

**APPENDIX F**  
**PUBLIC COMMENTS ON DRAFT AMENDED EA**



[REDACTED]

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**From:** Francis Bovasso LII <[REDACTED]>  
**Sent:** Monday, January 05, 2015 9:43 AM  
**To:** NSF COMMENT NJ  
**Subject:** seismic blasting

To Whom it may concern,

The last thing we need is seismic blasting off our coast. I have run a struggling Charter Boat Business out of Manasquan for over 10 years. Between Sandy destroying the reefs (by covering up with sand)(and ending our season early), ridiculous Government Regulations (on seasons and bag limits), and the horrendous economy, us Charter Boat operators are becoming extinct.

This blasting has shown to disrupt fish migration, kill fish and decimate the shellfish, over the long and short term. What are you thinking? It is better to kill a resource because this cheap technology is what's best for the oil industry research. It is no different than draining a lake to see what's on the bottom.

I am one, but between my Family, Friends, Associates, and Customers, ....if this happens we will cross party lines and vote out whoever is part of this administration, and seek legal actions. You screw with MY JOB I'm going to see you lose yours.

Captain Frank Bovasso  
Predator Sport Fishing  
[REDACTED]

[REDACTED]

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**From:** Jack Fullmer <[REDACTED]>  
**Sent:** Wednesday, January 14, 2015 2:07 PM  
**To:** NSF COMMENT NJ; Dive-NJCDC- Glenn Arthur; Kim Hansen; Mike Lavitt; Jack Fullmer  
**Subject:** Comments -Geophysical survey  
**Attachments:** Geophysical Survey.doc

Attached please find comments from the NJ Council of Diving Clubs on the proposed Seismic Survey off Barnegat Inlet this summer.  
Jack Fullmer



## NEW JERSEY COUNCIL OF DIVING CLUBS

P. O. Box 841  
Eatontown, NJ 07724-0841  
<http://www.scubanj.org>



Comments  
Marine Geophysical Survey by the  
R/V Marcus G. Langseth  
Summer, 2015

1/11/15

National Science Foundation  
Division of Ocean Sciences  
4201 Wilson Blvd, Suite 725  
Arlington, VA 22230

The New Jersey Council of Diving Clubs (NJCDC) is an organization of 14 sport diving clubs in New Jersey with a few clubs in nearby states. Recreational Sport Diving is a multi-million dollar industry in New Jersey with 30 specialized dive shops, about 25 commercial dive boats, even more private dive boats, and several manufacturing companies devoted to producing dive gear and supporting the sport. Most diving off NJ is done on shipwrecks and artificial reefs. The NJCDC respectfully submits the following comments on the proposal to conduct a seismic survey southeast of Barnegat Inlet this summer.

2 Our first concern is for the safety of Sport Divers who do not presently know how close they can be to the seismic survey vessel. Your EIS stated you would coordinate with the sport diving community prior to the survey! Last year the NJCDC made repeated efforts to contact the project and ask that question, and it took a number of weeks before someone from Columbia University finally got back to us and attempted to answer that question.

His answer was that sport divers need to stay 3.2 miles from the Marcus G. Langseth for a dB level of 160 with a 4 airgun subarray, and I'm sure he felt that would be safe. However, the US Office of Naval Research suggests an underwater dB level of 145 for safety for sport divers and we do not have a distance for that dB level. When we contacted DAN (Diver Alert Network) which handles most safety concerns for the sport diving community, we were told to follow OSHA guidelines which top off at 115 dB, which I believe is for air. Consequently, we are a little bit confused and uncertain on this issue and need a definitive answer ASAP and before the project begins.

3 The second issue is the way the coordinates for the survey area are being represented on a chart. Most dive boats use GPS coordinates which represent positions as degrees, minutes, and up to a thousandth of a minute. It might be better for the dive boats and fishing boats if the chart that represents the survey rectangle or the security rectangle were represented in GPS coordinates rather than the way you are presently presenting the coordinates in your notice or BIS. At least I had some problems plotting it.

4 The third issue is that the EIS only mentions the Lillian shipwreck within the survey area. Although I personally am not familiar with other shipwrecks in that area, there may be other wrecks in that area and/or within 3.2 miles of the survey area or within a 145 dB level of the survey area that are visited by divers. Most of the inshore area of the survey rectangle are depths that are within dive limits. The NOAA Automated Wreck and Obstruction List is not a complete list of wrecks and obstructions off the NJ coast. There are estimated to be almost 7000 wrecks off the NJ coast, so do not assume there are no other wrecks close by that could be visited by other dive boats.



(2)

5 [ Finally, the NJCDC does not want marine life injured by this project. National Marine Fisheries should consider remotely monitoring the fish and marine life in the survey rectangle during the survey, perhaps on the Lillian wreck as all wrecks are a focal point for marine life. And, within a safe distance, we hope to be down there with our underwater cameras to record any impact on marine life..

