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February 9, 2015

Via electronic mail sent to nsfcommentnj@nsf.gov

Mr. Richard W. Murray
Division Director, Division of Ocean Sciences
Directorate for Geosciences
National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 2230

RE: Comments on the National Science Foundation Draft Amended Environmental Assessment of a Marine Geophysical Survey in the Northwest Atlantic Ocean Offshore New Jersey, June to August 2015.

Dear Mr. Murray:

On behalf of the undersigned organizations, Clean Ocean Action (COA) submits the following comments in response to the National Science Foundation (NSF) request for comments on the Draft Amended Environmental Assessment of a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off New Jersey, Summer 2015.¹

Rutgers University, in collaboration with the National Science Foundation, Lamont-Doherty Earth Observatory (L-DEO), and the University of Texas, proposes to conduct a seismic vessel survey off the coast of New Jersey for approximately 30 days between June and August 2015 to study changes in sea level from 60 million years ago to present. The proposed project involves the use of two four-airgun subarrays towed at a depth of either 4.5 m or 6 m and operating alternately, in conjunction with a multibeam echosounder and sub-bottom profiler. The nominal source levels of the airgun subarrays would be approximately 246 decibels (dB) re: 1 μ Pa (peak-to-peak), and airguns would fire every 5-6 seconds, 24 hours a day, for an approximately 30 day period set to run between June and August, 2015. The area to be surveyed is a roughly rectangular region that encompasses approximately 230 square miles and is positioned between 15.5 and 52.8 miles of the coast of New Jersey.

¹ Available at http://www.nsf.gov/geo/oce/envcomp/amended_mountain_nj_margin_ex_draft_18dec14-b.pdf (hereafter "Draft Amended EA").

The Draft Amended EA has been prepared pursuant to the National Environmental Policy Act (NEPA) and tiers to the 2011 Programmatic Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS) for Marine Seismic Research funded by the National Science Foundation or Conducted by the U.S. Geological Survey and 2012 NSF Record of Decision. The Draft Amended EA will be used in support of an application for an Incidental Harassment Authorization (IHA) from the National Marine Fisheries Service (NMFS) under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA). Prior to approving the project and issuing an IHA for the survey, the federal agencies involved must comply with Section 7 Consultation under the Endangered Species Act (ESA)² and an Essential Fish Habitat assessment under the Magnuson-Stevens Fishery Conservation and Management Act.³

The seismic survey will have significant environmental impacts, and this triggers the need for a full Environmental Impact Statement (EIS). To the extent that the agencies rely on an EA, there are significant flaws, deficiencies and ecological concerns with the Draft Amended EA. These comments focus on three broad topic areas: regulatory compliance, marine mammal take estimations, monitoring and mitigation measures, and evaluation of project alternatives.

Regulatory Compliance

Significant Environmental Impacts Trigger the Need for an EIS

NEPA's fundamental purposes are to guarantee that: (1) agencies take a hard look at the environmental consequences of their actions before these actions occur; and (2) agencies make the relevant information available to the public so that it may also play a role in both the decision-making process and the implementation of that decision. See, e.g. 40 C.F.R. § 1500.1. To assure transparency and thoroughness, agencies also must "to the fullest extent possible...[e]ncourage and facilitate public involvement" in decision-making. 40 C.F.R. §1500.2(d).

In the case of the seismic project, the applicability of at least three of the significance factors as described in NEPA (impacts to a species listed under the ESA, controversial effects, significant cumulative impacts) indicate that NMFS and the NSF must prepare an EIS. The presence of one or more significant effects can trigger the need for a full EIS. See, e.g. *Nat'l Parks & Conserv. Ass'n. v. Babbitt*, 241 F.3d 722, 731 (9th Cir. 2001) (either of two significance factors considered by the court "may be sufficient to require preparation of an EIS in appropriate circumstances"); *Anderson v. Evans*, 350 F.3d 815, 835 (9th Cir. 2003) (presence of one or more factors can necessitate preparation of a full EIS). Furthermore, the agency must fully analyze the impacts of, alternatives to, and mitigation measures for the action. 40 C.F.R. §§ 1502.14, 1502.16, 1508.7, 1508.8.

² Section 7 of the ESA (16 U.S.C. 1531 et seq.) outlines the procedures for Federal interagency cooperation to conserve federally-listed species and designated critical habitats.

