic surveys. On July 19, 2013, NMFS issued a Biological Opinion concluding that seismic surveys were not likely to jeopardize the continued existence of any species and issued an Incidental Take Statement authorizing takes by seismic surveying.

89. BOEM released a final Programmatic EIS in February 2014. BOEM issued its Record of Decision a few months later, in July.

90. BOEM received tens of thousands of comments in response to its proposal to open the Atlantic to drilling, as well as to its draft and final Programmatic EISs, including from Plaintiffs, states, coastal cities, and regional fisheries management councils. Many commenters expressed concerns about the severity of harm and BOEM's failure to consider the full range of environmental impacts associated with seismic surveys.

91. In response to a petition from several of the Plaintiffs, BOEM reinitiated ESA consultation with NMFS in October 2015 to consider new information, including new and expanded critical habitat designations for loggerhead sea turtles and North Atlantic right whales.

92. In 2014 and 2015, five seismic survey companies—Spectrum Geo Inc., TGS-NOPEC Geophysical Company, Ion GeoVentures, WesternGeco LLC, and CGG—applied to NMFS for incidental harassment authorizations to take marine mammals during an initial year of seismic airgun blasting in the Atlantic Ocean. The same companies also submitted applications to BOEM for permits pursuant to the Outer Continental Shelf Lands Act.

93. In 2016, after years of study, BOEM rejected its earlier proposal to allow offshore oil and gas drilling in the Atlantic. The agency cited "strong local opposition, conflicts with other ocean uses, and current market dynamics." In early January 2017, BOEM denied all pending seismic permit applications for oil and gas surveys in the Atlantic, finding that the "value of obtaining the geophysical and geological information from new seismic airgun surveys in the Atlantic does not outweigh the potential risks of those surveys' acoustic pulse impacts on marine life." BOEM cautioned further that "[d]eep penetration seismic airgun surveys come with an environmental burden" and that "the potential disadvantage to [the] small, critically endangered, and declining population [of North Atlantic right whales] is not worth the risk." This was before the twenty right whale deaths that occurred later in 2017 and into 2018.

94. Shortly after BOEM denied all pending seismic permits, NMFS suspended its consideration of pending harassment authorization applications.

II. The Trump Administration's Reversal

95. When President Donald J. Trump took office, the new administration announced its intent to expand offshore oil and gas development. On April 28, 2017, President Trump issued Executive Order 13,795, directing the Departments of the Interior and Commerce to expedite consideration of, among other things, seismic survey permit applications. Secretary of the Interior Ryan Zinke then directed BOEM to expedite consideration of those applications, including the five companies' applications that had already been denied.

96. BOEM reversed its denials of the Atlantic seismic survey permit applications on May 10, 2017. That same month, NMFS resumed its review of the suspended harassment authorization applications. On June 6, 2017, NMFS proposed authorizing the five companies' large-scale seismic surveys, and issued a Federal Register notice to solicit public comments.

97. Members of the public—including Plaintiffs, a bipartisan group of members of the U.S. House of Representatives and U.S. Senate, coastal states, municipalities, business groups, scientists, and fishing alliances—submitted hundreds of pages of detailed comments setting out the reasons for their opposition to the proposed authorizations. Oceana's comment summarized the groundswell of opposition to the surveys as follows:

> Over 125 municipalities along the East Coast and nearly 1,200 elected officials as well as an alliance representing . . . over 41,000 businesses and 500,000 fishing families have publicly opposed seismic airgun surveys and/or offshore drilling, citing threats to marine life, fisheries and coastal economies. All three regional fishery management councils—New England, Mid- and South Atlantic—have . . . express[ed] their concerns about the effects oil and gas exploration may have on recreational and commercial fisheries as well as the coastal economies that depend on these fisheries in the Atlantic. On June 28, 2017, over 100 Congressional representatives, including representatives from each of the Atlantic coastal states, sent a letter to Secretary Zinke opposing the issuance of

> [harassment authorizations under the MMPA] as well as seismic permits [under the Outer Continental Shelf Lands Act].

In total, members of the public submitted more than 117,000 comment letters and 15 petitions with nearly 100,000 signatures. According to NMFS's own description, these comments and petitions expressed "overwhelming opposition" to oil and gas exploration in the Atlantic.

