

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF LOUISIANA**

NATURAL RESOURCES DEFENSE COUNCIL INC.;	*	
CENTER FOR BIOLOGICAL DIVERSITY, INC.;	*	Case No:
GULF RESTORATION NETWORK, INC.; AND	*	
SIERRA CLUB, INC., <i>Plaintiffs</i> ,	*	Judge:
	*	
<i>versus</i>	*	Magistrate:
	*	
KENNETH SALAZAR, SECRETARY OF THE	*	
DEPARTMENT OF THE INTERIOR;	*	
BUREAU OF OCEAN ENERGY	*	
MANAGEMENT, REGULATION, AND	*	
ENFORCEMENT; MICHAEL R. BROMWICH,	*	
DIRECTOR, BUREAU OF OCEAN ENERGY	*	
MANAGEMENT, REGULATION AND	*	
ENFORCEMENT, <i>Defendants</i>	*	
	*	
* * * * *		

**COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF**

**I. INTRODUCTION**

1. This action challenges the United States Bureau of Ocean Energy Management, Regulation, and Enforcement’s (“BOE”)<sup>1</sup> July 1, 2004 decision to issue a Finding of No Significant Impact for geological and geophysical exploration for mineral resources in the Gulf of Mexico Outer Continental Shelf (“OCS”), its conclusion that no Environmental Impact Statement (“EIS”) is required to assess the impact of such exploration activities under the National Environmental Policy Act (“NEPA”), its continued failure to produce an EIS notwithstanding significant new information indicating that a full NEPA review is required, and its decision to allow exploration to go forward without any mitigation before an EIS is complete.

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<sup>1</sup> On June 18, 2010, pursuant to Secretarial Order 3302, Interior Secretary Salazar changed the name of the Minerals Management Service to “Bureau of Ocean Energy Management, Regulation, and Enforcement.” The name “BOE” is used throughout this Complaint to refer inclusively to both the Minerals Management Service and its successor agency.

1           2.     The geophysical activities at issue in this case are powerful seismic surveys routinely  
2 conducted by the oil and gas industry throughout the Gulf of Mexico OCS. These seismic surveys,  
3 which conventionally rely on arrays of airguns towed behind ships, use some of the loudest  
4 underwater sounds generated by humans in order to explore for subsurface oil and gas reserves.  
5 Day and night, for days and months at a time, large swaths of the Gulf of Mexico are inundated with  
6 high-intensity sound pulses that are effectively 250 decibels or greater at their source, billions of  
7 times more intense than the noise thresholds known to compromise foraging and other vital  
8 behavior in endangered species of whales. This sound can travel vast distances underwater, and  
9 according to a substantial scientific record, its impacts can be felt across a diverse range of marine  
10 species, from the largest whales, to dolphins and other marine mammals, to numerous species of  
11 fish, and to invertebrates such as squid.

12           3.     The ocean is an acoustic environment, and marine mammals, such as whales and  
13 dolphins, and many species of fish have adapted to rely primarily on sound for their foraging,  
14 breeding, avoiding predators, navigating, and communicating—in short, for virtually every vital life  
15 function. They are therefore particularly harmed by intense underwater noise. According to the  
16 United States Marine Mammal Commission and other scientific experts, impacts from intense man-  
17 made noise range from disruptions in biologically critical behaviors such as feeding, breeding,  
18 communicating, and nursing, to permanent or temporary hearing loss, and, in some circumstances,  
19 injury and death.

20           4.     The impacts of airgun surveys are felt on an extraordinarily wide geographic scale.  
21 Although airguns are vertically oriented within the water column, their energy travels so far  
22 horizontally as to make them one of the leading contributors to low-frequency background noise  
23 thousands of miles from any given survey. For example, a single seismic array has been shown to  
24 cause endangered baleen whales to cease vocalizing (a behavior essential to their breeding and  
25 foraging) over many tens of thousands of square nautical miles; and to dramatically depress catch  
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1 rates of commercial fish over thousands of square kilometers. Because a seismic airgun array is  
2 capable of flooding substantial portions of the Gulf of Mexico with intense levels of sound, the  
3 dozens of surveys that BOE authorizes each year will repeatedly impact the same endangered and  
4 protected populations. Repeated insult from airgun surveys, over months and seasons, come on top  
5 of already high levels of background noise from industrial traffic and other activities in the Gulf,  
6 which BOE has not analyzed.

7         5. The same wildlife populations contending with the long-term consequences of the  
8 Gulf spill will also have to contend with the industry's seismic surveys. For example, the Gulf's  
9 small population of sperm whales, which has already suffered a substantial loss of its nursing habitat  
10 in the Mississippi Canyon and is likely to consume oil-contaminated prey over the long term, must  
11 persist amid regular booming from the industry surveys, which appear to impair their ability to feed.  
12 Similarly, the Gulf's Bryde's whales, which as filter-feeders are particularly vulnerable to oil  
13 ingestion, are also particularly vulnerable to the wide-scale disruptions in foraging, breeding, and  
14 communication that airgun surveys are demonstrated to cause baleen whales.

15         6. Despite the large numbers and many species of marine mammals affected by seismic  
16 exploration surveys in the Gulf of Mexico, BOE violated the NEPA, 40 U.S.C. §§ 4321-4370, by  
17 approving a Programmatic Environmental Assessment ("PEA") that fails adequately to describe the  
18 substantial and wide-ranging impacts of seismic surveys, both individually and cumulatively, on the  
19 marine environment; to consider and analyze all reasonable alternatives; and to identify and  
20 implement all feasible mitigation measures. BOE likewise violated NEPA by issuing a Finding of  
21 No Significant Impact ("FONSI") for geological and geophysical activities in the Gulf of Mexico  
22 OCS based on this PEA and by concluding that no EIS is required for these activities.

23         7. These decisions were manifestly wrong at the time they were made—as underscored  
24 by the decision of the National Marine Fisheries Service ("NMFS"), four months after the FONSI  
25 was signed, to prepare its own EIS on the impacts of Gulf seismic surveys on marine mammals. 69

1 Fed Reg. 67535 (Nov. 18, 2004). But subsequent scientific information on the direct impacts of  
2 airguns on sperm whales, baleen whales, and other species, on the cumulative effects of seismic  
3 surveys and other low-frequency noise sources on endangered whales, and on the efficiency and  
4 availability of mitigation measures—in addition to the disastrous oil spill that is threatening the same  
5 Gulf populations—has only compounded the error.

6 8. In the Atlantic planning region, BOE either prepares project-specific environmental  
7 assessments or bars certain types of seismic surveys altogether while the programmatic EIS it has  
8 committed to issue is in preparation; in the Arctic region, BOE prepares project-specific  
9 environmental assessments pending development of a full EIS. Yet in the Gulf, where most  
10 offshore seismic exploration activities take place, BOE continues to approve survey activities  
11 without additional environmental review. Absent the rigorous analysis of impacts and reasonable  
12 mitigation that the EIS process is intended to compel, the surveys that BOE continues to approve  
13 will unnecessarily compromise the same marine species that are already in desperate need of  
14 recovery from the Deepwater Horizon spill.

15 9. In its conduct and authorization of geophysical and geological activities in the Gulf of  
16 Mexico OCS, including especially seismic surveys, BOE has committed these and other specific  
17 violations of the NEPA and the Administrative Procedure Act (“APA”), as set forth more fully  
18 herein.

19 10. To remedy the violations of law described in this Complaint, Plaintiffs Natural  
20 Resources Defense Council (“NRDC”), the Center for Biological Diversity (“CBD”), The Gulf  
21 Restoration Network, and Sierra Club (collectively, “Plaintiffs”) seek (1) a declaration that BOE,  
22 and each of its named subdivisions and officials, are violating federal law in the respects set forth  
23 herein; (2) an order vacating, setting aside, and rescinding BOE’s July 1, 2004 Finding of No  
24 Significant Impact; and (3) an order requiring Defendants to comply with NEPA and the APA in  
25 connection with any future actions regarding geological and geophysical activity in the Gulf.

1 **II. JURISDICTION AND VENUE**

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

6 12. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b) and (e) as this civil  
7 action is brought against agencies of the United States and officers and employees of the United  
8 States acting in their official capacities and under the color of legal authority, at least one Plaintiff  
9 resides in the Eastern District of Louisiana, and a substantial part of the events or omissions giving  
10 rise to the claims at issue in this case occurred within this District. No real property is involved in  
11 this action. In addition, some of the seismic exploration activity at issue in this Complaint takes  
12 place in waters off southeast Louisiana.

13 13. An actual and substantial controversy presently exists between Plaintiffs and  
14 Defendants. Plaintiffs assert that Defendants are violating federal law.

15 14. Plaintiffs have no plain, speedy, or adequate remedy in the ordinary course of law.  
16 Unless this Court grants the relief requested, Defendants' actions will result in irreparable harm to  
17 the environment, to Plaintiffs and their members, and to the public in the manner described herein, in  
18 violation of federal law and contrary to the public interest. No monetary damages or other legal  
19 remedy could adequately compensate Plaintiffs, their members, or the public for this harm.

20 15. Plaintiffs and their members are persons adversely affected or aggrieved by federal  
21 agency action and are entitled to judicial review of such action within the meaning of section 702 of  
22 the Administrative Procedure Act. 5 U.S.C. § 702. As more fully alleged below, Plaintiffs' and  
23 their members' interests are directly and significantly harmed by Defendants' illegal actions.

24 **III. PARTIES**

25 16. Plaintiff NRDC (Natural Resources Defense Council) is a not-for-profit membership  
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1 corporation formed in 1970 and organized under the laws of the State of New York. It has offices in  
2 New York, N.Y., Washington, D.C., San Francisco and Santa Monica, Calif., Chicago, Ill., and  
3 Beijing, China. NRDC has more than 445,000 members throughout the United States, including  
4 more than 1,900 individual members in the State of Louisiana. NRDC is dedicated to the  
5 preservation, protection, and defense of the environment, its wildlife, and natural resources, and  
6 actively pursues effective enforcement of environmental laws and regulations on behalf of its  
7 members.