Sincerely

Jack Fullmer  
Legislative Committee.  
NJCDC

Please reply directly to :

Jack Fullmer  
[REDACTED]  
[REDACTED]

Since I am presently out of state for some time, you might also want to cc:

Glen A. Arthur  
Chairman, NJCDC  
[REDACTED]  
[REDACTED]

6 [ PS: We do look forward to coordinating with the same individual that tried to help from Columbia University again this year, and we need to know exactly when the survey will be run!

**From:** Cassandra Ornell (Clean Ocean Action) <Science@cleanoceanaction.org>  
**Sent:** Friday, January 16, 2015 2:23 PM  
**To:** NSF COMMENT NJ  
**Cc:** Cindy Zipf (Clean Ocean Action)  
**Subject:** Request for 30-day extension on public comment period  
**Attachments:** COA seismic extension request letter - 01-16-15.pdf

To Whom It May Concern:

Please find attached a letter from Clean Ocean Action requesting a 30-day extension on the public comment period for the for 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.

Please contact Cindy Zipf (copied here) with any questions or to discuss this request further.

Best,

Cassandra Ornell  
Staff Scientist  
Clean Ocean Action (COA)  
18 Hartshorne Drive, Suite 2  
Highlands, NJ 07732

(p) 732-872-0111 (f) 732-872-8041

January 16, 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 22230

**RE: Request for a 30-day extension on the comment period for 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**

Dear Mr. Murray:

On behalf of the over 115 environmental, fishing, boating, business, women's, religious, and other groups represented in the Clean Ocean Action coalition, we are requesting a 30-day extension to the public comment period for the Draft Amended Environmental Assessment (EA) of a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off New Jersey, Summer 2015.

Any proposal to perform seismic surveys off the coasts of New Jersey and New York is a matter of significant public import. Seismic surveys may threaten significant harm to marine mammals, sea turtles, fish, and invertebrates, and may threaten human uses of the ocean for activities such as fishing and recreation. Accordingly, the public should be afforded the adequate time and opportunity to take a hard look at the proposed seismic survey.

7 This project is of great interest and concern to many groups and individuals in the environmental, fishing, diving, and tourism sectors, as well as to the New Jersey State Legislature and several federal and state elected officials.

The Draft Amended EA contains references to 126 additional sources of published data and scientific literature, which were not contained in the December 2013 Draft EA. Given the extent of new information cited in the Draft Amended EA, this information must be assessed and cross-referenced with the original publications. Finally, time is needed for us to share our conclusions with the network of organizations and interested parties.

For these reasons, it is imperative that the public be provided with an additional 30 days to review the Draft Amended EA and submit comments. We would welcome an opportunity to discuss this matter with you or your staff at your convenience. For further discussion, please contact Cindy Zipf at Clean Ocean Action at 732.872.0111 or [zipf@cleanoceanaction.org](mailto:zipf@cleanoceanaction.org).

Thank you for your consideration of our request and we look forward to hearing from you.

Sincerely,

Cindy Zipf  
Executive Director  
Clean Ocean Action



[REDACTED]

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**From:** EDWARD YATES <[REDACTED]>  
**Sent:** Sunday, January 18, 2015 1:18 PM  
**To:** NSF COMMENT NJ  
**Subject:** Eddie Yates  
**Attachments:** UBONJ.docx

DATE: January 18<sup>th</sup>, 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 22230

RE: Request for a 30-day extension on the comment period for 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

Dear Mr. Murray:

On behalf of United Boatman of New Jersey we are requesting a 30-day extension to the public comment period for the Draft Amended Environmental Assessment (EA) of a Marine Geophysical Survey by the R/V Marcus G. Langseth in the Atlantic Ocean off New Jersey, Summer 2015.

8 The reasons that the United Boatman of New Jersey are requesting a 30-day extension are due to the migrating species of fish including bluefish, sea bass, fluke, and school sized blue fin tuna which migrate from south to north and east to west during that time frame. We cannot afford any disruption in normal patterns as we are restricted to such a limited season for these species already. Any disruption in normal pattern could and more likely will cause disruption in their normal traveling patterns and result in days lost at sea.

9 Any proposal to perform seismic surveys off the coasts of New Jersey and New York is a matter of significant public import. Seismic surveys may threaten significant harm to marine mammals, sea turtles, fish, and invertebrates, and may threaten human uses of the ocean for activities such as fishing and recreation. Accordingly, the public should be afforded the adequate time and opportunity to take a hard look at the proposed seismic survey.

This project is of great interest and concern to many groups and individuals in the environmental, fishing, diving, and tourism sectors, as well as to the New Jersey State Legislature and several federal and state elected officials.

The Draft Amended EA contains references to 126 additional sources of published data and scientific literature that were not contained in the December 2013 Draft EA. Given the extent of new information cited in the Draft Amended EA, this information must be assessed and cross-referenced with the original publications. Finally, time is needed for us to share our conclusions with the network of organizations and interested parties.

For these reasons, it is imperative that the public be provided with an additional 30 days to review the Draft Amended EA and submit comments. We would welcome an opportunity to discuss this matter with you or your staff at your convenience. For further discussion, please contact Eddie Yates and [REDACTED] or email me at [REDACTED].