³ Public Law (P.L.) 94-265, as amended by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (P.L. 109-479). EFH Guidelines at 50 CFR 600.05-600.930 outline the process to satisfy EFH consultation under Section 305(b)(2)-(4) of the MSA.

The groups strongly urge the preparation of a full EIS for this project, which would include complete scientific substantiation for the project, a thorough analysis of all direct, indirect, and cumulative environmental impacts, and consideration of a full range of alternatives to the project. Moreover, to meet its NEPA obligations, the NEPA document must be made available for public review and comment. *See, e.g. Anderson v. Evans*, 314 F.3d 1006, 1016 (9th Cir. 2002) (“the public must be given an opportunity to comment on draft EAs and EISs”). Following is a description of some, but not all, of the potentially significant environmental impacts as well as the deficiencies of the EA.

Coastal Zone Management Act (CZMA)

The CZMA requires that applicants for federal permits to conduct an activity affecting a natural resource of the coastal zone of a state “shall provide in the application to the licensing or permitting agency a certification that the proposed activity complies with the enforceable policies of the state’s approved program and that such activity will be conducted in a manner consistent with the program.”⁴ The marine mammals and fish that will be affected by the seismic survey are “natural resources” protected by New Jersey’s coastal management program. Accordingly, the state should be given the opportunity to review the project for consistency with its coastal management program.

Endangered Species Act

Section 7(a)(2) of the ESA requires federal agencies to “insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species . . . determined . . . to be critical . . .”⁵ To accomplish this goal, agencies must consult with the delegated agency of the Secretary of Commerce or Interior whenever their actions “may affect” a listed species.⁶ NMFS has the discretion to impose terms, conditions, and mitigation on any authorization.

The seismic survey puts several ESA-listed species at risk. Listed species affected include blue, fin, humpback, North Atlantic right, sei, and sperm whales. The proposed seismic survey can have harmful impacts on listed marine mammals, which must be fully and accurately vetted through the consultation process. Accordingly, the agencies must complete consultation and obtain any take authorizations before authorizing the proposed seismic survey here. Moreover, NSF and Rutgers should adopt robust mitigation measures such as those described in the alternatives section above to avoid adverse impacts to listed species.

NMFS’ reliance on the 160-dB Level B and 180/190 Level A thresholds do not reflect the best available science. As described above, the best available science supports lower thresholds for many marine species. The ESA requires the use of the best available science.⁷

⁴ 16 U.S.C. § 1456(c)(3)(A).

⁵ 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

⁶ *Id.*

⁷ 16 U.S.C. § 1536(a)(2); *Intertribal Sinkyone Wilderness v. NMFS*, 970 F. Supp. 2d 988 (N.D. Cal. 2013) (rejecting the agency’s reliance on out-dated thresholds for impacts of Navy sonar activities).

Additionally, NMFS should also evaluate the impact on potential right whale critical habitat. Recent studies have further shown that mid-Atlantic coastal areas are a key migratory route between calving and feeding grounds.⁸ NMFS has indicated that it intends to amend the current critical habitat to potentially include the coastal area adjacent to the survey area, but has substantially delayed issuing its proposal. See 75 Fed. Reg. 61,690 (Oct. 6, 2010) (indicating the agency had already begun developing the amendment and would publish a proposed rule “in the second half of 2011”). Accordingly, NMFS should consider how the seismic survey may impact habitat that is under consideration for designation for North Atlantic right whales.

In sum, the federal agencies must fully comply with the ESA and develop a robust biological opinion based on the best available science. We further urge NSF and Rutgers to establish more stringent mitigation measures to protect ESA-listed species than are currently proposed by the IHA.

Marine Mammal Take Estimations

The Draft Amended EA relies on the same broad methodology to develop marine mammal exclusion and buffer zones (corresponding with Level A and Level B harassment, respectively) and estimate total marine mammal takes as was used in the March 2014 Draft EA, despite several concerns raised by the Marine Mammal Commission and others during the comment period on the draft IHA. COA shares many of the MMC concerns and recommends that the Draft Amended EA be revised to account for expert recommendations.