8 17. Plaintiff CENTER FOR BIOLOGICAL DIVERSITY (“the Center”) is a nonprofit  
9 corporation that works through science, law, and policy to secure a future for all species, great or  
10 small, hovering on the brink of extinction. The Center is dedicated to the preservation, protection,  
11 and restoration of biodiversity and ecosystems throughout the world, including conservation of the  
12 Gulf of Mexico’s marine species and habitat. The Center has over 40,000 members, staff, and board  
13 members, including over 3,500 members in the Gulf of Mexico region.

14 18. Plaintiff GULF RESTORATION NETWORK (“CBD”) is a network including  
15 commercial and recreational fishermen, environmental and fishing groups, and other citizens’ groups  
16 and individuals committed to restoring the Gulf of Mexico to an ecologically and biologically  
17 sustainable condition. GRN’s members live in the five Gulf states of Texas, Louisiana, Mississippi,  
18 Alabama, and Florida, and nationwide, and include a substantial number of residents who live on the  
19 coastline of Louisiana.

20 19. Plaintiff SIERRA CLUB is a not-for-profit organization dedicated to the protection  
21 and preservation of the environment and our natural resources. Sierra Club is one of the oldest and  
22 largest conservation groups in the country, with over 1.3 million members and supporters nationally  
23 in sixty-four chapters in all of the 50 states, the District of Columbia and Puerto Rico.  
24 Approximately 2,900 members of the Sierra Club are residents of Louisiana. Sierra Club brings this  
25 action for itself and as representative of its members in the State of Louisiana.  
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1           20. Plaintiffs and Plaintiffs' members and constituents regularly use, enjoy, and benefit  
2 from the marine environment of the Gulf of Mexico, including U.S. waters within the Eastern  
3 District of Louisiana and beyond, and the presence of healthy marine life, including marine  
4 mammals, fish, and other species, within that environment for recreational, aesthetic, commercial,  
5 scientific, and environmental purposes, including whale-watching, scientific study, boat touring,  
6 underwater diving, fishing, and photography. The ability of Plaintiffs and Plaintiffs' members to  
7 pursue these interests hinges not only on the well-being of marine animals that live, migrate, feed,  
8 and breed in areas affected by activities, but also on the health of the marine ecosystem on which  
9 these animals depend.

10           21. To protect the interests of Plaintiffs and the public, certain Plaintiffs submitted  
11 extensive comments to Defendants within the periods allowed by law, which comments expressed  
12 numerous, significant concerns about the harmful effects of seismic survey activities in the Gulf of  
13 Mexico. Because BOE has not substantially modified its practices in order to protect the interests  
14 of Plaintiffs or the public, and because BOE did not prepare an EIS for these activities as required  
15 by law, the interests of Plaintiffs' members and the public have been, are being, and will be  
16 adversely affected by Defendants' violations of federal law, as described herein.

17           22. Due to BOE's failure to comply with NEPA, Plaintiffs' members and staff have also  
18 suffered procedural and informational harms connected to their substantive conservation,  
19 recreational, scientific, and aesthetic interests. Plaintiffs' members and staff rely on BOE to comply  
20 with the requirements of NEPA and to properly implement the statutes so as to protect marine  
21 mammals and other species from the adverse impacts of acoustic exploration activities. The  
22 Plaintiffs' members and staff also rely on BOE to comply with NEPA requirements that allow for  
23 and require public participation in agency decision making under these statutes. Without the  
24 mandated communication with the public, Plaintiffs and other members of the public are denied  
25 essential information regarding the management of marine resources and denied the opportunity to  
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1 provide the agency with relevant information concerning the affected environment, reasonable  
2 alternatives, and mitigation suggestions. These informational and procedural harms can only be  
3 remedied if BOE is forced to comply with the requirements of NEPA. Plaintiffs have no adequate  
4 remedy at law.

5 23. Defendant Kenneth Salazar is Secretary of the Interior of the United States and is the  
6 official ultimately responsible for all BOE activities. Secretary Salazar is sued in his official  
7 capacity.

8 24. Defendant Bureau of Ocean Energy Management, Regulation, and Enforcement is an  
9 agency of the United States and is a subdivision of the U.S. Department of the Interior. BOE is  
10 responsible for managing oil, gas, and mineral natural resources on the OCS. Minerals Management  
11 Service is the agency that issued the Environmental Assessment and FONSI and authorized the  
12 seismic survey activities that are challenged here, and, pursuant to Secretarial Order 3302 (June 18,  
13 2010), BOE is the successor to that agency. As a federal agency, BOE is responsible for ensuring  
14 compliance with NEPA.

15 25. Defendant Michael R. Bromwich is the Director of BOE and is the official ultimately  
16 responsible for all BOE activities. Director Bromwich is sued in his official capacity.

#### 17 **IV. STATUTORY AND REGULATORY FRAMEWORK**

##### 18 **The National Environmental Policy Act**

19 26. NEPA is this country's "basic national charter for protection of the environment." 40  
20 C.F.R. § 1500.1. NEPA requires all agencies of the federal government to prepare a "detailed  
21 statement" regarding all "major federal actions significantly affecting the quality of the human  
22 environment." 42 U.S.C. § 4332(C). This statement, known as an Environmental Impact Statement  
23 ("EIS"), must describe (1) the "environmental impact of the proposed action," (2) any "adverse  
24 environmental effects which cannot be avoided should the proposal be implemented," (3) alternatives  
25 to the proposed action, (4) "the relationship between local short-term uses of man's environment and



1 the maintenance and enhancement of long-term productivity,” and (5) any “irreversible or  
2 irretrievable commitment of resources which would be involved in the proposed action should it be  
3 implemented.” 42 U.S.C. § 4332.

4 27. The Council on Environmental Quality (“CEQ”)—an agency within the Executive  
5 Office of the President—has promulgated regulations implementing NEPA which are “binding on all  
6 federal agencies.” 40 C.F.R. § 1500.3. These regulations require that, unless an activity is  
7 “categorically excluded” from NEPA compliance, an agency must either prepare an EIS, or, at the  
8 very least, an Environmental Assessment (“EA”) that is used to determine whether an EIS is  
9 necessary. Id. § 1501.4.

10 28. Among the factors an agency must consider to determine whether a project may have  
11 “significant” impacts, and therefore whether an EIS is required, are the “context” and “intensity” of  
12 the action. 40 C.F.R. § 1508.27. Regarding context, the CEQ regulations provide that, for a “site-  
13 specific action,” an agency must determine whether the “effects on the locale” are significant. Id.  
14 § 1508.27(a).

15 29. As for intensity, the regulations provide that, among other relevant factors, the  
16 severity of the impact must be judged based on whether “the proposed action affects public health  
17 and safety”; “[t]he degree to which the effects on the quality of the human environment are likely to  
18 be highly controversial”; “the degree to which the possible effects on the human environment are  
19 highly uncertain or involve unique or unknown risks”; “[t]he degree to which the action may  
20 adversely affect an endangered species”; “[w]hether the action threatens a violation of Federal [law]  
21 imposed for the protection of the environment”; “unique characteristics of the geographic area such as  
22 proximity to ecologically critical areas”; and “the degree to which the action is related to other actions  
23 with . . . cumulatively significant impacts.” Id. § 1508.27(b). With regard to the last factor, such  
24 cumulative impacts include “the incremental impact of the action when added to other past, present  
25 and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal)

1 undertakes such other actions.” Id. § 1508.7.

2 30. Irrespective of whether an EIS is required, where an agency prepares an EA the  
3 regulations require that the EA discuss both the need for the proposed action and alternatives to it,  
4 address the environmental impacts of both the proposal and the alternatives, and “provide sufficient  
5 evidence and analysis for determining whether to prepare” an EIS. Id. § 1508.9.

6 31. If, after preparing an EA, the agency concludes that an EIS is not necessary, it must  
7 issue a Finding of No Significant Impact (“FONSI”) that adequately explains why the project will  
8 “not have a significant effect on the human environment” and an EIS will not be prepared. 40 C.F.R.  
9 § 1508.13.

10 32. Even after a NEPA process is completed, where an agency learns of “significant new  
11 circumstances” or new “information relevant to environmental concerns and bearing on the proposed  
12 action or its impacts,” the agency must undertake further review under NEPA. Id. § 1502.9(c); 10  
13 C.F.R. § 1021.314.

14 **The Regulatory Role of MMS in Permitting Seismic Surveys**

15 33. BOE, through delegation by the Secretary of the Interior, is the federal agency  
16 responsible for authorizing all geological and geophysical (“G&G”) exploration of the OCS. 30  
17 C.F.R. § 251.4

18 34. Pursuant to regulations issued by BOE, entities wishing to conduct geophysical  
19 exploration activities in the Gulf of Mexico OCS (on areas that have not yet been leased) must  
20 submit a permit application with the name of the applicant; the type, location, purpose, and dates of  
21 the proposed activity; and environmental and other information. 30 C.F.R. § 251.5. BOE processes  
22 the permit application and determines whether to issue the permit. BOE has the authority to impose  
23 environmental and other restrictions on the permitted activities.

24 35. The term “geophysical exploration” means “exploration that utilizes geophysical  
25 techniques (e.g., gravity, magnetic, or seismic) to produce data and information on oil, gas, and  
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1 sulphur resources in support of possible exploration and development activities.” 30 C.F.R. § 251.1.  
2 The term encompasses the seismic survey activities covered by the challenged EA.

3 36. One purpose of this permitting requirement for geophysical exploration is “[t]o ensure  
4 that [operators] carry out G&G activities in a safe and environmentally sound manner so as to  
5 prevent harm or damage to, or waste of, any natural resources . . . , any life (including fish and other  
6 aquatic life), . . . or the marine, coastal, or human environment.” 30 C.F.R. § 251.2(b).