98. On November 30, 2018, NMFS approved all five companies' incidental harassment applications. That same day, NMFS issued a Biological Opinion under the ESA. The agency also issued a Finding of No Significant Impact and an EA under NEPA. In doing so, it relied on and tiered to BOEM's 2014 Programmatic EIS.

99. The five seismic survey companies must also receive permits from BOEM pursuant to the Outer Continental Shelf Lands Act. While those permits have not been issued, the Acting Director of BOEM testified before Congress on January 19, 2018, that BOEM will promulgate permits within two weeks after NMFS's issuance of MMPA harassment authorizations. A BOEM official recently stated that the agency will announce permit decisions "in the near future." Once BOEM issues permits, all five companies will be free to begin seismic surveys.

III. The Authorized Seismic Airgun Surveys

100. NMFS's harassment authorizations will allow five seismic survey companies to conduct overlapping seismic airgun blasting in an area of the Atlantic Ocean that stretches from the mouth of the Delaware Bay to Cape Canaveral, Florida—an area approximately twice the size of California.

101. NMFS has authorized marine mammal takes associated with seismic airgun blasting along over 87,000 miles of survey lines in the region, enough to circumnavigate the

globe more than three times. As many as 208 seismic airguns may be in the water at the same time. Because NMFS has authorized takes associated with nearly 850 combined days and nights of seismic activity, simultaneous blasting from multiple ships is a virtual certainty. According to NMFS's estimates, the authorizations permit more than five million airgun blasts in the region during this initial year of activity.

102. The five companies' surveys largely overlap. A large swath of the Mid- and South Atlantic will be exposed to airgun blasts from all five companies. Because seismic airgun noise travels extremely long distances underwater, many areas within the survey region will be exposed to continuous airgun blasting 24 hours per day for months at a time.

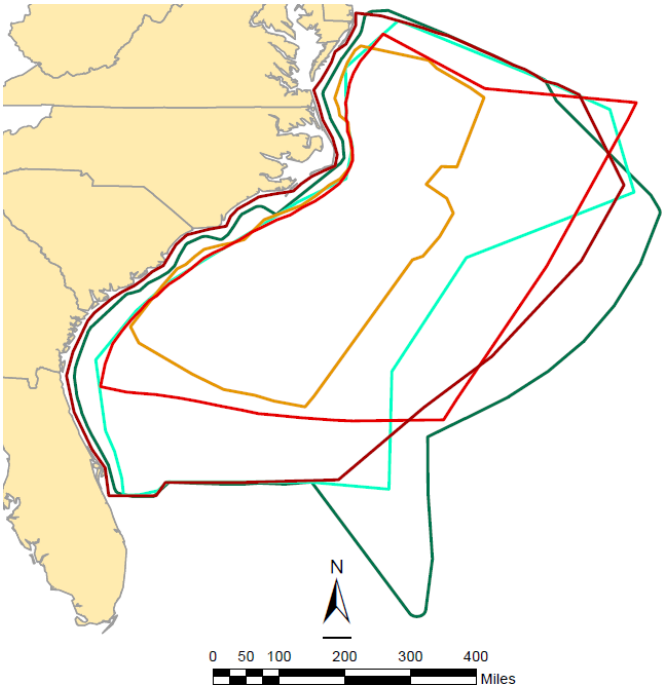

Image of overlapping survey areas in which five companies will conduct more than 87,000 miles of seismic airgun surveys

Credit: Image from https://www.boem.gov/Atlantic-Pending-Permit-Map/.

NMFS's MMPA Incidental Harassment Authorizations

I. NMFS's Flawed Small Numbers Analysis

103. In determining that each of the five seismic surveys met the MMPA's requirement that takes incidental to a specified activity be limited to "small numbers" of marine mammals, 16 U.S.C. § 1371(a)(5)(D)(i), the agency set a threshold of *one-third* of the total species or stock, per applicant, as a "small number." NMFS applied the same threshold to each affected species, regardless of whether that species is abundant or endangered.

104. One-third (or 33 percent) of an entire species or population is not a "small number." For example, the agency authorized just one company, WesternGeco LLC, to take over 88,000 marine mammals, including 23,000 common bottlenose dolphins, 18,000 Atlantic spotted dolphins, and nearly 5,000 beaked whales. By themselves, these numbers are not "small," and they account for only one of the five approved seismic surveys. Thus, NMFS's approach authorized a number of takes for each applicant that was not small.