The thresholds used to determine take are not based on the best available science. The EA uses the single sound pressure level of 160 dB re 1 μ Pa (RMS) as a threshold for estimating behavioral, sublethal take in all marine mammal species affected by the proposed survey.⁹ As acknowledged in the EA, this approach does not reflect the best available science, and the choice of threshold is not sufficiently conservative in several important respects. In fact, experts characterize the 160-dB threshold as “overly simplified, scientifically outdated, and artificially rigid.”¹⁰ NMFS is obviously aware of the existence better science, which is demonstrated and analyzed by the agency’s own draft acoustic guidance which is currently pending finalization.¹¹ The best available science indicates that NMFS must use a more conservative threshold.

⁸ See Pace, R.M. III and R. Merrick. 2008. Northwest Atlantic Ocean Habitats Important to the Conservation of North Atlantic Right Whales (*Eubalaena glacialis*). NEFSC Ref. Doc. 08-07; Garrison, L.P. 2007. Defining the North Atlantic Right Whale Calving Habitat in the Southeastern United States: An Application of a Habitat Model. NOAA Technical Memorandum NOAA NMFS-SEFSC-553. A more recent study, also recommended that “currently defined critical habitat should be expanded to include areas farther offshore and generally further north off the coast of Georgia.” Keller, C.A., Application of a Habitat Model to Define Calving Habitat of the North Atlantic Right Whale in the Southeastern United States. *Endang. Species. Res.* Vol. 18: 73-87 (2012): doi: 10.3354/esr00413.

⁹ 77 Fed. Reg. at 58260.

¹⁰ Clark, C., Mann, D., Miller, P., Nowacek, D., and Southall, B., Comments on Arctic Ocean Draft Environmental Impact Statement at 2 (Feb. 28, 2012); see 40 C.F.R. § 1502.22.

¹¹ 78 Fed. Reg. 78822 (Dec. 2013).

Using a single sound pressure level of 160-dB for harassment represents a major step backward from recent authorizations. For Navy sonar activity, NMFS has incorporated into its analysis linear risk functions that endeavor to account for risk and individual variability and to reflect the potential for take at relatively low levels.¹²

Furthermore, current scientific literature establishes that behavioral disruption can occur at substantially lower received levels for some species, including many species that will be impacted by the proposed survey here. 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 – and cause other baleen whales to abandon habitat over an area at least 100,000 square nautical miles.¹³ Bowhead whales migrating through the Beaufort Sea have shown almost complete avoidance of seismic airgun received levels at 120 dB to 130 dB and below.¹⁴

Some odontocetes are highly sensitive to a range of low-frequency and low-frequency-dominant anthropogenic sounds, including seismic airgun noise. Cuvier's beaked whales exhibited alarming behavioral impacts when exposed to sonar at low received levels 89-120db.¹⁵ The proposal anticipates Level B take of 168 Cuvier's beaked whales, which far underestimates actual take. Harbor porpoises, which are mostly inshore, but occasionally occur in the project area, have been observed to engage in avoidance responses 50 miles from a seismic airgun array, a result that is consistent with both captive and wild animal studies showing porpoises abandoning habitat in response to pulsed sounds at very low received levels, well below 120 dB.¹⁶

Although the agencies should be aware of these studies showing seismic surveys can have significant behavioral impacts to marine mammals well below 160 dB, the EA irrationally sets the behavioral harassment threshold at 160 dB. If the agency were to modify its threshold estimates, as it must based on the best available science, the estimated number of marine mammal takes incidental to the proposed seismic survey would be significantly higher than the EA's current estimates.

¹² See, e.g., 74 Fed. Reg. 4844, 4844-4885 (Jan. 27, 2009).

¹³ Clark, C.W., and Gagnon, G.C., 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 MacLeod, K., Simmonds, M.P., and Murray, E., Abundance of fin (*Balaenoptera physalus*) and sei whales (*B. borealis*) amid oil exploration and development off northwest Scotland, *Journal of Cetacean Research and Management* 8: 247-254 (2006).

¹⁴ Miller, G.W., Elliot, R.E., Koski, W.R., Moulton, V.D., and Richardson W.J., Whales, in Richardson, W.J. (ed.), Marine Mammal and Acoustical Monitoring of Western Geophysical's Open-Water Seismic Program in the Alaskan Beaufort Sea, 1998 (1999); Richardson, W.J., Miller, G.W., and Greene Jr., C.R., Displacement of migrating bowhead whales by sounds from seismic surveys in shallow waters of the Beaufort Sea, *Journal of the Acoustical Society of America* 106:2281 (1999).