Thank you for your consideration of our request and we look forward to hearing from you.

Sincerely,

Captain Eddie Yates, President of the United Boatman of New Jersey

[REDACTED]

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**From:** Mary Wilding <[REDACTED]>  
**Sent:** Sunday, January 18, 2015 3:18 PM  
**To:** NSF COMMENT NJ  
**Subject:** Request for 30 day extension on comment period re Marine Geophysical Survey by R/V  
Marcus G. Langseth  
**Attachments:** Ltr re extension for seismic blasting proposal.doc

Please see attached letter. Thank you. Mary C. Wilding .

Mr. Richard W. Murray  
Division Director, Division of Ocean Sciences  
Directorate for Geosciences  
National Science Foundation  
4201 Wilson Boulevard  
Arlington, Virginia 22230

January 19, 2015

**RE: Request for a 30-day extension on the comment period for 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**

Dear Mr. Murray:

As a concerned citizen who lives on the New Jersey shore, I am requesting a 30-day extension to the public comment period for the Draft Amended Environmental Assessment (EA) of a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off New Jersey, Summer 2015.

Any proposal to perform seismic surveys off the coasts of New Jersey and New York is a matter of significant public import. Seismic surveys may do significant harm to marine mammals, sea turtles, fish, and invertebrates, and may threaten human uses of the ocean for activities such as fishing and recreation. Accordingly, individuals and organizations should be afforded the adequate time and opportunity to take a hard look at the proposed seismic survey and investigate research findings from similar activities.

This project is of great interest and concern to many groups with which I am affiliated and individuals in the environmental, fishing, diving, and tourism sectors, as well as to the New Jersey State Legislature and several federal and state elected officials.

The Draft Amended EA contains references to 126 additional sources of published data and scientific literature that were not contained in the December 2013 Draft EA. Given the extent of new information cited in the Draft Amended EA, this information must be assessed and cross-referenced with the original publications. Finally, time is needed for us to share conclusions with the network of organizations and interested parties.

For these reasons, it is imperative that the public be provided with an additional 30 days to review the Draft Amended EA and submit comments. I would welcome an opportunity to discuss this matter with you or your staff at your convenience. For further discussion, please contact me.

I thank you for your consideration of our request and look forward to hearing from you.

Sincerely,

Mary C. Wilding

[REDACTED]

[REDACTED]

[REDACTED]



[REDACTED]

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**From:** Marlena Christensen <[REDACTED]>  
**Sent:** Tuesday, January 20, 2015 1:13 PM  
**To:** NSF COMMENT NJ  
**Subject:** Attn: Richard W Murray, Division of Ocean Sciences

Dear Mr. Murray,

As a concerned citizen who lives on the New Jersey shore, I am requesting a 30-day extension to the public comment period for the Draft Amended Environmental Assessment (EA) of a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off New Jersey, Summer 2015.

Any proposal to perform seismic surveys off the coasts of New Jersey and New York is a matter of significant public import. Seismic surveys may do significant harm to marine mammals, sea turtles, fish, and invertebrates, and may threaten human uses of the ocean for activities such as fishing and recreation. Accordingly, individuals and organizations should be afforded the adequate time and opportunity to take a hard look at the proposed seismic survey and investigate research findings from similar activities.

11 This project is of great interest and concern to many groups with which I am affiliated and individuals in the environmental, fishing, diving, and tourism sectors, as well as to the New Jersey State Legislature and several federal and state elected officials.

The Draft Amended EA contains references to 126 additional sources of published data and scientific literature that were not contained in the December 2013 Draft EA. Given the extent of new information cited in the Draft Amended EA, this information must be assessed and cross-referenced with the original publications. Finally, time is needed for us to share conclusions with the network of organizations and interested parties.

For these reasons, it is imperative that the public be provided with an additional 30 days to review the Draft Amended EA and submit comments. I would welcome an opportunity to discuss this matter with you or your staff at your convenience. For further discussion, please contact me.

I thank you for your consideration of our request and look forward to hearing from you.

Sincerely,

Marlena Christensen  
[REDACTED]

[REDACTED]

**From:** Glenn Arthur [REDACTED]  
**Sent:** Wednesday, January 21, 2015 2:39 PM  
**To:** NSF COMMENT NJ  
**Subject:** 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

As a concerned citizen I have researched your Draft Environmental Assessment. At no point in the document is the safety of recreational SCUBA divers mentioned. In your previous attempt in 2014 your Final Environmental Assessment stated:

13 "Significant impacts on, or conflicts with, divers or diving activities would be avoided through communication with the diving community before and during the survey and publication of a Notice to Mariners about operations in the area."