105. Notwithstanding its purported one-third limit, NMFS authorized one applicant, TGS-NOPEC Geophysical Company, to take *more* than one-third of several species. Specifically, NMFS authorized over 190,000 instances of marine mammal takes by the company, including over 3,500 takes of endangered sperm whales (representing as much as 37 percent of the population), over 12,000 takes of beaked whales (representing as much as 48 percent of the population); and over 41,000 takes of Atlantic spotted dolphins (representing as much as 38 percent of the population). For this applicant and these species, NMFS did not even abide by its own threshold for small numbers.

106. Moreover, although NMFS issued all five authorizations in one document, it considered the potential impacts of each survey independently. NMFS did not analyze whether

all the surveys, operating simultaneously, would together take more than small numbers of marine mammals.

107. When considered in the aggregate, the harassment authorizations allow takes of far more than "small numbers" of marine mammals. Because NMFS asserted that it need only evaluate whether each applicant would take small numbers of marine mammals, the agency authorized multiple survey companies to take up to 33 percent of the same species. For instance, the agency authorized the five seismic surveys to take up to 93 percent of beaked whale populations—which NMFS concedes are extremely sensitive to sound—79 percent of the endangered sperm whale population, 83 percent of the rough-toothed dolphin population, and over 50 percent of five other species.

108. Given that 33 percent of a population, standing alone, is not a small number, these are certainly not small numbers.

109. In its proposed notice issuing the harassment authorizations, NMFS estimated that the applicants' surveys would result in far more takes than even the large number of takes authorized by the agency in the final notice. In that proposed notice, NMFS estimated that four of the five surveys would cause takes in excess of the agency's 33-percent threshold for at least one species. For example, NMFS estimated that TGS-NOPEC Geophysical Company's seismic activities would, by themselves, disrupt up to 93 percent of the beaked whale population.

110. In the final notice, the agency revised its analysis to bring all of the companies' take estimates below the agency's proportional "small numbers" limit. It did so by revising both the number of takes resulting from each survey and its estimates of the total population abundance for each species.

111. Even though the data submitted by the survey companies had, with a few exceptions, remained unchanged since the proposed notice, NMFS's new analysis reduced its estimates to such a degree that all five companies were now estimated to take no more than the agency's one-third "small numbers" limit. NMFS's revised take analysis was not scientifically justified.

II. NMFS's Flawed Negligible Impact Analysis

112. NMFS's harassment authorizations include findings that each survey company's proposed activities will have no more than a negligible impact on marine mammal species or stocks. NMFS concluded that each survey "cannot be reasonably expected to" adversely affect annual rates of reproduction or survival for any marine mammal species. *See* 50 C.F.R. § 216.103.

113. In making these determinations, NMFS did not evaluate whether the *total* take from all five companies' activities will have more than a negligible impact on any marine mammal species or stock. Indeed, NMFS expressly disclaimed any responsibility for evaluating whether the aggregate impact of the five surveys would be more than negligible.

114. Nor did NMFS evaluate whether the incremental impact of each survey would be more than negligible. In other words, after authorizing the first survey, NMFS did not consider whether authorizing a second survey (in addition to the first) would lead to an impact on the species that was more than negligible, nor whether authorizing a third survey (in addition to the first and second) would lead to an impact on the species that was more than negligible, and so forth. Instead, the agency analyzed each survey in isolation, pretending that survey would be the only one in the Atlantic region during the relevant time period—even though the agency was, in

the same document, authorizing four other companies to conduct the same activity, in the same area, over the same time period.

115. NMFS's negligible impact conclusions for individual surveys are irrational in light of the agency's factual findings and analysis. For example, NMFS reached its negligible impacts conclusions, in part, by double-counting the impact of its mitigation protocols for certain species. Moreover, the conclusions do not reflect the best scientific evidence, as described in more detail below.