## 7 **V. FACTS GIVING RISE TO PLAINTIFFS’ CLAIMS**

### 8 **A. Natural Resources of the Gulf of Mexico**

9 37. The Gulf of Mexico is an extraordinary aesthetic, economic, and environmental  
10 resource to the state of Louisiana, the other States along the Gulf coast, and the nation. It supports  
11 a diversity of marine life and represents some of the most productive tropical and temperate  
12 ecosystems in the United States. The Gulf of Mexico is home to thousands of marine species,  
13 ranging from simple invertebrates such as gastropods and sponges to complex and highly evolved  
14 fish and marine mammals. It is estimated that the Gulf contains thousands of species of  
15 invertebrates, at least 600 species of fish, and 29 species of cetaceans. In addition, five of the  
16 world’s seven species of sea turtles as well as tens of thousands of shore and coastal birds reside in  
17 or migrate to the Gulf of Mexico. Over 300 species of coral, combined with other hard-bottom  
18 communities, wetlands, seagrass beds, mangroves, and soft bottom communities, provide the  
19 necessary habitat to support this rich assemblage of marine life. These diverse and highly complex  
20 habitats provide food, shelter, and spawning grounds for all of these species at different points  
21 during their life history.

22 38. Many of the aquatic animals living in the Gulf are endangered or threatened. Of the  
23 seven baleen whale species known to occur in the Gulf of Mexico, five are listed as endangered (the  
24 blue whale, finback whale, sei whale, humpback whale and Northern right whale). Other endangered  
25 marine mammals present in the Gulf are the sperm whale and the West Indian manatee. All five sea  
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1 turtles are endangered or threatened, including Kemp's Ridley turtles (the most endangered sea  
2 turtles in the world), leatherback sea turtles, hawksbill sea turtles, green sea turtles, and loggerhead  
3 sea turtles. Of the fish stocks, both the Gulf sturgeon and the smalltooth sawfish have been listed as  
4 endangered or threatened, and eleven additional fish species are candidates for listing. In all, a  
5 myriad of federally designated endangered or threatened species inhabit the Gulf of Mexico.

6 39. There are also an abundance of overfished species in the Gulf, including red grouper,  
7 nassau grouper, red snapper, red drum, great amberjack and the vermillion grouper. Furthermore,  
8 three out of the four tuna species in the Gulf are overfished, including the bigeye tuna, albacore and  
9 bluefin tuna. The giant squid, a prey species of the sperm whale, also inhabits the Gulf.

10 40. Other species of marine mammals that occur in the Gulf of Mexico include dwarf and  
11 pygmy sperm whales, Brydes whales, several species of beaked whales, more than 30 Northern Gulf  
12 of Mexico stocks of bottlenose dolphins, Atlantic and pantropical spotted dolphins, striped dolphins,  
13 spinner dolphins, Clymene dolphins, Fraser's dolphins, killer whales, pygmy killer whales, Risso's  
14 dolphins, melon-headed whales, and short-finned pilot whales.

15 41. The Gulf of Mexico provides important habitat to many of these species. Sperm  
16 whales are residents of the Gulf with core habitat in areas with abundant oil and gas activities. The  
17 only spawning ground for western Atlantic bluefin tuna is in the Gulf. The Flower Garden banks and  
18 many other marine protected areas provide important habitat and unique ecological settings for a  
19 variety of fish and wildlife. Additionally, there is critical habitat for threatened and endangered  
20 species identified in the Gulf.

21 42. The Gulf of Mexico's marine life is a tremendous economic resource. The Gulf  
22 tourism industry encompasses tens of thousands of jobs worth over \$20 billion annually. According  
23 to the National Marine Fisheries Service, the Gulf's commercial fishery produced an estimated 1.3  
24 billion pounds of fish and shellfish in 2008 with dockside value over \$600 million. The Gulf is also  
25 home to four of the top seven fishing ports by weight in the United States. Gulf recreational fishing  
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1 contributed well more than \$5 billion in total sales to the regional economy and generated more than  
2 50,000 jobs.

3 43. Because the Gulf is the major drainage basin for the contiguous states east of the  
4 Rockies, it is stressed by pollution, nutrient loading, and other problems unique to its ecosystem.  
5 Harmful algal blooms, habitat loss, invasive species, and hypoxic (low oxygen) conditions are among  
6 the major ecosystem threats; and the blowout of the Deepwater Horizon on April 20, 2010, has  
7 resulted in the spilling of tens of millions of gallons of oil into the Gulf, according to the latest  
8 government estimates. The introduction of man-made noise into the marine environment is also an  
9 increasing and important threat, one that acts both alone and in concert with other environmental  
10 stressors to degrade marine habitat.

11 **B. Overview of Seismic Exploration Activities**

12 44. Oil and gas exploration and production in the Gulf of Mexico OCS is extensive and  
13 expanding. There are approximately 3,600 producing platforms and well over 100 companies active  
14 in the Gulf. The trend in this activity has been from shallower into deeper waters. According to a  
15 report issued by BOE in May 2004, shortly before the EA was issued, “[t]he Gulf of Mexico is now  
16 in its ninth year of sustained expansion of the deepwater frontier,” an expansion of oil and gas  
17 exploration and development that, indeed, has “shown no sign of diminishment” in the years since.  
18 Deepwater Gulf of Mexico 2004: America’s Expanding Frontier at xi (MMS, May 2004). Along  
19 with this expansion has come “a dramatic increase in the acquisition of 3D seismic data,” which has  
20 continued through the decade. Id. at 6; Deepwater Gulf of Mexico 2008: America’s Offshore  
21 Energy Future at xiii, 22 (MMS, 2008).

22 45. To map the ocean floor, the oil and gas industry typically relies on arrays of airguns,  
23 which are towed behind ships in complex arrays and release intense impulses of compressed air into  
24 the water about every 10-12 seconds. The intense pulses that they produce travel down through the  
25 water column, penetrate deep into the seafloor, and rebound to the surface where they can be  
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1 recorded and analyzed. A typical seismic survey “takes place day and night and may continue for  
2 days, weeks, or months depending on the size of the survey.” PEA at II-11.

3 46. The noise produced by seismic survey airguns is tremendously loud and has far-  
4 ranging impacts. A large seismic array can produce effective peak pressure levels higher than that of  
5 virtually any other man-made source, save explosives—more than 250 decibels. Although airguns  
6 are vertically oriented within the water column, horizontal propagation is so significant as to make  
7 them, even under present use, one of the leading contributors to low-frequency noise literally  
8 thousands of miles from any given survey, masking the calls of baleen whales and other animals that  
9 rely on the acoustic environment for breeding and survival.

10 47. There are several types of seismic surveys: 2D surveys, in which ships cover long track  
11 lines with single arrays; 3D surveys, in which ships cover a grid pattern using two arrays that fire in  
12 rapid succession; and so-called 4D, or time-lapse, surveys, in which surveys are repeated every  
13 several months to note changes in subsurface features over time. In addition, some operators have  
14 begun to conduct “wide azimuth” surveys, in which multiple ships towing seismic arrays run side-by-  
15 side and fire in tandem. Most 2D and 3D seismic exploration surveys in the Gulf of Mexico are  
16 conducted by geophysical contractors who acquire data on unleased lands and then license the data  
17 to multiple clients on a speculative basis. These so-called “spec” surveys are typically conducted  
18 over large, multi-block areas. (In the Gulf of Mexico, blocks are typically areas of about three miles  
19 on a side, encompassing about 8 square miles in total.)

20 48. According to the PEA, as many as five regional seismic surveys may be conducted at  
21 any one time in the Gulf, with more than 30 surveys conducted annually. PEA at III-23. In 2004,  
22 when it released its EA, MMS anticipated continued high levels of seismic surveying through the  
23 year 2014, with a peak in 2011 of more than six times the number of lease blocks surveyed as in  
24 2003. See PEA at Table II-4.

25 49. Over time, seismic surveys have blanketed and will continue to blanket the Gulf of  
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1 Mexico OCS. Attached as Exhibit A and incorporated herein is a figure from Sperm whale seismic  
2 study in the Gulf of Mexico: Synthesis report at 267 (Minerals Management Service, 2008), showing  
3 seismic coverage across the Gulf of Mexico OCS from January 2002 through October 2006 in  
4 relation to sperm whale sightings.

### 5 **C. Environmental Impact of Seismic Surveys**

6 50. The ocean is an acoustic world. Unlike light, sound travels extremely efficiently in  
7 seawater; and marine mammals and many fish depend on sound for finding mates, foraging, avoiding  
8 predators, navigating, and communicating – in short, for virtually every vital life function. When  
9 loud sounds are introduced into the ocean, it degrades this essential part of the environment. Some  
10 biologists have analogized the increasing levels of noise from human activities as a rising tide of  
11 “smog” that has industrialized major portions of the marine environment off our coasts. This  
12 acoustic smog is already shrinking the sensory range of marine animals by orders of magnitude from  
13 pre-industrial levels.<sup>2</sup>

14 51. A substantial body of evidence shows that the high-intensity pulses produced by  
15 airguns can produce a range of impacts on marine mammals, fish, and other marine life, including  
16 broad habitat displacement, disruption of vital behaviors essential to foraging and breeding, loss of  
17 biological diversity, and, in some circumstances, injuries and mortalities. High-intensity sounds are  
18 known to pose a unique danger to marine mammals and other aquatic species, in part because of the  
19 important role that acoustics play in marine ecology and in part because of the great distances and  
20 diverse range of habitat over which intense sound can propagate underwater.

21 52. The impacts of airgun surveys are felt on an extraordinarily wide geographic scale.  
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23 <sup>2</sup> M. Bode, C.W. Clark, J. Cooke, L.B. Crowder, T. Deak, J.E. Green, L. Greig, J.  
24 Hildebrand, C. Kappel, K.J. Kroeker, L.L. Loseto, M. Mangel, J.J. Ramasco, R.R. Reeves, R.  
25 Suydam, and L. Weilgart, Statement to President Barack Obama of Participants of the Workshop  
26 on Assessing the Cumulative Impacts of Underwater Noise with Other Anthropogenic Stressors on  
Marine Mammals (2009).