¹⁵ Stacy L. DeRuiter et al., First Direct Measurements of Behavioural Responses by Cuvier's Beaked Whales to Mid-Frequency Active Sonar *Biology Letters*, 9: 20130223 1 (2013).

¹⁶ See, e.g., Bain, D.E., and Williams, R., 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).

Given the agency's decidedly non-conservative approach to estimating impacts thresholds for injury to marine mammals from the proposed survey, it is likely that many more marine mammals will be harmed than estimated.

Furthermore, the Draft Amended EA is inconsistent in several regards with the Final Incidental Harassment Authorization (IHA) issued by the National Marine Fisheries Service (NMFS) for the project in 2014, and COA recommends that the applicant rectify these inconsistencies to account for measures previously required by the agency.

Model used in establishing exclusion and buffer zones

The applicant has estimated marine mammal exclusion and buffer zones via a simplistic model that assumes uniform propagation in the water column and no seafloor interactions. This is problematic given that the model employed appears to only have been field-tested in the Gulf of Mexico, which in addition to having very different environmental and oceanographic conditions from those off the coast of New Jersey, is also a much deeper marine environment. Use of scaling factors with the Gulf of Mexico measurements oversimplifies the complex and potentially synergistic interactions that the sound source would have with the seafloor geology. As such, COA recommends that the applicant re-estimate exclusion and buffer zones after inputting project-specific operational details (including tow depth, airgun source intensity, and number of firing airguns) and environmental parameters (including water depth, seafloor geology, and how sound refracts in the water column) into its sound propagation model.

Underestimation of marine mammal takes in a small area

The concentrated multiplied impact of the applicant's proposal has not been adequately assessed, especially given the relatively small ocean area affected. The proposal would run seismic pulses back and forth over 4,900 km of tracklines for 24 hours a day over a 30-day period. Under this scenario, many areas will be ensonified multiple times over the duration of the study, some on multiple occasions within the same day, particularly if some data collected do not meet quality objectives. Simply multiplying the total ensonified area by the estimated marine mammal densities will underestimate the total number of takes, as it does not take into account the fact that areas will be ensonified on multiple occasions over the 30-day project period. At minimum, the EA must assess the total multiplied ensonified area for a given day (with a 25% contingency, discussed further below) by the applicable marine mammal densities and the total number of survey days. Furthermore, these concentrated multiplied affects must be evaluated for all marine life species, not just mammals and turtles.

Cumulative impacts of marine mammal exposure to seismic surveys and sonar off the Atlantic Coast

An agency must take a hard look at the cumulative impacts of the proposed action and determine and provide a meaningful analysis of the environmental impacts of these activities. "NEPA always requires that an environmental analysis for a single project consider the cumulative impacts of that project together with 'past, present and reasonably foreseeable

future actions.”¹⁷ CEQ’s regulations for implementing NEPA emphasize that “[c]umulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”¹⁸

The Draft Amended EA fails to describe the cumulative effects from other seismic surveys, including oil and gas seismic surveys, and sonar on the same stocks of marine mammals. Marine mammals that are affected by the proposed project include many of the same stocks or populations of animals that will be exposed to seismic surveys for oil and gas, research surveys farther offshore, and military activities using sonar. The programmatic environmental analysis for Atlantic oil and gas surveys estimates more than 138,000 instances of take. The Navy Atlantic testing and training estimates 21.8 million instances of harm to marine mammals in the coming years. This added to the USGS seismic surveys offshore in 2014 and 2015 and the survey similar to the one proposed here warrants a thorough analysis of the impacts of acoustic disturbance on these animals.

Inconsistencies between Draft Amended EA and 2014 Final IHA

The Draft Amended EA indicates that the study proposed for the summer of 2015 is nearly identical to the project proposed by the applicants for the summer of 2014; the NMFS issued a Final IHA for this project in July of 2014. Despite the project similarities, there are several inconsistencies between the Final IHA and the Draft Amended EA. Notably, the 2014 Final IHA included several additional precautions to protect marine life from the detrimental impacts of seismic airguns that have been omitted from the Draft Amended EA. As such, COA does not consider the Draft Amended EA to be complete or representative of the best available mitigation measures, including the No Action Alternative, or Alternative time-of –year for study to be conducted.