116. NMFS's unrealistic consideration of each survey in isolation violates the agency's responsibility under the MMPA.

III. NMFS's Failure to Use the Best Scientific Evidence

117. NMFS's analysis also fails to comport with the best scientific evidence available. NMFS relied on a number of flawed assumptions that result in a systematic underestimate of the scale of disruption the authorized surveys will cause. For instance, NMFS assumed that animals exposed to seismic airgun blasts will not be harassed unless they experience received sound levels of 160 decibels or higher. In setting that threshold, the agency ignored scientific studies on a range of marine mammal species that have repeatedly documented adverse behavioral reactions at far lower noise levels. If NMFS had selected a more accurate harassment threshold, it would have calculated a greatly expanded disturbance zone around each seismic survey, and thus a much higher number of animals likely to be harassed. The agency's reliance on its outdated 160-decibel standard underlies the agency's conclusion that marine mammals will not be harmed more than 10 kilometers away from seismic airgun blasts—and thus the agency's conclusion that its 10-kilometer "buffer zone" will adequately protect highly endangered species like the North Atlantic right whale.

118. NMFS's reliance on the 160-decibel standard is especially inappropriate for beaked whales—a species the agency has repeatedly described as being particularly vulnerable to acoustic disturbances. Indeed, in a proposed take authorization for seismic surveys issued earlier this year, NMFS's own take analysis assumed that harassment occurs for 50 percent of beaked whales at the 120-decibel received sound level, and for 90 percent of beaked whales at the 140-decibel received sound level. NMFS described these lower thresholds as "consistent with the best available science." NMFS's harassment authorizations provide no reasonable justification for applying the outdated 160-decibel standard here.

119. In adopting its 160-decibel threshold, NMFS assumed seismic surveys are a purely impulsive noise source. But as NMFS itself has recognized, the noise produced by seismic airguns reflects and refracts through the water such that it can become continuous at distance, elevating background noise levels. An expert panel convened by NMFS itself has noted that, because of the way sound reverberates as it travels through the ocean, the sound created by seismic airgun blasts becomes virtually continuous at distance. Thus, these experts have concluded that seismic surveys should be treated as a hybrid impulsive/continuous noise source. This distinction is material, because NMFS generally assumes that marine mammal behavior will be disrupted by sound from continuous noise at lower levels of received sound than from impulsive noise. If NMFS had properly characterized seismic airguns as a hybrid impulsive/continuous noise source, and had set the threshold for behavioral harassment at 120 decibels, as it does for other sources of continuous noise, the agency's harassment estimates would likely be at least an order of magnitude higher.

120. In these and other ways, NMFS's failure to consider the best available scientific evidence on the impacts of seismic surveys on marine mammals has resulted in a gross

underestimate of the number of marine mammals that will be harassed by the approved seismic surveys.

IV. NMFS's Flawed Interpretation of Harassment

121. Behavioral harassment, as defined by the MMPA, includes any act that "has the potential to disturb a marine mammal . . . by causing disruption of behavioral patterns." 16 U.S.C. § 1362(18)(A)(ii).

122. NMFS's harassment authorizations set a 160-decibel threshold of received sound as the level at which sound from seismic airgun blasting causes "harassment," despite acknowledging that there is "the potential for [behavioral] harassment at exposures to received levels below 160 [decibels]." The authorizations also do not account for categories of behavioral harassment that are known to occur at received sound levels well below 160 decibels, including masking.

123. By offering a definition of harassment inconsistent with the definition set forth in the MMPA, NMFS has underestimated the number of takes the agency has authorized.

V. NMFS's Failure to Ensure Least Practicable Impact

124. NMFS also failed to ensure that the surveys would have the least practicable adverse impact on marine mammals.

125. For example, NMFS's harassment authorizations acknowledge the dire status of the North Atlantic right whale and the need to reduce adverse effects on right whales through a prohibition on all seismic airgun blasting within 90 kilometers of the coast during right whale calving season from November through April. However, the authorizations allow seismic surveying far closer to right whale calving grounds by applicants covered by a "NMFS-approved mitigation and monitoring plan." The authorizations do not provide any explanation of the

criteria by which the agency will evaluate a mitigation and monitoring plan or any support for NMFS's determination that these alternative plans will provide adequate mitigation. Indeed, elsewhere, NMFS acknowledged that "there are limitations on what may reasonably be expected of . . . monitoring" and that "there is no expectation that [monitoring] will detect all marine mammals present."

126. Nor did NMFS adequately consider the practicability of mitigation measures that the agency recognizes as effective to mitigate impacts on marine mammals, such as quieting software and technologies for seismic exploration, application of a lowest practicable source level requirement, or broader temporal or spatial restrictions to protect the North Atlantic right whale and other vulnerable marine mammal species.