For example, a single seismic survey has been shown to cause endangered fin and humpback whales to stop vocalizing—a behavior essential to breeding and foraging—over an area many tens of thousands of square nautical miles in size, and can cause baleen whales to abandon habitat over the same scale. Similarly, airgun noise can also mask the calls of vocalizing baleen whales over vast distances, substantially compromising their ability to communicate, feed, find mates, and engage in other vital behavior.<sup>3</sup> The intermittency of airgun pulses hardly mitigates this effect since their acoustic energy spreads over time and can sound virtually continuous at distances from the array.<sup>4</sup>

53. Airguns are also known to affect a broad range of other marine mammal species beyond the endangered great whales. For example, sperm whale foraging appears to decline significantly on exposure to even moderate levels of airgun noise, with potentially serious long-term consequences; and harbor porpoises have been seen to engage in strong avoidance responses fifty miles from an array.<sup>5</sup> Seismic surveys have been implicated in the long-term loss of marine mammal biodiversity off the coast of Brazil.<sup>6</sup>

54. MMS acknowledged in its 2004 PEA that take could rise above 200 marine mammals

<sup>3</sup> E.g., C.W. Clark and G.C. Gagnon, Considering the temporal and spatial scales of noise exposures from seismic surveys on baleen whales (2006) (IWC Sci. Comm. Doc. IWC/SC/58/E9); see also K. MacLeod, M.P. Simmonds, and E. Murray, Abundance of fin (*Balaenoptera physalus*) and sei whales (*B. borealis*) amid oil exploration and development off northwest Scotland, 8 Journal of Cetacean Research and Management 247-254 (2006); C.W. Clark, W.T. Ellison, B.L. Southall, L. Hatch, S. van Parijs, A. Frankel, and D. Ponirakis, Acoustic masking in marine ecosystems as a function of anthropogenic sound sources (2009) (IWC Sci. Comm. Doc. SC/61/E10).

<sup>4</sup> Clark et al., Acoustic masking in marine ecosystems; L. Weilgart, Report of the workshop on alternative technologies to seismic airgun surveys for oil and gas exploration and their potential for reducing impacts on marine mammals, 31 Aug. – 1 Sept., 2009, Monterey, Calif. (2010).

<sup>5</sup> E.g., P.J.O. Miller, M.P. Johnson, P.T. Madsen, N. Biassoni, M. Quero, and P.L. Tyack, Using at-sea experiments to study the effects of airguns on the foraging behavior of sperm whales in the Gulf of Mexico, 56 Deep-Sea Research I 1168, 1168-1181 (2009); D.E. Bain and R. Williams, Long-range effects of airgun noise on marine mammals: responses as a function of received sound level and distance (2006) (IWC Sci. Comm. Doc. IWC/SC/58/E35).

<sup>6</sup> C.L. Parente, J. Pauline de Araújo, and M. Elisabeth de Araújo, Diversity of cetaceans as tool in monitoring environmental impacts of seismic surveys, 7 Biota Neotropica 1, 1-7 (2007).



per year, including endangered sperm whales, from seismic activities even with mitigation measures. PEA at L-27-31. This is likely a vast underestimate considering that for a single research vessel doing seismic surveys in the Gulf in 2007—using some of the more current methodologies that led it to conclude that an EIS is required for industrial seismic exploration in the Gulf (69 Fed. Reg. 67535, 67536 (Nov. 18, 2004))—NMFS estimated a total of 3,770 marine mammal takes, including 22 sperm whales, when authorizing incidental take under the Marine Mammal Protection Act. 72 Fed. Reg. 45744 (Aug. 15, 2007).

55. Seismic surveys can also seriously injure marine mammals. In 2002, in the Gulf of California, Mexico, two beaked whales (*Ziphius cavirostris*) were found to have stranded coincident with geophysical surveys that were being conducted in the area. That same year, endangered adult humpback whales were reported to have stranded in unusually high numbers along Brazil's Abrolhos Banks, where oil-and-gas surveys were being conducted.<sup>7</sup> In 2008, a pod of several hundred melonheaded whales stranded along the coast of Madagascar, coincident in space and time with an Exxon seismic survey.

56. Based on this and other evidence, the Scientific Committee of the International Whaling Commission, one of the world's leading bodies of marine biologists, concluded in its 2004 report that the increase in noise from geophysical exploration and other activities was "cause for serious concern," and the IWC has since held special symposia related to the impacts of seismic surveys of whales.<sup>8</sup>

57. Airgun surveys also have important consequences for the health of fish and fisheries.

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<sup>7</sup> E.g., J. Hildebrand, Impacts of anthropogenic sound, in Pages 101-123 in T.J. Ragen, J.E. Reynolds III, W.F. Perrin, R.R. Reeves, and S. Montgomery, Marine Mammal Research: Conservation beyond Crisis 101, 101-123 (2006); M.H. Engel, M.C.C. Marcondes, C.C.A. Martins, F. O Luna, R.P. Lima, and A. Campos, Are seismic surveys responsible for cetacean strandings? An unusual mortality of adult humpback whales in Abrolhos Bank, Northeastern coast of Brazil (2004) (IWC Sci. Comm. Doc. IWC/SC/56/E28).

<sup>8</sup> International Whaling Commission, 2004 Report of the Scientific Committee: Chairman's Summary at § 12.2.5 (2004).

For example, airguns have been shown to dramatically depress catch rates of various commercial species (by 40-80%) over thousands of square kilometers around a single array,<sup>9</sup> leading fishermen in some parts of the world to seek industry compensation for their losses. Other impacts on commercially harvested fish include habitat abandonment, reduced reproductive performance, decreased survival rate of fish eggs, and hearing loss.<sup>10</sup> For example, snapper exposed to impulsive airgun noise were found to have “sustained extensive damage” to the hair cells located at the sensory epithelia of the inner ear, suggesting “that hair cells had been ‘ripped’ from the epithelia (immediate mechanical damage) or, alternatively, had ‘exploded’ after exposure (physiological damage).” *Id.* at 640. The study points out that “[f]ishes with impaired hearing would have reduced fitness, potentially leaving them vulnerable to predators, possibly unable to locate prey, sense their acoustic environment, or, in the case of vocal fishes, unable to communicate acoustically.”<sup>11</sup>

58. Seismic surveys are also known to affect sea turtles. Loggerhead turtles, a threatened species, have been shown to alter their swimming in response to airgun noise, and there is concern that intense noise may drive them and other species to the surface, where they are more vulnerable to

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<sup>9</sup> A. Engås, S. Løkkeborg, E. Ona, and A.V. Soldal, Effects of seismic shooting on local abundance and catch rates of cod (*Gadus morhua*) and haddock (*Melanogrammus aeglefinus*), 53 Canadian Journal of Fisheries and Aquatic Sciences 2238, 2238-2249 (1996); see also J.R. Skalski, W.H. Pearson, and C.I. Malme, Effects of sounds from a geophysical survey device on catch-per-unit-effort in a hook-and-line fishery for rockfish (*Sebastes* spp.), 49 Canadian Journal of Fisheries and Aquatic Sciences 1357, 1357-1365 (1992).

<sup>10</sup> E.g., R.D. McCauley, J. Fewtrell, A.J. Duncan, C. Jenner, M.-N. Jenner, J.D. Penrose, R.I.T. Prince, A. Adhitya, J. Murdoch, and K. McCabe, Marine seismic surveys: analysis and propagation of air-gun signals, and effects of air-gun exposure on humpback whales, sea turtles, fishes, and squid (2000) (report by Curtin U. of Technology); R. McCauley, J. Fewtrell, and A.N. Popper, High intensity anthropogenic sound damages fish ears, 113 Journal of the Acoustical Society of America 638, 638-642 (2003); A.R. Scholik, and H.Y. Yan, Effects of boat engine noise on the auditory sensitivity of the fathead minnow, *Pimephales promelas*, 63 Environmental Biology of Fishes 203, 203-209 (2002).

<sup>11</sup> McCauley et al., High intensity anthropogenic sound; see also McCauley et al., Marine seismic surveys.

1 ship strikes and predation.<sup>12</sup> Seismic surveys may also be capable of killing and injuring squid and  
 2 other invertebrates, in addition to displacing them from habitat. According to one study, two mass  
 3 mortalities of multiple giant squid off the coast of Spain were linked spatially and temporally to the  
 4 use of airguns nearby; the squid showed lesions that have never before been seen in the species.<sup>13</sup>

5 59. Many of the species that have been shown to be affected by intense airgun noise reside  
 6 in the Gulf of Mexico and are likely suffering harm from the intense and increasing seismic survey  
 7 activity there. For example, the Gulf's small population of sperm whales resides in the Gulf year-  
 8 round, with particular fidelity to a part of the Mississippi Canyon that is both heavily impacted by the  
 9 Deepwater Horizon oil spill and targeted by seismic surveys. (See, e.g., Exhibit A.) Bryde's whales,  
 10 beaked whales, squid, commercial fish stocks, endangered sea turtles, and many of the other marine  
 11 resources identified above are all likely to be harmed by the intense noise produced, day and night,  
 12 by seismic surveys in the Gulf of Mexico.

#### 13 **D. BOE's Decision Not to Prepare an EIS for Seismic Surveys in the Gulf of Mexico**

14 60. Despite this considerable evidence of harm to marine mammals, fish, and other marine  
 15 species from seismic surveys, in August 2002, BOE released for public review and comment a draft  
 16 Programmatic Environmental Assessment for Geological and Geophysical Exploration for Mineral  
 17 Resources on the Gulf of Mexico OCS ("Draft PEA") and proposed to find that these activities  
 18 would have "no significant impact" on the environment. Plaintiff Gulf Restoration Network  
 19 ("Plaintiff commenter") submitted timely comments on the Draft PEA to BOE, dated September 19,  
 20 2002. Plaintiff commenter argued that the Draft PEA was insufficient, that a Finding of No  
 21

22 <sup>12</sup> M.L. Lenhardt, Seismic and very low frequency sound-induced behaviors in captive  
 23 loggerhead marine turtles (Caretta caretta), in Proceedings, Fourteenth Annual Symposium on Sea  
 24 Turtle Biology and Conservation 238, 238-40 (1994) (NOAA Tech. Memo. NMFS-SEFSC-351); J.  
 O'Hara and J.R. Wilcox, Avoidance responses of loggerhead turtles, *Caretta caretta*, to low-  
frequency sounds, [1990] *Copeia* 564, 564-67 (1990).