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<http://www.nsf.gov/geo/occe/envcomp/nj-seismic-research/nj-final-ca-1-july-2014.pdf>

To my knowledge no such "communication" occurred. Most online lists of "for hire" dive boats and dive shops are incomplete or dated. There exists no list of private boat owners who dive from their vessels for you to use as a means of contact. Most boat Captains have "secret" numbers for sites that are not listed on NOAA charts or online. 12 There was (last year) and is (this year) no mention of, in any of your documents, a safe distance away from your survey area for recreational SCUBA divers to safely conduct their operations without risk of injury. You have included the same statement I quoted above in your draft for this year. Plans and schedules are now being formed for the 2015 diving season. Who do you plan on notifying before and during this year's attempt?

14 With no inclusion of your Environmental Assessments in the Federal Register it was only through the efforts of certain NGOs that any to this had been made public. Is there any requirement for you to hold public hearings and if so how do I request it? Please consider this an official request for public hearings. With the holidays at the beginning of this public comment period, I appreciate your extension. It is however still 15 insufficient as there are several other events happening off the coast of New Jersey that has taken up mine and others' time. Please consider this an official request for a thirty day extension of the public comment period.

Thank you for at least this small opportunity to comment on this event.

• *Cultural Resources*—With the following possible exceptions, there are no known cultural resources in the proposed Project area. One shipwreck, a known dive site, is in or near the survey area (see Fig. 2 in § III); the Lillian (Galiano 2009; Fisherman's Headquarters 2014; NOAA 2014a). Shipwrecks are discussed further in § IV. Airgun sounds would have no effects on solid structures; no significant impacts on shipwrecks would be anticipated (§ IV). No impacts to cultural resources would be anticipated.

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**Recreational SCUBA Diving**



Wreck diving is a popular form of recreation in the waters off New Jersey. A search for shipwrecks in New Jersey waters was made using NOAA's automated wreck and obstruction information system (NOAA 2014a). Results of the search are plotted in Figure 2 together with the survey lines. There are over 900 shipwrecks/obstructions in New Jersey waters, most (58%) of which are listed by NOAA (2014b) as unidentified. Only one shipwreck, a known dive site, is in or near the survey area (Fig. 2); the Lillian (Galiano 2009; Fisherman's Headquarters 2014; NOAA 2014a).

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#### **(5) Direct Effects on Recreational SCUBA Divers and Dive Sites and Their Significance**

No significant impacts on dive sites, including shipwrecks, would be anticipated. Airgun sounds would have no effects on solid structures. The only potential effects could be temporary displacement of fish and invertebrates from the structures.

Significant impacts on, or conflicts with, divers or diving activities would be avoided through communication with the diving community before and during the survey and publication of a Notice to Mariners about operations in the area. In particular, dive operators with dives scheduled on the shipwreck Lillian during the survey would be contacted directly. That dive site represents only a very small percentage of the recreational dive sites in New Jersey waters. No dive vessels were observed in the survey area during the ~14 days that the Langseth was there in July 2014.

Page 54

[http://www.nsf.gov/geo/occ/envcomp/amended\\_mountain\\_nj\\_margin\\_ex\\_draft\\_18dec14-b.pdf](http://www.nsf.gov/geo/occ/envcomp/amended_mountain_nj_margin_ex_draft_18dec14-b.pdf)

Glenn A. Arthur  


[REDACTED]

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**From:** Kirk Larson <[REDACTED]>  
**Sent:** Wednesday, January 21, 2015 3:29 PM  
**To:** NSF COMMENT NJ  
**Subject:** seismic testing

Mr. Richard W. Murray  
Division Director, Division of Ocean Sciences  
Directorate for Geosciences  
National Science Foundation  
4201 Wilson Boulevard  
Arlington, Virginia 22230

**RE: Request for a 30-day extension on the comment period for 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**

Dear Mr. Murray:

16 On behalf of the **Mayor of Barnegat Light** we are requesting a 30-day extension to the public comment period for the Draft Amended Environmental Assessment (EA) of a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off New Jersey, Summer 2015.

17 **Our town is concerned with the effects of the seismic testing that could affect the economics of our town.**

Any proposal to perform seismic surveys off the coasts of New Jersey and New York is a matter of significant public import. Seismic surveys may threaten significant harm to marine mammals, sea turtles, fish, and invertebrates, and may threaten human uses of the ocean for activities such as fishing and recreation. Accordingly, the public should be afforded the adequate time and opportunity to take a hard look at the proposed seismic survey.

This project is of great interest and concern to many groups and individuals in the environmental, fishing, diving, and tourism sectors, as well as to the New Jersey State Legislature and several federal and state elected officials.

The Draft Amended EA contains references to 126 additional sources of published data and scientific literature that were not contained in the December 2013 Draft EA. Given the extent of new information cited in the Draft Amended EA, this information must be assessed and cross-referenced with the original publications. Finally, time is needed for us to share our conclusions with the network of organizations and interested parties.

For these reasons, it is imperative that the public be provided with an additional 30 days to review the Draft Amended EA and submit comments. We would welcome an opportunity to

discuss this matter with you or your staff at your convenience. For further discussion, please contact **Kirk O.**

Larson Sr, [REDACTED]

Thank you for your consideration of our request and we look forward to hearing from you.