VI. NMFS's Inappropriate Use of Harassment Authorizations

127. Given the risk that the approved seismic surveys will cause the serious injury or death of marine mammals, including by stranding, injurious behavioral responses, and mother-calf separation, the only proper mechanism for authorizing these surveys is the promulgation of an incidental take regulation and issuance of letters of authorization. *See* 16 U.S.C. § 1371(a)(5)(A)(i). NMFS's decision to issue harassment authorizations, which are reserved for situations that do not involve the possibility of serious injury or death, was improper.

The ESA Biological Opinion and Incidental Take Statement

128. NMFS's November 28, 2018 Biological Opinion is the result of the agency's consultation on both the five MMPA harassment authorizations and BOEM's future seismic permits under the Outer Continental Shelf Lands Act.

129. In the Biological Opinion, NMFS acknowledged the precarious state of the North Atlantic right whale. NMFS explained that "three lines of evidence indicate the population is still

in decline." NMFS noted that "calving rates in recent years were low"; "the preliminary abundance estimate for 2016 is 451 individuals, down approximately 1.5 percent from 458 in 2015"; and that "since June 2017, at least 19 North Atlantic right whales have died in what has been declared an Unusual Mortality Event (UME), and at least one calf died prior to this in April 2017." NMFS further noted that "[c]urrently, none of [the North Atlantic right whale's] recovery goals . . . have been met."

130. According to the Biological Opinion, "recent modeling efforts indicate that low female survival, a male biased sex ratio, and low calving success are contributing to the population's current decline . . . . In fact, there is evidence of a population wide decline in health since the early 1990s, the last time the population experienced a population decline . . . . Given this status, the species resilience to future perturbations is considered very low . . . ."

131. NMFS acknowledged that "the species may decline towards extinction if prey conditions worsen, as predicted under future climate scenarios . . . , and anthropogenic mortalities are not reduced."

132. Coupled with the extremely dire status of North Atlantic right whales, NMFS also acknowledged the serious consequences that anthropogenic noise, including seismic airgun blasts, can have for right whales and other marine mammals. The Biological Opinion acknowledged (but wrongly dismissed) the potential impacts of seismic activity on mother-calf pairs that could prevent mothers and calves from reuniting and result in missed feeding opportunities for calves. NMFS authorized seismic surveys to take right whales up to 19 times.

133. NMFS nonetheless concluded that the take from seismic surveys will not jeopardize the survival and recovery of the North Atlantic right whale. This conclusion is contrary to the agency's own analysis and public statements about the status of the species. It is

also not based on the best available science, which indicates that right whales are currently at a high risk of extinction and cannot withstand additional harm. *See* 50 C.F.R. § 402.14(g)(8). The combined effects of five overlapping, contemporaneous seismic surveys will exacerbate the precarious status of the species.

134. NMFS reached similar conclusions for other marine mammal species such as fin whales and sperm whales. For fin whales, NMFS acknowledged that seismic activities may cause permanent hearing impairment affecting their ability to find mates and communicate with each other. NMFS thus authorized up to 12 takes of fin whales by physical injury. For sperm whales, NMFS authorized over 7,500 takes by harassment. Significantly, NMFS admitted that its take estimates for most species do not differentiate between exposures that cause behavioral harassment and those that cause temporary hearing loss.

135. For North Atlantic right whales and other species, NMFS attempts to minimize the effects of its action by stating that seismic exposures will be "brief, lasting less than a day and in most cases only several minutes." Thus, the Biological Opinion's assessment of harm to all species, including vulnerable female North Atlantic right whales and their calves, relies on an unfounded assumption that harm is temporary and ceases "shortly after the seismic source becomes inactive or leaves the area." But NMFS did not base its conclusion that endangered or threatened species' exposures will be "brief" on any actual analysis of the temporal or geographic distribution of the five companies' surveys. Without an analysis of the overlapping and contemporaneous nature of these five surveys, NMFS lacks any rational basis for its conclusions that exposure and take will be limited.