25 <sup>13</sup> A. Guerra and A.F. Gonz  les, Severe injuries in the giant squid *Architeuthis dux* stranded  
 26 after seismic explorations, in Impacts of Seismic Survey Activities on Whales and Other Marine  
Biota 32, 32-38 (2006) (German Federal Environment Agency).

1 Significant Impact was inappropriate, and that BOE was required to conduct an EIS for these  
2 activities to satisfy NEPA.

3 61. On July 1, 2004, BOE approved the Programmatic EA and issued the FONSI  
4 challenged in this case, concluding that “the G&G activities evaluated in the EA will not significantly  
5 affect the quality of the human environment” and that “[p]reparation of an environmental impact  
6 statement is not required.” Notice of the availability of this PEA and FONSI were published in the  
7 Federal Register on July 30, 2004.

8 62. Four months later, on November 18, 2004, NMFS noticed its intent, in the Federal  
9 Register, to conduct an EIS to assess the environmental impact of seismic exploration activities in  
10 the Gulf of Mexico. In doing so, NMFS implicitly rejected BOE’s conclusion, challenged here, that  
11 only an EA is required for these activities, as well as BOE’s Finding of No Significant Impact for  
12 such activities. 69 Fed. Reg. 67535, 67536 (Nov. 18, 2004). 40 C.F.R. § 1501.6. Nevertheless,  
13 NMFS has not yet issued even the Draft EIS required by regulation, let alone a Final EIS or Record  
14 of Decision, and seismic exploration activities continue without having been evaluated as required  
15 under NEPA.

16 63. For the Atlantic region, by contrast, BOE noticed an intent to prepare a Programmatic  
17 EIS, to defer all major seismic survey activity until the EIS is completed, and to consider “small-  
18 scale, limited” permit requests only with preparation of an EA. 75 Fed. Reg. 16830, 16832. For the  
19 Arctic region, while it works with NMFS as a cooperating agency on a Programmatic EIS, BOE  
20 routinely requires the preparation of environmental assessments for individual seismic survey  
21 activities.

22 **E. BOE Continues to Permit Seismic Surveys in the Gulf of Mexico without Proper**  
23 **Environmental Review under NEPA**

24 64. Despite its failure to complete an adequate environmental review under NEPA, BOE  
25 continues to approve site-specific, individual applications to conduct seismic surveys of the Gulf of  
26

1 Mexico OCS. Upon information and belief, BOE categorically excludes its permitting of such  
2 surveys from further NEPA review, in reliance on its PEA, and therefore prepares for them neither  
3 an environmental assessment nor an environmental impact statement.

4 65. For example, upon information and belief, BOE recently issued the following permits  
5 for seismic surveys in the Gulf of Mexico OCS, without preparing an environmental assessment or  
6 environmental impact statement under NEPA:

7 Permit Number L10-021, issued by BOE on April 12, 2004, authorizing Tesla Offshore,  
8 LLC, to conduct geophysical exploration for mineral resources as defined in 30 C.F.R. § 251.1 and  
9 specifically to conduct a seismic survey in the Main Pass protraction area, off Louisiana. The permit  
10 allowed seismic exploration activities between April 12, 2010, and June 12, 2010.

11 Permit Number L10-019, issued by BOE on April 13, 2010, authorizing C&C Technologies,  
12 Inc. to conduct geophysical exploration for mineral resources as defined in 30 CFR 251.1, including  
13 a seismic survey in the Mississippi Canyon and Atwater Valley, off Louisiana. The permit allowed  
14 seismic exploration activities between April 13, 2010, and June 13, 2010.

15 Permit Number L10-018, issued by BOE on April 5, 2010, authorizing Tesla Offshore, LLC  
16 to conduct geophysical exploration for mineral resources as defined in 30 CFR 251.1, including a  
17 seismic survey in the Mississippi Canyon, off Louisiana. The permit allowed seismic exploration  
18 activities between April 5, 2010, and June 5, 2010.

19 Permit Number L10-016, issued by BOE on March 26, 2010, authorizing Tesla Offshore,  
20 LLC, to conduct geophysical exploration for mineral resources as defined in 30 CFR 251.1,  
21 including a seismic survey in the Main Pass protraction area, off Louisiana. The permit allowed  
22 seismic exploration activities between March 26, 2010, and May 26, 2010.

23 Permit Number L10-015, issued by BOE on March 26, 2010, authorizing Fugro GeoServices  
24 to conduct geophysical exploration for mineral resources as defined in 30 CFR 251.1, including a  
25 seismic survey in the Mississippi Canyon, off Louisiana. The permit allowed seismic exploration  
26

1 activities between March 26, 2010 and May 26, 2010.

2 66. Since January 1, 2010, BOE has permitted nine seismic surveys in the Mississippi  
3 Canyon area alone, without any further review under NEPA.

4 **F. Mitigation and Monitoring Measures Exist to Minimize Harm**

5 67. The harms outlined throughout this Complaint are preventable and mitigable through  
6 reasonable, common-sense mitigation measures that could be imposed without unduly impacting the  
7 oil and gas industry's ability to explore for energy resources. In fact, enforcing compliance with  
8 NEPA and the APA would help to put such measures into place, because the environmental review  
9 process required by law are designed precisely to ensure that BOE has the information it needs to  
10 make effective mitigation decisions, and to ensure that BOE works with its sister federal agencies  
11 with expertise in designing minimum mitigation measures to prevent needless harm to animals.

12 68. BOE's mitigation for seismic surveys in the Gulf, which entail maintaining a small  
13 exclusion zone around the array, is both poorly implemented and inadequate to address to the large-  
14 scale impacts on marine wildlife identified in the scientific literature. To mitigate impacts, several  
15 scientific papers and expert reports have recommended, in particular, limiting seismic surveys or  
16 otherwise managing their use to reduce effects in important wildlife habitat; developing and  
17 requiring certain control technologies; and improving monitoring for protected species around the  
18 array, such as by requiring use of independent, third-party observers. Mitigation measures for  
19 seismic surveys in the Gulf are inadequate to eliminate significant environmental impacts.

20  
21 **FIRST CLAIM FOR RELIEF (NEPA AND APA)**  
22 **(Failure to Prepare an Environmental Impact Statement**  
23 **As Required By the National Environmental Policy Act)**

24 69. Plaintiffs reallege and incorporate herein by reference the allegations contained in  
25 Paragraphs 1 through 68 of this Complaint.

26 70. Defendants are "agencies of the Federal Government" within the meaning of NEPA,

1 and are bound by regulations adopted by the Council on Environmental Quality. 40 C.F.R.  
2 § 1500.3.

3 71. The actions of Defendants set forth above in conducting and authorizing geological  
4 and geophysical exploration for mineral resources on the Gulf of Mexico OCS, and each individual  
5 seismic survey identified above, are “major federal actions significantly affecting the quality of the  
6 human environment” within the meaning of NEPA. Grounds for a finding of “significance” include,  
7 but are not limited to: the intensity of the action; the ecological importance of the marine  
8 environment; the controversial nature of the seismic exploration at issue; the uncertainty of a  
9 seismic survey’s effects on the food web and other aspects of the marine ecosystem; the cumulative  
10 impacts of seismic surveys considered together with other human activities generating noise in the  
11 marine environment; its adverse effects on endangered and threatened species or their critical  
12 habitat; and Defendants’ violation of the Marine Mammal Protection Act and other Federal, State,  
13 and local environmental laws in its conduct of geophysical exploration of the Gulf of Mexico OCS.  
14 40 C.F.R. § 1508.27.

15 72. Because Defendants’ actions identified above are a major federal action that may have  
16 significant, unknown, and highly controversial impacts on the environment, Defendants are violating  
17 NEPA, and its implementing regulations, and are acting in a manner that is arbitrary and capricious  
18 and contrary to the law in violation of the APA, by failing to prepare an Environmental Impact  
19 Statement prior to conducting and authorizing such exploration. 42 U.S.C. § 4332; 5 U.S.C. § 706.

20 73. Defendants have violated NEPA by preparing an Environmental Assessment for  
21 geological and geophysical exploration for mineral resources on the Gulf of Mexico OCS that fails  
22 to consider adequately the impacts of such exploration on the environment, or reasonable  
23 alternatives, and by issuing a Finding of No Significant Impact based on that EA.

24 74. Defendants have failed to consider adequately the cumulative effects of geological  
25 and geophysical exploration for mineral resources on the Gulf of Mexico OCS, including the  
26

1 addition of seismic survey noise to a marine environment increasingly polluted by toxins, by  
2 anthropogenic noise, and by other environmental stressors. By failing to consider the synergistic  
3 and cumulative effects of such seismic surveys taken together with other sources of underwater  
4 man-made noise and other environmental stressors, Defendants are unlawfully limiting their  
5 consideration of environmental impacts in violation of NEPA and its implementing regulations.

6 75. Defendants have failed to consider a range of direct behavioral effects that may occur  
7 when marine mammals are subjected to sound levels that disturb communication, social  
8 organization, foraging, migration or other activities affecting reproduction and survival. Defendants  
9 have also failed to consider indirect environmental impacts of the proposed action, such as those the  
10 proposed action may have on fish and fisheries and other species of marine mammals.

11 76. Defendants have failed to identify relevant gaps in the data they used to support their  
12 conclusions regarding reasonably foreseeable environmental impacts, and failed to deal properly  
13 with the data gaps that they do identify.