Sincerely,

Mayor Kirk O. Larson Sr.



[REDACTED]

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**From:** Clifford, Jonathan <Jonathan.Clifford@mail.house.gov>  
**Sent:** Wednesday, January 21, 2015 6:09 PM  
**To:** NSF COMMENT NJ  
**Subject:** Attention Mr. Richard W. Murray  
**Attachments:** Seismic Testing Extension Letter 1212015.pdf

Please see the attached letter from members of the New Jersey Congressional delegation requesting an extension to the comment period for proposed seismic testing off the coast of New Jersey. If you have any comments, concerns, or replies, please let me know.

Regards,  
Jonathan

**Jonathan S. Clifford**  
Legislative Assistant

Work: 202-225-6572  
Fax: 202-225-3318  
Email: jonathan.clifford@mail.house.gov

**Congressman Frank A. LoBlondo**  
**U.S. House of Representatives**  
2427 Rayburn House Office Building  
Washington, DC 20515-3002



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**Congress of the United States**  
**Washington, DC 20515**

January 20, 2015

Mr. Richard W. Murray  
Division Director, Division of Ocean Sciences  
Directorate for Geosciences  
National Science Foundation  
4201 Wilson Boulevard  
Arlington, Virginia 22230

Dear Mr. Murray:

We, the undersigned, are aware of the proposed seismic testing, which is slated to occur off the coast of New Jersey in the summer of 2015. This project is of great interest and concern to many groups and individuals in the environmental, fishing, diving, and tourism sectors. In order for interested parties to submit thoughtful and well-researched comments, we are requesting a 30-day extension to the public comment period for the Draft Amended Environmental Assessment (EA) of a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off the coast of New Jersey.

18 Any proposal to perform seismic surveys off the coasts of New Jersey and New York is a matter of significant impact to citizens, businesses, and the ecosystem. Seismic surveys may threaten significant harm to marine mammals, sea turtles, fish, and invertebrates, and may threaten human uses of the ocean for activities such as fishing and recreation. Accordingly, the public should be afforded the adequate time and opportunity to take a hard look at the proposed seismic survey.

The Draft Amended EA contains references to 126 additional sources of published data and scientific literatures which were not contained in the December 2013 Draft EA. Given the extent of new information cited in the Draft Amended EA, time is required to assess this information and cross-reference it with the original publications.

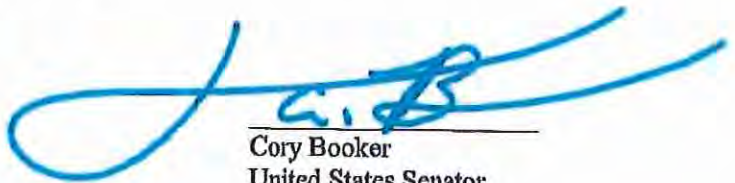
For these reasons, it is imperative that the public be provided with an additional 30 days to review the Draft Amended EA and submit comments.

Thank you for your consideration of our request and we look forward to hearing from you.

Sincerely,



Robert Menendez  
United States Senator



Cory Booker  
United States Senator



Christopher H. Smith  
Member of Congress



Frank Pallone Jr.  
Member of Congress



Frank A. LoBiondo  
Member of Congress



Tom MacArthur  
Member of Congress

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Thursday, January 22, 2015 7:59 PM  
**To:** NSF COMMENT NJ  
**Subject:** 30 Day Extension  
**Attachments:** extension request letter Original.docx

Mr. Murray,

Paul Haertel, President of the Jersey Coast Anglers Association, has asked me to forward our association's comments to you concerning an extension of 30 days to more adequately review more information that has become available concerning seismic blasting.

A signed copy of our association's comments will also be mailed to you in the very near future.

Thank You.

John Toth  
JCAA Board Member

Attachment

[REDACTED]

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**From:** [REDACTED]  
**Sent:** Thursday, January 22, 2015 8:21 PM  
**To:** NSF COMMENT NJ  
**Subject:** 30 Day Extension  
**Attachments:** JCAA Seismic Blasting Letter (1).doc

Mr. Murray,

The attachment I sent to you was in error. It was a draft that both I and Paul Haerttel were working on.

This attachment shows the JCAA letterhead and information about our location.

Sorry for this oversight.

A signed copy of it will also be sent to you.

John Toth

Attachment



**Jersey Coast Anglers Association**  
**Working for Marine Recreational Anglers**

1201 Route 37 East Suite 9 Toms River NJ 08753

TEL.: 732-506-6565 • FAX: 732-506-6975



January 22, 2015

Mr. Richard W. Murray  
Division Director, Division of Ocean Sciences  
Directorate for Geosciences  
National Science Foundation  
4201 Wilson Boulevard  
Arlington, Virginia 22230

**RE: Request for a 30-day extension on the comment period for 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**

Dear Mr. Murray:

On behalf of Jersey Coast Anglers Association, we are requesting a 30-day extension to the public comment period for the Draft Amended Environmental Assessment (EA) of a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off New Jersey, Summer 2015.