The 2014 Final IHA states, “NMFS finds it more appropriate to incorporate a mechanism to explicitly account for the potential of positive immigration of marine mammals into the survey area...therefore we are using a generalized turnover estimate of 1.25...[which] will help better estimate the number of animals exposed.”¹⁹ Despite the inclusion of this contingency factor in the Final IHA, the Draft Amended EA states, “NSF has traditionally not included this factor into take calculations and therefore has not included it here.”²⁰ No explanation is provided in the report for why the 1.25 turnover estimate is omitted, particularly in light of it having been included in the 2014 Final IHA for the same project. As the federal agency responsible for permitting marine mammal takes has stated that a 25% contingency is an “appropriate” mechanism to conservatively account for the inherent uncertainty of marine mammal

¹⁷ *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 895 (9th Cir. 2002) (quoting 40 C.F.R. § 1508.7).

¹⁸ 40 C.F.R. § 1508.7.

¹⁹ National Oceanic and Atmospheric Administration. 2014. Takes of Marine Mammals Incidental to Specified Activities; Marine Geophysical Survey in the Northwest Atlantic Ocean Offshore New Jersey, July to August 2014. July 8.

²⁰ LGL Ltd., environmental research associates. 2014. “Draft Amended Environmental Assessment of a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off New Jersey, Summer 2015” (hereafter, “Draft Amended EA”), p. 47.

movements in and around the survey area, it is essential that it be included in the calculations presented in the EA.

The Final IHA authorized takes (by Level B harassment) for a total of four (4) gray seals, 112 harbor seals, and four (4) harp seals. Despite the inclusion of pinniped species in the Final IHA, the Draft Amended EA states that “no pinnipeds are included” because they are “not expected to occur there during the survey.”²¹ Even though the Draft Amended EA contains different conclusions than those reached by NMFS in issuing its Final IHA in 2014, no new or updated data are presented in the Draft Amended EA to support such claims, and the only information provided on pinnipeds has been incorporated by reference from the 2014 EA for the project. As such, COA recommends that updated species information and take estimates be provided for the three pinniped species included in the 2014 Final IHA.

The 2014 Final IHA required a more conservative exclusion zone for marine mammals, which the Biological Opinion indicated would also apply to sea turtles; namely, the standard 180-dB exclusion threshold was increased by 3 dB (thereby triggering operational mitigation at the 177-dB isopleth). The Draft Amended EA states, “NSF does not view this overly precautionary approach appropriate, and it is not included here.”²² It is inappropriate for NSF to disregard NMFS’s decision to take a more conservative approach in protecting federally protected marine mammals and threatened and endangered sea turtle species from the harmful effects of seismic airguns. As such, the EA should be amended to include updated estimates of marine mammal and sea turtle impacts under the 177-dB exclusion zone approach.

Monitoring and Mitigation Measures

Marine Mammal Monitoring and Mitigation Measures

The Draft Amended EA indicates that monitoring and mitigation prior to and during survey activities would follow measures outlined in the June 2011 Final Programmatic Environmental Impact Statement/Overseas Environmental Impact Statement for Marine Seismic Research Funded by the National Science Foundation or Conducted by the U.S. Geological Survey. Specifically, if a marine mammal is observed within the mitigation zone, a power down would occur and activity would remain suspended until the animal is visually observed to have left the mitigation zone, has not been observed within the mitigation zone for at least 15 minutes (for small odontocetes and pinnipeds) or 30 minutes (for mysticetes and large odontocetes), or the vessel has moved outside the mitigation zone within which the animal was most recently observed.

The 15 and 30 minute wait times are too limited and inappropriate because many marine mammals, especially large odontocetes, can and do remain underwater for much longer periods of time. For example, grand mean dive times for Blainville’s and Cuvier’s beaked

²¹ Draft Amended EA, p. 12.

²² Draft Amended EA, p. 6-7.

whales are approximately 60 minutes,²³ but individuals have been observed to remain submerged for over 80 minutes.²⁴ Sperm whales have a grand mean dive time of approximately 45 minutes,²⁵ but have been known to remain underwater for up to 55 minutes.²⁶ This information, adds to the need to conduct a full Environmental Impact Statement, and include assessments of longer, more conservative time thresholds (i.e., at least 60 minutes) for large odontocetes observed in the mitigation zone.