14 77. Contrary to the fundamental purpose of NEPA, Defendants have approved  
15 geophysical exploration of the Gulf of Mexico OCS in the absence of basic information essential to  
16 a meaningful understanding of the potential consequences of their actions – for example,  
17 information regarding a scientifically-based risk assessment for marine mammals, determining  
18 impacts for a geographic area where multiple seismic sources are operating simultaneously, and  
19 long-term impacts on individuals and populations – thereby failing to insure the professional  
20 integrity, including scientific integrity, of their analysis.

21 78. Defendants have failed to consider and analyze all reasonable alternatives and to  
22 study, develop, and describe appropriate alternatives to recommended courses of action for a  
23 proposal that involves unresolved conflicts concerning alternative uses of available resources.

24 79. Defendants have failed to consider or require all feasible mitigation, including, but  
25 not limited to, the use of various spatial-temporal management measures to reduce effects on  
26



1 vulnerable species and high-value habitat, such as by restricting simultaneous surveys in sperm  
2 whale habitat; the development and use of control technologies; and the use of more reliable means  
3 to detect the presence of marine mammals and sea turtles within areas of activity, such as by  
4 requiring use of independent, third-party observers.

5 80. Defendants' violation of NEPA and the regulations promulgated thereunder in failing  
6 to prepare an adequate EA and in failing to prepare an EIS for geological and geophysical  
7 exploration of the Gulf of Mexico OCS is arbitrary and capricious, an abuse of discretion, not in  
8 accordance with the law, and without observance of procedure required by law, and therefore in  
9 violation of the Administrative Procedure Act.

10 81. Defendants' failure to comply with NEPA is arbitrary, capricious, and not in  
11 accordance with law as required by Section 706(2) of the APA, and is subject to judicial review  
12 thereunder. 5 U.S.C. §§ 701 through 706. Defendants' failure to comply with NEPA also  
13 constitutes agency action that is unreasonably delayed and/or unlawfully withheld as provided by §  
14 706(1) of the APA, and is subject to judicial review thereunder. 5 U.S.C. §§ 701 through 706.

15 82. These violations are injuring plaintiffs in the manner described in Paragraphs 1  
16 through 67 above.

17 **SECOND CLAIM FOR RELIEF (NEPA AND APA)**  
18 **(Failure to Consider Significant New Information Compelling**  
19 **Further Review under the National Environmental Policy Act)**

20 83. Plaintiffs reallege and incorporate herein by reference the allegations contained in  
21 Paragraphs 1 through 81 of this Complaint.

22 84. Even after a NEPA process is completed, where an agency learns of "significant new  
23 circumstances" or new "information relevant to environmental concerns and bearing on the  
24 proposed action or its impacts," the agency must undertake further review under NEPA. Id. §  
25 1502.9(c); 10 C.F.R. § 1021.314.

1           85. Significant developments in impact assessment and mitigation of seismic surveys, as  
2 well as the Deepwater Horizon spill, also compel further NEPA analysis. Four months after BOE  
3 issued its Programmatic EA and FONSI, NMFS noticed its intent to prepare a programmatic EIS  
4 on the impacts of seismic exploration on Gulf marine mammals; and in doing so cited five factors  
5 requiring further analysis, including: “proposed use of computer modeling as one of two methods  
6 for calculating incidental take levels for marine mammals and sea turtles for a geographic area  
7 where multiple seismic sources may be operating simultaneously; incorporation of a scientifically-  
8 based risk assessment for marine mammals; possible use of energy criteria rather than the current  
9 pressure criteria to calculate marine mammal take levels, especially to calculate potential multiple  
10 exposures; and incorporation of new acoustic guidelines for assessing impacts of sound on marine  
11 mammals.” 69 Fed. Reg. 67535, 67536 (numbers omitted). In addition, significant new scientific  
12 information, including methodologies published by NMFS and scientific publications, contradict the  
13 EA’s methods and conclusions regarding impact thresholds, cumulative effects, and mitigation of  
14 airgun surveys on marine mammals. Finally, the Deepwater Horizon spill has undermined the  
15 assumptions made in the EA about the environmental characteristics, including the numbers and  
16 status of Gulf populations impacted by seismic exploration, such as the Gulf’s small population of  
17 endangered sperm whales.

18           86. Defendants’ failure to prepare an EIS in light of this new information, and their  
19 continued permitting of exploration activities in the Gulf (but not the Arctic or Atlantic) without  
20 additional environmental review, is arbitrary, capricious, and not in accordance with law as required  
21 by Section 706(2) of the APA, and is subject to judicial review thereunder. 5 U.S.C. §§ 701  
22 through 706.

23           87. These violations are injuring plaintiffs in the manner described in Paragraphs 1  
24 through 67 above.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiffs respectfully request that this Court:

1. Adjudge and declare that Defendants and each of them are in violation of the National Environmental Policy Act and its implementing regulations, and order that the Programmatic Environmental Assessment and Finding of No Significant Impact issued on July 1, 2004 be vacated, set aside, and/or rescinded;
2. Adjudge and declare that Defendants and each of them are in violation of the Administrative Procedure Act;
3. Order Defendants to comply with NEPA and the APA in connection with any future actions regarding geological and geophysical activity in the Gulf;
4. Award Plaintiffs their costs of suit and attorneys fees under the Equal Access to Justice Act and/or other applicable provisions; and
5. Grant Plaintiffs such other and further relief as the Court deems just and appropriate under the circumstances.

Respectfully submitted this 30<sup>th</sup> day of June, 2010:

*Counsel for Plaintiffs*

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pro hac vice admission forthcoming

Miyoko Sakashita (CA # 239639), application  
for pro hac vice admission forthcoming

1 Stephen Zak Smith (CA # 228913), application  
2 for pro hac vice admission forthcoming  
3 Rebecca Riley (IL # 6284356), application for  
4 pro hac vice admission forthcoming

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11 zsmith@nrdc.org  
12 rriley@nrdc.org

Andrea Treece (CA # 237639), application  
for pro hac vice admission forthcoming

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## CIVIL COVER SHEET

The JS 44 civil cover sheet and the information contained herein neither replace nor supplement the filing and service of pleadings or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. (SEE INSTRUCTIONS ON THE REVERSE OF THE FORM.)

**I. (a) PLAINTIFFS**

Natural Resources Defense Council, Inc.; Center for Biological Diversity, Inc.; Gulf Restoration Network, Inc.; and Sierra Club, Inc.

(b) County of Residence of First Listed Plaintiff New York

(EXCEPT IN U.S. PLAINTIFF CASES)

(c) Attorney's (Firm Name, Address, and Telephone Number)

Joel Waltzer, Waltzer & Associates, 3715 Westbank Expressway, Suite 13, Harvey, LA 70058, (504) 340-6300; David Pettit, 1314 Second Street, Santa Monica, CA 90401, (310) 434-2300

**DEFENDANTS**

Kenneth Salazar, Secretary of the Department of the Interior; Bureau of Ocean Energy Management, Regulation, and Enforcement; Michael R. Bromwich, Director, Bureau of Ocean Energy

County of Residence of First Listed Defendant \_\_\_\_\_

(IN U.S. PLAINTIFF CASES ONLY)

NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF THE LAND INVOLVED.

Attorneys (If Known)

**II. BASIS OF JURISDICTION**

(Place an "X" in One Box Only)

- ☐ 1 U.S. Government Plaintiff
- ☐ 3 Federal Question (U.S. Government Not a Party)
- ☒ 2 U.S. Government Defendant
- ☐ 4 Diversity (Indicate Citizenship of Parties in Item III)

**III. CITIZENSHIP OF PRINCIPAL PARTIES**

(For Diversity Cases Only)

(Place an "X" in One Box for Plaintiff and One Box for Defendant)

- |   | PTF                        | DEF                        |  | PTF                        | DEF                        |
|---|----------------------------|----------------------------|--|----------------------------|----------------------------|
| Citizen of This State                   | <input type="checkbox"/> 1 | <input type="checkbox"/> 1 | Incorporated <i>or</i> Principal Place of Business In This State     | <input type="checkbox"/> 4 | <input type="checkbox"/> 4 |
| Citizen of Another State                | <input type="checkbox"/> 2 | <input type="checkbox"/> 2 | Incorporated <i>and</i> Principal Place of Business In Another State | <input type="checkbox"/> 5 | <input type="checkbox"/> 5 |
| Citizen or Subject of a Foreign Country | <input type="checkbox"/> 3 | <input type="checkbox"/> 3 | Foreign Nation   | <input type="checkbox"/> 6 | <input type="checkbox"/> 6 |

**IV. NATURE OF SUIT**

(Place an "X" in One Box Only)