Seismic surveys may threaten significant harm to all marine mammals, especially sea turtles, fish, and invertebrates, and may threaten human uses of the ocean for activities such as fishing and recreation. Accordingly, the public should be afforded the adequate time and opportunity to thoroughly review the proposed seismic survey.

19

This project is of serious interest and concern to many fishing organizations and individuals in the environmental, diving, and tourism sectors, and also with New Jersey's legislators and a number of federal officials.

The Draft Amended EA contains references to 126 additional sources of published data and scientific literature that were not contained in the December 2013 Draft EA. Given the extent of new information cited in the Draft Amended EA, this information must be assessed and cross-referenced with the original publications. Finally, time is needed for us to share our conclusions with the above network of organizations and interested parties.

For these reasons, it is imperative that the public be provided with an additional 30 days to review the Draft Amended EA and submit comments. We would welcome an opportunity to discuss this matter with you or your staff at your convenience. For further discussion, please contact JCAA member John Toth [REDACTED].

Thank you for your consideration of our request and we look forward to hearing from you.

Sincerely,

Paul Haertel  
President  
Jersey Coast Anglers Association

[REDACTED]

---

**From:** ROBERT SWITZER <[REDACTED]>  
**Sent:** Friday, January 23, 2015 10:36 AM  
**To:** NSF COMMENT NJ  
**Subject:** Fw: Reply to thread 'It's Back! Seismic Testing!'

20 I am 100% opposed to the planned seismic testing off our coast.

The procedure disrupts wildlife and is unnecessary.

Regards,  
Robert Switzer  
[REDACTED]

Sent from my BlackBerry 10 smartphone on the Verizon Wireless 4G LTE network.

**From:** BASS BARN <[thebassbarn.com@vsobr.com](mailto:thebassbarn.com@vsobr.com)>  
**Sent:** Friday, January 23, 2015 9:48 AM  
**To:** [REDACTED]  
**Subject:** Reply to thread 'It's Back! Seismic Testing!'

Dear rob,

njddiver has just replied to a thread you have subscribed to entitled - It's Back! Seismic Testing! - in the Offshore Fishing Forum forum of BASS BARN.

This thread is located at:

<http://www.thebassbarn.com/forum/6-offshore-fishing-forum/553729-s-back-seismic-testing-new-post.html>

Here is the message that has just been posted:

\*\*\*\*\*

Good news on the proposed Seismic Survey off Barnegat Inlet later this summer. "NSF has decided to extend the public comment period by an additional 15 days above and beyond the 37 days it was planned to be open for comment. The public comment period will now close on February 9, 2015, 11:59pm Eastern Standard Time." Last year's attempt was stymied by equipment failure and to our knowledge no announcement or warning was issued to our community. Please let them know what you think of this situation by sending an email comment to:

[nsfcommentnj@nsf.gov](mailto:nsfcommentnj@nsf.gov) (<http://www.thebassbarn.com/neo/b/compose?to=nsfcommentnj@nsf.gov>)

We are searching for studies done on the effects of their equipment on recreational divers and will post and inform our community when the final Environmental Assessment has been published. The proposed Environmental Assessment can be found here:

[http://www.nsf.gov/geo/occe/envcomp/amended\\_mountain\\_nj\\_margin\\_ex\\_draft\\_18dec14-b.pdf](http://www.nsf.gov/geo/occe/envcomp/amended_mountain_nj_margin_ex_draft_18dec14-b.pdf)

\*\*\*\*\*

There may also be other replies, but you will not receive any more notifications until you visit the forum again.



All the best,  
BASS BARN

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[REDACTED]

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**From:** [REDACTED]  
**Sent:** Friday, January 23, 2015 3:06 PM  
**To:** NSF COMMENT NJ  
**Subject:** 30 day Extension  
**Attachments:** extension request letter (3) (1).docx

Mr. Murray,

Mr Anthony Mauro, Chairman, New Jersey Outdoor Alliance, requested that I forward the comments of this organization to you.

John Toth

Attachment

January 22, 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 22230

**RE: Request for a 30-day extension on the comment period for 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**

Dear Mr. Murray:

On behalf of the New Jersey Outdoor Alliance, we are requesting a 30-day extension to the public comment period for the Draft Amended Environmental Assessment (EA) of a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off New Jersey, Summer 2015.

Seismic surveys off the coasts of New Jersey and New York is a significant public issue. Seismic surveys may threaten significant harm to marine mammals, sea turtles, fish, and invertebrates, and may threaten human uses of the ocean for activities, especially fishing. Therefore, the public should be afforded ample time and opportunity to thoroughly review the proposed seismic survey.

21 This project is of great interest and concern to many groups and individuals in the environmental, fishing, diving, and tourism interests, as well as our New Jersey State Legislators.

The Draft Amended EA contains references to 126 additional sources of published data and scientific literature that were not contained in the December 2013 Draft EA. Given the extent of this new information cited in the Draft Amended EA, this information must be assessed and cross-referenced with the original publications. Additionally, time is needed for us to share our conclusions with our member organizations and the network of other organizations and interested parties.