136. For the four threatened and endangered species of sea turtles that NMFS found will be adversely affected by seismic exploration, NMFS concluded that significant numbers will

be taken by harassment. As an example, NMFS concluded that over 54,000 adult loggerheads and over 466,000 small (juvenile) sea turtles will be taken by harassment by seismic activities. Yet the agency failed to adequately analyze whether this significant amount of take would jeopardize these species.

137. NMFS reached its no-jeopardy conclusions for each of the species in the Biological Opinion without analyzing the impacts of these five permits when added to the past and present impacts of other activities (including federal activities that have undergone Section 7 consultation) in the action area, or together with cumulative effects. *See* 50 C.F.R. § 402.14(g)(3)-(4).

138. The Biological Opinion also fails to use the best available science about the current status of North Atlantic right whales and the effects of seismic surveys. *See* 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(g)(8). Instead, the Biological Opinion relies on outdated information, including outdated information regarding North Atlantic right whale status and distribution, as well as incorrect sound thresholds for marine mammals as described above.

139. The Biological Opinion also relies on mitigation measures that are not proven to be effective, including seasonal restrictions on seismic activity that, though intended to protect North Atlantic right whales, do not account for the year-round presence of right whales in the region or adequately protect right whales from the significant threat posed by extensive seismic surveying. NMFS also relies on ineffective measures such as visual monitoring and observation that are unlikely to detect the majority of listed species.

The NEPA Programmatic EIS and Environmental Assessment

140. NMFS has not issued an EIS evaluating the environmental effects of the five simultaneous, overlapping seismic surveys in the Atlantic. Instead, in November 2018, the

agency issued one EA, tiered to BOEM's 2014 Programmatic EIS, that purports to evaluate the environmental impact of all five surveys. The agency concluded that the issuance of the harassment authorizations would not have a significant impact on the environment and issued a Finding of No Significant Impact.

141. Many of the considerations that by regulation warrant preparation of an EIS are present here. *See* 40 C.F.R. § 1508.27. First, there is significant controversy and uncertainty surrounding the environmental impacts of seismic surveys in the Atlantic. Scientists, state agencies, elected officials, coastal businesses, and environmental advocates have cast serious doubt on the agency's conclusions about the impacts of seismic airgun blasting. *See id.* § 1508.27(b)(4)-(5). Second, these surveys will adversely affect endangered and threatened species, including the North Atlantic right whale. Leading experts warn that seismic surveys could send the right whale further down the path to extinction. *See id.* § 1508.27(b)(9). Third, the five simultaneous, overlapping seismic surveys will have adverse and substantial aggregate impacts on marine wildlife and habitat. *See id.* § 1508.27(b)(7). Fourth, the agency's decision is likely to establish precedent for future actions: additional applications for permits to conduct further seismic surveys in the Atlantic in the coming years are expected. *See id.* § 1508.27(b)(6). Any one of these considerations is enough to require preparation of a full EIS.

142. A proper NEPA analysis demands consideration of the impacts of "[c]onnected actions," "[s]imilar actions," and "[c]umulative actions." *Id.* § 1508.25(a). Neither the Programmatic EIS nor the EA adequately address the impacts of the multiple concurrent seismic surveys that have been authorized as connected actions, similar actions, or cumulative actions.

143. A proper NEPA analysis must also analyze the direct, indirect, and cumulative effects of a proposed action. *Id.* §§ 1508.7, 1508.8. Neither BOEM's Programmatic EIS nor

NMFS's EA adequately consider these impacts. For example, the U.S. Navy conducts extensive operations in the Mid- and South Atlantic, and NMFS has authorized the Navy to take hundreds of thousands of marine mammals from the same populations that are imperiled by seismic airgun blasting. Yet neither the Programmatic EIS nor the EA adequately considers cumulative effects from other activities in the area, including U.S. Navy operations.

144. NEPA requires federal agencies to prepare a supplemental EIS when new information reveals significant new circumstances or information relevant to the activity or its impacts. *Id*. § 1502.9(c)(1)(ii). The status of many marine species, and our understanding of them, have changed significantly in recent years. Neither the 2014 Programmatic EIS nor the EA incorporate recent, relevant scientific information. For instance, in 2017 alone, NMFS itself declared an Unusual Mortality Event in response to the unprecedented number of North Atlantic right whale deaths, and scientific papers were published concluding that the right whale population is in decline, that the right whale calving interval is increasing and right whale reproduction is declining, and that seismic airgun blasting has extensive, fatal effects on zooplankton. This new information was not considered at all in the 2014 Programmatic EIS, and was either ignored or not adequately considered in the EA.