CONTRACT	TORTS	FORFEITURE/PENALTY	BANKRUPTCY	OTHER STATUTES
<input type="checkbox"/> 110 Insurance <input type="checkbox"/> 120 Marine <input type="checkbox"/> 130 Miller Act <input type="checkbox"/> 140 Negotiable Instrument <input type="checkbox"/> 150 Recovery of Overpayment & Enforcement of Judgment <input type="checkbox"/> 151 Medicare Act <input type="checkbox"/> 152 Recovery of Defaulted Student Loans (Excl. Veterans) <input type="checkbox"/> 153 Recovery of Overpayment of Veteran's Benefits <input type="checkbox"/> 160 Stockholders' Suits <input type="checkbox"/> 190 Other Contract <input type="checkbox"/> 195 Contract Product Liability <input type="checkbox"/> 196 Franchise	<b>PERSONAL INJURY</b> <input type="checkbox"/> 310 Airplane <input type="checkbox"/> 315 Airplane Product Liability <input type="checkbox"/> 320 Assault, Libel & Slander <input type="checkbox"/> 330 Federal Employers' Liability <input type="checkbox"/> 340 Marine <input type="checkbox"/> 345 Marine Product Liability <input type="checkbox"/> 350 Motor Vehicle <input type="checkbox"/> 355 Motor Vehicle Product Liability <input type="checkbox"/> 360 Other Personal Injury	<input type="checkbox"/> 362 Personal Injury - Med. Malpractice <input type="checkbox"/> 365 Personal Injury - Product Liability <input type="checkbox"/> 368 Asbestos Personal Injury Product Liability <b>PERSONAL PROPERTY</b> <input type="checkbox"/> 370 Other Fraud <input type="checkbox"/> 371 Truth in Lending <input type="checkbox"/> 380 Other Personal Property Damage <input type="checkbox"/> 385 Property Damage Product Liability	<input type="checkbox"/> 422 Appeal 28 USC 158 <input type="checkbox"/> 423 Withdrawal 28 USC 157 <b>PROPERTY RIGHTS</b> <input type="checkbox"/> 820 Copyrights <input type="checkbox"/> 830 Patent <input type="checkbox"/> 840 Trademark <b>SOCIAL SECURITY</b> <input type="checkbox"/> 861 HIA (1395ff) <input type="checkbox"/> 862 Black Lung (923) <input type="checkbox"/> 863 DIWC/DIWW (405(g)) <input type="checkbox"/> 864 SSID Title XVI <input type="checkbox"/> 865 RSI (405(g)) <b>FEDERAL TAX SUITS</b> <input type="checkbox"/> 870 Taxes (U.S. Plaintiff or Defendant) <input type="checkbox"/> 871 IRS—Third Party 26 USC 7609	<input type="checkbox"/> 400 State Reapportionment <input type="checkbox"/> 410 Antitrust <input type="checkbox"/> 430 Banks and Banking <input type="checkbox"/> 450 Commerce <input type="checkbox"/> 460 Deportation <input type="checkbox"/> 470 Racketeer Influenced and Corrupt Organizations <input type="checkbox"/> 480 Consumer Credit <input type="checkbox"/> 490 Cable/Sat TV <input type="checkbox"/> 810 Selective Service <input type="checkbox"/> 850 Securities/Commodities/Exchange <input type="checkbox"/> 875 Customer Challenge 12 USC 3410 <input type="checkbox"/> 890 Other Statutory Actions <input type="checkbox"/> 891 Agricultural Acts <input type="checkbox"/> 892 Economic Stabilization Act <input checked="" type="checkbox"/> 893 Environmental Matters <input type="checkbox"/> 894 Energy Allocation Act <input type="checkbox"/> 895 Freedom of Information Act <input type="checkbox"/> 900 Appeal of Fee Determination Under Equal Access to Justice <input type="checkbox"/> 950 Constitutionality of State Statutes
<b>REAL PROPERTY</b> <input type="checkbox"/> 210 Land Condemnation <input type="checkbox"/> 220 Foreclosure <input type="checkbox"/> 230 Rent Lease & Ejectment <input type="checkbox"/> 240 Torts to Land <input type="checkbox"/> 245 Tort Product Liability <input type="checkbox"/> 290 All Other Real Property	<b>CIVIL RIGHTS</b> <input type="checkbox"/> 441 Voting <input type="checkbox"/> 442 Employment <input type="checkbox"/> 443 Housing/Accommodations <input type="checkbox"/> 444 Welfare <input type="checkbox"/> 445 Amer. w/Disabilities - Employment <input type="checkbox"/> 446 Amer. w/Disabilities - Other <input type="checkbox"/> 440 Other Civil Rights	<b>PRISONER PETITIONS</b> <input type="checkbox"/> 510 Motions to Vacate Sentence <b>Habeas Corpus:</b> <input type="checkbox"/> 530 General <input type="checkbox"/> 535 Death Penalty <input type="checkbox"/> 540 Mandamus & Other <input type="checkbox"/> 550 Civil Rights <input type="checkbox"/> 555 Prison Condition		

**V. ORIGIN**

(Place an "X" in One Box Only)

- ☒ 1 Original Proceeding
- ☐ 2 Removed from State Court
- ☐ 3 Remanded from Appellate Court
- ☐ 4 Reinstated or Reopened
- ☐ 5 Transferred from another district (specify)
- ☐ 6 Multidistrict Litigation
- ☐ 7 Appeal to District Judge from Magistrate Judgment

**VI. CAUSE OF ACTION**

Cite the U.S. Civil Statute under which you are filing (Do not cite jurisdictional statutes unless diversity):

42 USC 4332

Brief description of cause:

Failure to prepare an Environmental Impact Statement

**VII. REQUESTED IN COMPLAINT:**

☐ CHECK IF THIS IS A CLASS ACTION UNDER F.R.C.P. 23

DEMAND \$

CHECK YES only if demanded in complaint:

JURY DEMAND: ☐ Yes ☒ No

**VIII. RELATED CASE(S) IF ANY**

(See instructions):

JUDGE Hon. Carl J. Barbier

DOCKET NUMBER 10-1482; 10-1497; ...

DATE

SIGNATURE OF ATTORNEY OF RECORD

06/30/2010

**FOR OFFICE USE ONLY**

RECEIPT # \_\_\_\_\_ AMOUNT \_\_\_\_\_ APPLYING IFP \_\_\_\_\_ JUDGE \_\_\_\_\_ MAG. JUDGE \_\_\_\_\_

**INSTRUCTIONS FOR ATTORNEYS COMPLETING CIVIL COVER SHEET FORM JS 44****Authority For Civil Cover Sheet**

The JS 44 civil cover sheet and the information contained herein neither replaces nor supplements the filings and service of pleading or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. Consequently, a civil cover sheet is submitted to the Clerk of Court for each civil complaint filed. The attorney filing a case should complete the form as follows:

**I. (a) Plaintiffs-Defendants.** Enter names (last, first, middle initial) of plaintiff and defendant. If the plaintiff or defendant is a government agency, use only the full name or standard abbreviations. If the plaintiff or defendant is an official within a government agency, identify first the agency and then the official, giving both name and title.

(b) County of Residence. For each civil case filed, except U.S. plaintiff cases, enter the name of the county where the first listed plaintiff resides at the time of filing. In U.S. plaintiff cases, enter the name of the county in which the first listed defendant resides at the time of filing. (NOTE: In land condemnation cases, the county of residence of the "defendant" is the location of the tract of land involved.)

(c) Attorneys. Enter the firm name, address, telephone number, and attorney of record. If there are several attorneys, list them on an attachment, noting in this section "(see attachment)".

**II. Jurisdiction.** The basis of jurisdiction is set forth under Rule 8(a), F.R.C.P., which requires that jurisdictions be shown in pleadings. Place an "X" in one of the boxes. If there is more than one basis of jurisdiction, precedence is given in the order shown below.

United States plaintiff. (1) Jurisdiction based on 28 U.S.C. 1345 and 1348. Suits by agencies and officers of the United States are included here.

United States defendant. (2) When the plaintiff is suing the United States, its officers or agencies, place an "X" in this box.

Federal question. (3) This refers to suits under 28 U.S.C. 1331, where jurisdiction arises under the Constitution of the United States, an amendment to the Constitution, an act of Congress or a treaty of the United States. In cases where the U.S. is a party, the U.S. plaintiff or defendant code takes precedence, and box 1 or 2 should be marked.

Diversity of citizenship. (4) This refers to suits under 28 U.S.C. 1332, where parties are citizens of different states. When Box 4 is checked, the citizenship of the different parties must be checked. (See Section III below; federal question actions take precedence over diversity cases.)

**III. Residence (citizenship) of Principal Parties.** This section of the JS 44 is to be completed if diversity of citizenship was indicated above. Mark this section for each principal party.

**IV. Nature of Suit.** Place an "X" in the appropriate box. If the nature of suit cannot be determined, be sure the cause of action, in Section VI below, is sufficient to enable the deputy clerk or the statistical clerks in the Administrative Office to determine the nature of suit. If the cause fits more than one nature of suit, select the most definitive.

**V. Origin.** Place an "X" in one of the seven boxes.

Original Proceedings. (1) Cases which originate in the United States district courts.

Removed from State Court. (2) Proceedings initiated in state courts may be removed to the district courts under Title 28 U.S.C., Section 1441. When the petition for removal is granted, check this box.

Remanded from Appellate Court. (3) Check this box for cases remanded to the district court for further action. Use the date of remand as the filing date.

Reinstated or Reopened. (4) Check this box for cases reinstated or reopened in the district court. Use the reopening date as the filing date.

Transferred from Another District. (5) For cases transferred under Title 28 U.S.C. Section 1404(a). Do not use this for within district transfers or multidistrict litigation transfers.

Multidistrict Litigation. (6) Check this box when a multidistrict case is transferred into the district under authority of Title 28 U.S.C. Section 1407. When this box is checked, do not check (5) above.

Appeal to District Judge from Magistrate Judgment. (7) Check this box for an appeal from a magistrate judge's decision.

**VI. Cause of Action.** Report the civil statute directly related to the cause of action and give a brief description of the cause. **Do not cite jurisdictional statutes unless diversity.** Example: U.S. Civil Statute: 47 USC 553  
Brief Description: Unauthorized reception of cable service

**VII. Requested in Complaint.** Class Action. Place an "X" in this box if you are filing a class action under Rule 23, F.R.Cv.P.

Demand. In this space enter the dollar amount (in thousands of dollars) being demanded or indicate other demand such as a preliminary injunction.

Jury Demand. Check the appropriate box to indicate whether or not a jury is being demanded.