For these reasons, it is important that the public be provided with an additional 30 days to review the Draft Amended EA and submit comments. We would welcome an opportunity to discuss this matter with you or your staff at your convenience. For further discussion, please contact Captain Pete Grimbilas at [REDACTED]

A signed copy of this letter will also be mailed to you in the near future

Thank you for your consideration of our request and we anticipate hearing from you.

Sincerely,

Anthony Mauro,  
Chairman  
New Jersey Outdoor Alliance

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Sunday, January 25, 2015 4:11 PM  
**To:** NSF COMMENT NJ  
**Subject:** seismic survey off barnegat inlet

74 [until further research and testing is done on the effects of this blasting to map out the ocean floor and what is under it we have no idea how it will effect the fish and marine mammals in that area and that reason alone is enough to halt this study! let's see what could happen by researching the effects first instead of making it happen by continuing the seismic survey!

thank you  
john aurnhammer  
[REDACTED]

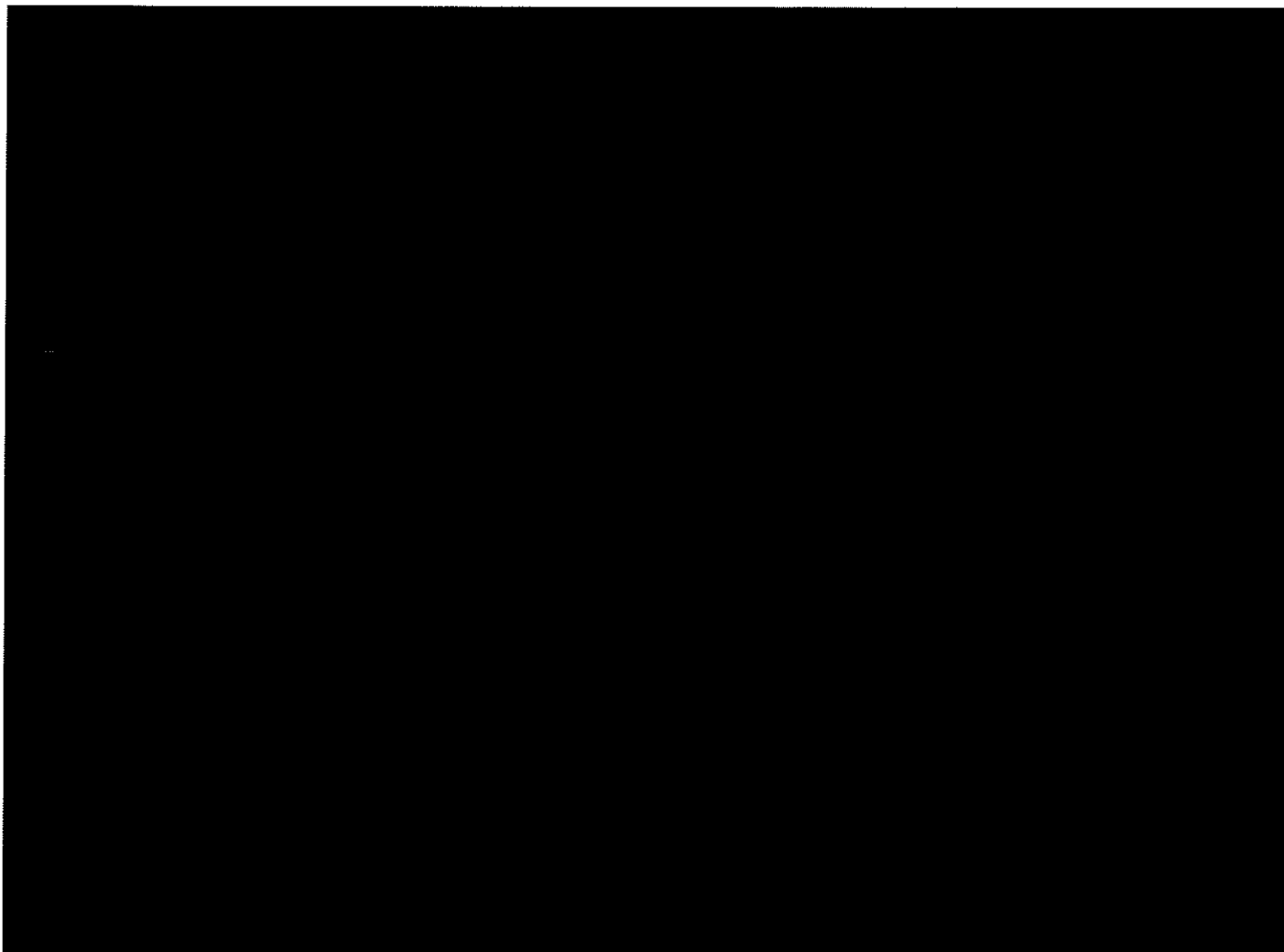


[REDACTED]