145. NMFS's stated "purpose" for the proposed action in the EA is "to authorize take of marine mammals incidental to the geophysical surveys proposed by the five companies, consistent with applicable legal requirements." Its stated "[n]eed" is "to determine whether and how to authorize take of marine mammals incidental to the activities described in the[] applications."

146. NMFS's EA considers only two alternatives: granting all five harassment authorizations (the proposed action) and denying all proposed harassment authorizations (the

no-action alternative). NMFS failed to consider other reasonable alternatives to the proposed action.

147. In addition, NMFS's conclusory EA improperly relies on unproven mitigation measures and unfounded assumptions about the concurrent nature of surveys to dismiss anything but minor impacts from the seismic surveys.

FIRST CLAIM FOR RELIEF

Arbitrary, Capricious, and Unlawful Action Contrary to the MMPA and APA

148. Plaintiffs incorporate by reference all preceding paragraphs.

149. Before authorizing harassment pursuant to the MMPA, NMFS must determine and ensure that the activity will take no more than "small numbers" of a marine mammal species or population stock. 16 U.S.C. § 1371(a)(5)(D)(i).

150. Before authorizing harassment pursuant to the MMPA, NMFS must determine and ensure that the activity will have no more than a "negligible impact" on the species or population stocks to be taken. *Id.* § 1371(a)(5)(D)(i)(I).

151. Before authorizing harassment pursuant to the MMPA, NMFS must use "the best scientific evidence available" to inform its decisions. *See* 50 C.F.R. § 216.102(a).

152. Before authorizing harassment pursuant to the MMPA, NMFS must set forth sufficient methods to ensure "the least practicable impact on [each affected] species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance." 16 U.S.C. § 1371(a)(5)(D)(ii)(I).

153. In granting the five harassment authorizations for seismic surveys in the Atlantic, NMFS violated every one of these requirements.

154. Further, NMFS violated the MMPA by setting a harassment threshold that is inconsistent with the statute's text.

155. NMFS improperly issued an incidental harassment authorization, instead of promulgating an incidental take regulation and then issuing letters of authorization, despite the potential for seismic surveys to cause death or serious injury to marine mammals.

156. NMFS's decision to issue the five incidental harassment authorizations violates the MMPA and its implementing regulations and is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA. *Id.* § 1371(a); 5 U.S.C. § 706(2)(A).

SECOND CLAIM FOR RELIEF

Arbitrary, Capricious, and Unlawful ESA Biological Opinion

157. Plaintiffs incorporate by reference all preceding paragraphs.

158. The ESA requires NMFS to ensure that all actions it authorizes, funds, or carries out are "not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification" of a listed species' designated critical habitat. 16 U.S.C. § 1536(a)(2).

159. The challenged harassment authorizations are actions "authorized, funded, or carried out" by NMFS within the meaning of 16 U.S.C. § 1536(a)(2). The issuance of a Biological Opinion for the incidental harassment authorizations is a final agency action reviewable under the APA. *See id.* § 1536(b)(4).

160. NMFS's determination that seismic surveys are not likely to jeopardize the continued existence of the North Atlantic right whale or any other threatened or endangered species such as fin whales and sea turtles is arbitrary and capricious and fails to comply with the

requirements of the ESA. NMFS failed properly to consider the effects of the authorized take from the seismic surveys for right whales and other species when added to the impacts of past and present activities in the environmental baseline and taken together with cumulative effects, and failed adequately to analyze the grave direct and indirect effects of seismic airgun blasting on right whale survival and recovery in light of the precarious status of North Atlantic right whales. The agency's failure to do so is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2). *See* 16 U.S.C. § 1536(a)(2); 50 C.F.R. §§ 402.10-16.

161. NMFS's no-jeopardy conclusions relied, in part, on mitigation measures that are not reasonably specific, not certain to occur, and ineffective. These measures include but are not limited to seasonal restrictions intended to protect North Atlantic right whales, despite right whales' year-round presence in the region and the inadequacy of these sorts of buffers more generally, and measures, such as visual monitoring for right whales and other listed species, that are unlikely to detect the majority of marine mammals or sea turtles. The agency's reliance on inadequate mitigation measures is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2)(A). *See* 16 U.S.C. § 1536(a)(2); 50 C.F.R. §§ 402.10-16.