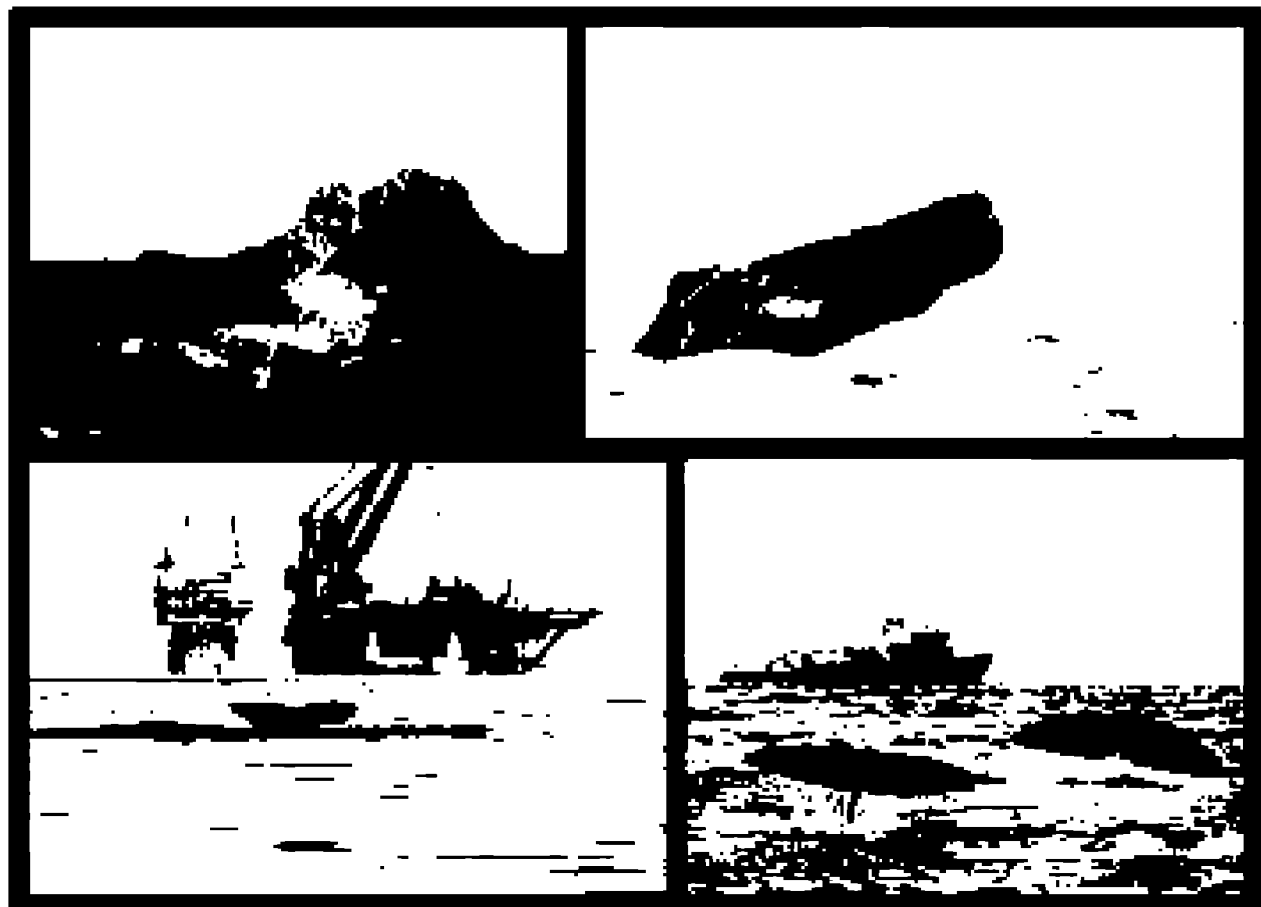
**VIII. Related Cases.** This section of the JS 44 is used to reference related pending cases if any. If there are related pending cases, insert the docket numbers and the corresponding judge names for such cases.

**Date and Attorney Signature.** Date and sign the civil cover sheet.

## Exhibit A

# Sperm Whale Seismic Study in the Gulf of Mexico

## Synthesis Report





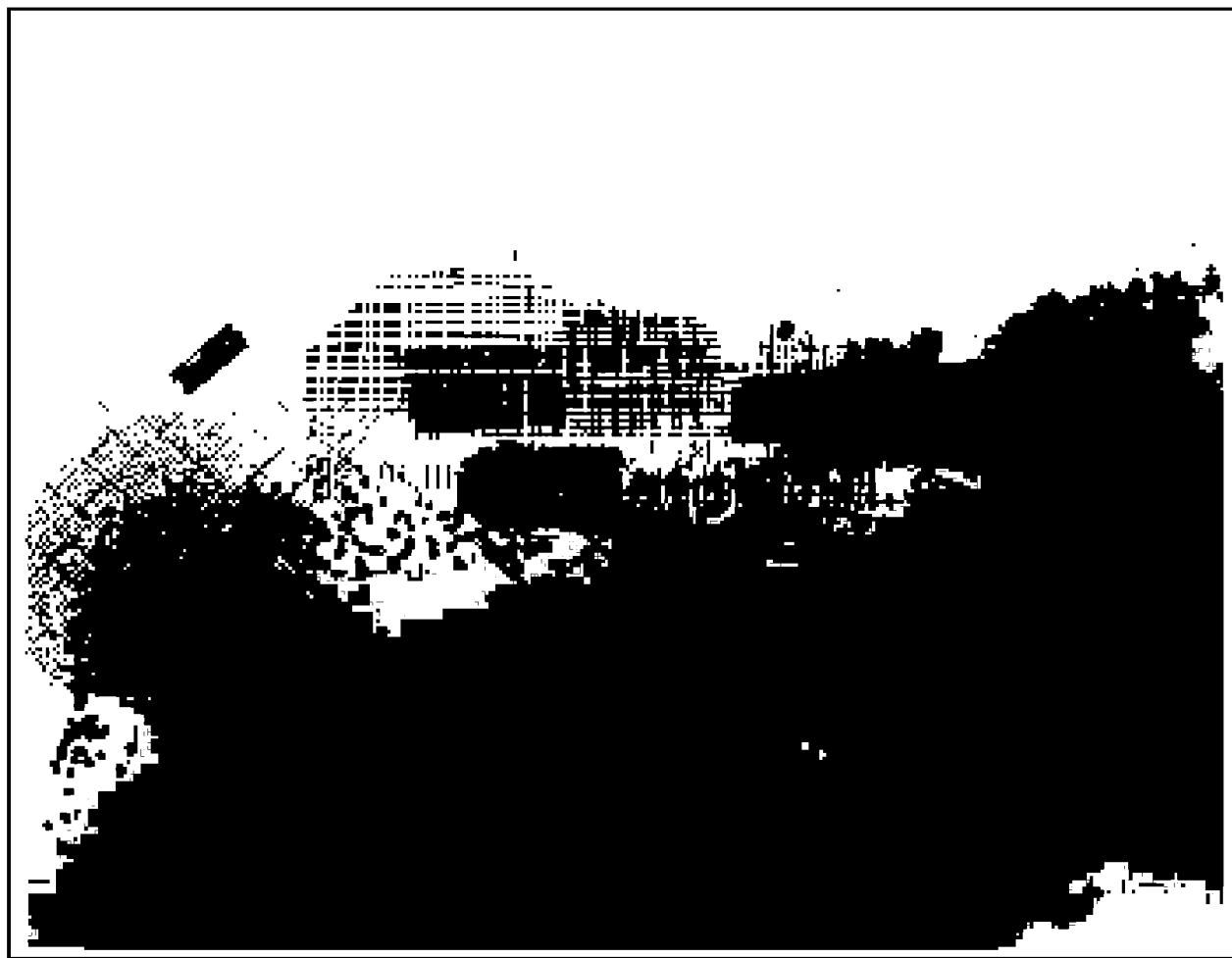


Figure 5.3.1 Map of all seismic lines provided by LAGC members from January 2002 through October 2006 (black lines) and high-quality (Argos LC1, LC2, and LC3) locations (red dots) from S-tagged sperm whales from July 2002 through October 2006.

When a whale location occurred between the start and end time of a seismic line, the position of the central shot point of the airgun array, at the time of the whale location, was interpolated from the line's start and end locations. The distance between the whale and central shot point location was then calculated. Vessels' track bearings and bearings from shot point to the whale were calculated using the interpolated shot point location. Only locations within 100 km of active airguns were considered in this analysis under the assumption that exposure to sound from closer distances would be of more interest in studying whale behavior. Additionally, vessel speeds and headings were assumed to be constant so that interpolated positions for central shot points were accurate.

Locations from 34 S-tagged whales were within 100 km of active airguns. The number of locations for each whale varied from 1 to 40. There was a total of 354 temporal matches of whale locations with seismic lines. Forty locations were within 100 km of two active vessels and three

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF LOUISIANA**

NATURAL RESOURCES DEFENSE COUNCIL INC.; \*  
CENTER FOR BIOLOGICAL DIVERSITY, INC.; \*  
GULF RESTORATION NETWORK, INC.; AND \*  
SIERRA CLUB, INC., *Plaintiffs*, \*

*versus*

KENNETH SALAZAR, SECRETARY OF THE \*  
DEPARTMENT OF THE INTERIOR; BUREAU OF \*  
OCEAN ENERGY MANAGEMENT, REGULATION, \*  
AND ENFORCEMENT; MICHAEL R. BROMWICH, \*  
DIRECTOR, BUREAU OF OCEAN ENERGY \*  
MANAGEMENT, REGULATION AND \*  
ENFORCEMENT, *Defendants* \*

\* \* \* \* \*

Case No:

Judge:

Magistrate:

**Statement of Collateral Proceedings (LR 3.1)**

This civil matter involves subject matter that comprises a material part of the subject matter or operative facts of the following actions pending before Judge Carl J. Barbier:

10-1482, Garner v. BP PLC et al;

10-1497, Gulf Restoration Network, Inc. et al v. Salazar et al.

The above actions include allegations that federal agencies violated the National Environmental Policy Act ("NEPA") when regulating oil and gas activities in the Gulf of Mexico.

Plaintiffs' action relates to the above actions because it also alleges violations of NEPA by federal defendants when regulating oil and gas activities in the Gulf of Mexico and relies on similar allegations of fact regarding the Gulf of Mexico environment and Defendants' failure to comply with NEPA.

Plaintiffs understand that in addition to the two cases cited above, over 30 cases related to oil and gas activities in the Gulf of Mexico have been allotted to Section J – Judge Barbier – and that some of these cases may similarly include allegations of NEPA violations.