Evaluation of Fisheries and Shellfish Impacts

The agencies have a statutory obligation to consult on the impact of federal activities on essential fish habitat under the Magnuson-Stevens Fishery Conservation and Management Act (“Magnuson Act”).²⁷

The Magnuson Act requires consultation with NMFS when actions to be permitted, funded, or undertaken by a federal agency may adversely affect essential fish habitat. The statute defines adverse effect as “any impact that reduces quality and/or quantity of EFH [and] may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species’ fecundity), site-specific or habitat wide impacts, including individual, cumulative, or synergistic consequences of actions.”²⁸ The essential fish habitat consultation should include an evaluation of the effects of the action on essential fish habitat and proposed mitigation.²⁹ Upon receipt of an essential fish habitat assessment, NMFS is required to provide essential fish habitat conservation recommendations for federal actions that would adversely affect essential fish habitat. As required by Section 305(b)(4) of the Magnuson Act, the Federal agency must respond with a description of measures proposed for avoiding, mitigating, or offsetting the impact of the activities on essential fish habitat and explain its reasons for not following any essential fish habitat conservation recommendations.

The Draft Amended EA provides only broad information on commercial and recreational fishing activities that have historically occurred in the waters off New Jersey. No site-specific information on habitat types and fisheries of particular interest is provided, aside from a list of species with Essential Fish Habitat (EFH) in the survey area. Specific information on how these

²³ Marine Mammal Commission. 2014. Letter to the National Marine Fisheries Service in reference to the Incidental Harassment Authorization issued in connection with the application submitted by Lamont-Doherty Earth Observatory (LDEO), in collaboration with the National Science Foundation (NSF), to take small numbers of marine mammals by harassment incidental to a marine geophysical survey to be conducted off North Carolina. August 18. Available at: http://www.nsf.gov/geo/oce/envcomp/hatteras-fall2014/appendix_f_publiccomments.pdf.

²⁴ Baird, R.W., D.L. Webster, G.S. Schorr, D.J. McSweeney, and J. Barlow. 2008. Diel variation in beaked whale diving behavior. *Marine Mammal Science* 24:630-642

²⁵ Watwood S.L., P.J.O. Miller, M. Johnson, P.T. Madsen, and P.L. Tyack. 2006. Deep-diving foraging behavior of sperm whales (*Physeter macrocephalus*). *Journal of Animal Ecology* 75:814–825.

²⁶ Drouot V., A. Gannier, and J.C. Goold. 2004. Diving and feeding behaviour of sperm whale (*Physeter macrocephalus*) in the northwestern Mediterranean Sea. *Aquatic Mammals* 30:419–426.

²⁷ 16 U.S.C. §§ 1801-1884.

²⁸ 50 C.F.R. § 600.910(a); *see also* National Marine Fisheries Service, Essential Fish Habitat: A marine fish habitat conservation mandate for federal agencies, Gulf of Mexico Region (2010) http://sero.nmfs.noaa.gov/hcd/pdfs/efhdocs/gom_guide_2010.pdf.

²⁹ 50 C.F.R. § 600.920(e).

vital habitat areas may be affected by seismic activity and measures that could be taken to mitigate such impacts is not provided in the Draft Amended EA.

The Draft Amended EA reports that although many commercial fisheries operate within 5.6 km from shore, the highest-value fish (e.g., flounder and tuna) are caught farther offshore.³⁰ Specific information is not provided on how far offshore and whether fishing areas for these commercially valuable species overlap with the survey area. Additionally, the Draft Amended EA contains several references to recently published literature that indicates potentially severe impacts to fish and shellfish from noise from sources such as seismic airguns; some of these studies also include recommendations for mitigating the negative impacts. As an example, the Hovem et al. (2012) study referenced in the report indicated that “seismic surveys should occur at a distance of 5-10 km from fishing areas, in order to minimize potential effects on fishing.”³¹ The Draft Amended EA offers no response to this and other recommendations made by subject matter experts and instead concludes that “newly available information does not affect the outcome of the effects assessment as presented in the PEIS.”³² This combination of unspecific fisheries information and a lack of assimilation of new and important research are insufficient to meet the obligations to consult on EFH impacts and comply with NEPA’s hard look requirement.