162. NMFS failed to use the best scientific and commercial data available in the Biological Opinion. Its failure to do so is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2)(A). *See* 16 U.S.C. § 1536(a)(2); 50 C.F.R. §§ 402.10-16.

163. NMFS's determinations that seismic surveys are not likely to jeopardize the continued existence of any threatened or endangered species has no factual or analytical basis in

the Biological Opinion. NMFS's failure to articulate a rational connection between the facts found and the conclusions reached in the Biological Opinion is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2)(A).

THIRD CLAIM FOR RELIEF

Arbitrary, Capricious, and Unlawful NEPA Analysis

164. Plaintiffs incorporate by reference all preceding paragraphs.

165. NEPA requires federal agencies to conduct environmental reviews of major federal actions that may significantly affect the environment. 42 U.S.C. § 4332(C). If an action is likely to significantly affect the environment, an agency must prepare an EIS. *Id.* An agency may decline to prepare an EIS only if it prepares an EA that takes a hard look at the effects of the action and makes a reasonable finding that there will be no significant impact.

166. In either an EIS or an EA, the agency must take a hard look at the environmental impacts of the proposed activity, including direct, indirect, and cumulative impacts. 40 C.F.R. §§ 1502.1, 1508.7, 1508.8. The agency must also evaluate a reasonable range of alternatives. 42 U.S.C. § 4332(C)(iii), (E); 40 C.F.R. § 1508.9(b). The agency's environmental review must be based on high-quality information and accurate scientific analysis. 40 C.F.R. § 1500.1(b). When significant new information or circumstances arise after an EIS has been issued, NEPA requires the agency to prepare a supplemental EIS. *Id.* § 1502.9(c)(1)(i), (ii).

167. NMFS violated NEPA by failing to prepare an EIS or supplemental EIS because the effects of the five authorized seismic surveys will be significant.

168. NMFS violated NEPA by adopting, relying on, and tiering to outdated portions of BOEM's 2014 Programmatic EIS; failing to account for more recent and relevant scientific

information; and otherwise failing to adequately consider the direct, indirect, and cumulative impacts of the seismic surveys or reasonable alternatives to the proposed action.

169. NMFS violated NEPA by preparing an EA that fails to take a hard look at the direct, indirect, and cumulative effects of the seismic surveys; fails to properly define the purpose and need; fails to examine a reasonable range of alternatives; and is not based on high-quality information and accurate analysis of the effects of the action.

170. NMFS's adoption of BOEM's Programmatic EIS and NMFS's issuance of the EA and Finding of No Significant Impact for the seismic surveys are final agency actions that are arbitrary, capricious, an abuse of discretion, not in accordance with law, and without observance of procedure required by law. 5 U.S.C. § 706(2)(A), (D). Alternatively, NMFS's failure to prepare an EIS or supplemental EIS before issuing harassment authorizations constitutes an agency action unlawfully withheld or unreasonably delayed, in violation of the APA. *Id.* § 706(1).

REQUEST FOR RELIEF

WHEREFORE, Plaintiffs respectfully request that this Court:

A. Declare that Defendants violated the Marine Mammal Protection Act;

B. Declare that Defendants violated the Endangered Species Act;

C. Declare that Defendants violated the National Environmental Policy Act;

D. Declare that Defendants violated the Administrative Procedure Act;

E. Vacate the Incidental Harassment Authorizations;

F. Vacate the Biological Opinion and Incidental Take Statement;

G. Vacate the Environmental Assessment and Finding of No Significant Impact;

H. Enjoin Defendants from authorizing takes of marine mammals incidental to seismic airgun blasting for purposes of oil and gas exploration in the Mid- and South Atlantic unless and until Defendants comply with all the requirements of the Marine Mammal Protection Act, Endangered Species Act, National Environmental Policy Act, and Administrative Procedure Act;

I. Grant Plaintiffs their costs of suit, including reasonable attorneys' fees to the extent authorized by law; and

J. Grant Plaintiffs such further relief as the Court deems just and proper.

Dated: December 11, 2018

Respectfully submitted,

/s/Catherine M. Wannamaker

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