Evaluation of Incidental Harm to Recreational Underwater and SUBA Divers

The EA provides mention to wreck diving, noting that it is “a popular form of recreation in the waters off New Jersey”³³ however it provides little information to the impacts that this proposed study would have on the recreational underwater diving community. Based on NOAA’s automated wreck and obstruction information system, the applicant concludes that “only one shipwreck, a known dive site, is in or near the survey area,”³⁴ but does not account for smaller dive sites that may not be included in NOAA’s system.

The Draft Environmental Assessment lacks any information regarding harm to divers that may be present during the study. A full EIS must assess these threats, and identify strict monitoring and mitigation to reduce harm to divers.

Evaluation of Alternative Actions

The “heart” of the NEPA process is an agency’s duty to consider “alternatives to the proposed action” and to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.”³⁵ CEQ regulations require NMFS to “rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed

³⁰ Draft Amended EA, p. 52.

³¹ Draft Amended EA, p. 52.

³² Id.

³³ Draft Amended EA, p. 32.

³⁴ Draft Amended EA, p. 32.

³⁵ 42 U.S.C. §§ 4332(2)(C)(iii), 4332(2)(E).

study, briefly discuss the reasons for their having been eliminated.”³⁶ “A ‘viable but unexamined alternative renders [the] environmental impact statement inadequate.’”³⁷

The Draft Amended EA does not provide sufficient evaluation of the No Action alternative, under which the study would not proceed and researchers would instead rely on core samples and 2-dimensional seismic data previously obtained within the project area to evaluate historical changes in sea level. Given that this project would occur in public waters upon which a variety of marine life and human uses rely, a comparison of the potential environmental and socioeconomic harm from the seismic activities against the potential contribution of the study results to scientific understanding is critical.

Furthermore, the Draft Amended EA contains only brief discussion of conducting the study at another time. Availability of the seismic vessel is cited as the primary reason for proposing the survey in the summer months, in addition to weather considerations. Given that weather issues (including Hurricane Arthur and “equipment damage from rough seas”) are identified in the Draft Amended EA as a primary contributor to the failure of the researchers to complete the survey within the time allotted last summer,³⁸ it is questionable why the summer months have again been identified as the only viable timeframe for the project. The Draft Amended EA also states that the study is timed to avoid right whale migration months of November through April. COA notes that recent research has confirmed the year-round presence of North Atlantic right whales off the New Jersey coast, and furthermore, that the numbers of up-call detections per day were highest in the March through June time period.³⁹ Based on this information, we recommend the Draft Amended EA incorporate information from experts in marine mammal biology and fisheries in its evaluation of alternate times of year from the study.

Conclusion

The Proposed Project threatens serious harm, both environmentally and economically, to numerous species of marine mammals, fishermen, and commercial and recreational divers and is therefore contrary to the goals, mandates, and prohibitions of the MMPA.

The Environmental Assessment is seriously flawed and deficient including incomplete information, inadequate assessment of impacts, and insufficient evaluation of alternatives and mitigation measures. Importantly, the Proposed Project must not be allowed to be conducted during summer, which is the peak of marine mammal (and other marine species) activity off the New Jersey coast, as well as the height of tourism and fishing seasons.

For the reasons detailed above, the undersigned organizations request a finding of significant impact, and trigger a full Environmental Impact Statement of the Marine Geophysical Survey by

³⁶ 40 C.F.R. § 1502.14(a).

³⁷ *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 814 (9th Cir. 1999) (quoting *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985)).

³⁸ Draft Amended EA, p. 4.

³⁹ Whitt, A.D., Dudzinski, K., and Laliberte, J.R. 2013. North Atlantic right whale distribution and seasonal occurrence in nearshore waters off New Jersey, USA, and implications for management. *Endangered Species Research* 20: 59-69.

the *R/V/ Marcus G. Langseth* in the Atlantic Ocean off New Jersey, Summer 2015. There should also be a public hearing on the proposal.

Sincerely,

Cindy Zipf, Executive Director
Clean Ocean Action

John Toth
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Jim Lovgren
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Peter Grimбилas

- New Jersey Outdoor Alliance
- Greater Point Pleasant Charter Boat Association
- Reef Rescue

Mayor Kirk O. Larson
Barnegat Light, NJ
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Captain Paul Eidman
Anglers Conservation Network

Captain Edward K. Yates, President
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