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**From:** Lincoln Hollister <linc@princeton.edu>  
**Sent:** Wednesday, January 28, 2015 9:31 AM  
**To:** NSF COMMENT NJ  
**Subject:** comment on Draft Amended EA, Marine Geophysical Survey off NJ, Summer 2015

This is my comment on the Draft Amended EA for the Marine Geophysical Survey off NJ, Summer 2015:



Lincoln S. Hollister  
Professor Emeritus and Senior Geologist  
Department of Geosciences, Princeton University  
Princeton, NJ 08544

609-258-4106

**From:** Lincoln Hollister <linc@princeton.edu>  
**Sent:** Wednesday, February 04, 2015 9:31 AM  
**To:** NSF COMMENT NJ  
**Subject:** revised comment on Draft Amended EA

I had made an error in my last paragraph, and have rewritten it to better state a point. I hope you will substitute the below for the letter I sent On Jan 28. Only the last paragraph has changed.

Revised comment on the Draft Amended EA for the Marine Geophysical Survey off NJ, Summer 2015:

Local environmental groups coordinated by Clean Ocean Action (COA) have, for about a year, continuously attacked the proposed Rutgers-led marine seismic study of the effects of sea level rise on the NJ Shore. The intent of these groups is to stop the Rutgers project, no matter the environmental costs from the research not being done.

22 At issue is the standard tool of marine seismic research, airguns, which the environmental groups claim will bring death and destruction to marine life. To achieve their goal of stopping the Rutgers project, the environmental groups prey on the fears of NJ Shore residents by greatly exaggerating the levels of sound produced by airgun arrays, and they erroneously claim that similar marine seismic studies done over the past 40 plus years have damaged marine life.

If there is an impact on marine life by airguns – for example, if fish swim away from the approaching airguns, the environmental groups would lead us to think the fish will never return, but the data show that the fish return within days following a seismic study. The claim that the airguns cause death and destruction of marine life has no basis in fact and is scientifically without merit.

23 The benefits to New Jersey and humanity from the results of the Rutgers project far exceed what little disturbance, if any, might be done to marine life by the seismic survey. Our knowledge of how Earth works, including the effects of sea level rise on the NJ Shore, will be much increased, and the basic research of the flagship public university of New Jersey will be able to move forward. Seventy percent of Earth is under water; seismic airguns are the best tool scientists have to study that part of the planet.

24 The opposition of environmental groups to science-focused marine seismic surveys negatively impacts the ability of academics to do research. Stopping such a survey is particularly damaging because of the loss of data and basic understanding of processes such as sea level rise on which public policy is built. University-based science is severely set back, research programs are dismantled, and education of the next generation is impaired. Students' and young scientists' careers are interrupted and future students are deterred from entering marine seismic science.

Lincoln S. Hollister

Professor Emeritus and Senior Geologist

Department of Geosciences, Princeton University

Princeton, NJ 08544

609-258-4106

**From:** Catie Tobin (Clean Ocean Action) <Education@cleanoceanaction.org>  
**Sent:** Monday, February 09, 2015 4:48 PM  
**To:** NSF COMMENT NJ  
**Cc:** Cindy Zipf (Clean Ocean Action); Lauren Townsend  
**Subject:** Seismic Comments on Draft Amended EA  
**Attachments:** COA et al seismic comments on Draft Amended EA.pdf

Please see attached.

**Catie Tobin**

*Marine Science Education Coordinator*  
Clean Ocean Action (COA)  
18 Hartshorne Drive, Suite 2  
Highlands, NJ 07732  
(p) 732.872.0111 (f) 732.872.8041  
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[REDACTED]

---

**From:** Catie Tobin (Clean Ocean Action) <Education@cleanoceanaction.org>  
**Sent:** Monday, February 09, 2015 4:56 PM  
**To:** NSF COMMENT NJ  
**Cc:** Cindy Zipf (Clean Ocean Action); Lauren Townsend  
**Subject:** Updated Seismic Comments on Draft Amended EA  
**Attachments:** COA et al seismic comments on Draft Amended EA.pdf

Please see the updated document attached.

**Catie Tobin**

*Marine Science Education Coordinator*  
Clean Ocean Action (COA)  
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[Give to support a clean ocean!](#)

**Clean Ocean Action • Jersey Coast Anglers Association • Fishermen's Dock  
Cooperative • New Jersey Outdoor Alliance • Greater Point Pleasant Charter Boat  
Association • Reef Rescue • Barnegat Light, NJ • Anglers Conservation Network •  
United Boatmen of New Jersey • Viking Village • Beach Buggy Association of  
New Jersey • Save Barnegat Bay • Hands Across the Sand • The Ocean Foundation**

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.<sup>1</sup>

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  $\mu$ 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.

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

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<sup>1</sup> Available at [http://www.nsf.gov/geo/oce/envcomp/amended\\_mountain\\_nj\\_margin\\_ex\\_draft\\_18dec14-b.pdf](http://www.nsf.gov/geo/oce/envcomp/amended_mountain_nj_margin_ex_draft_18dec14-b.pdf) (hereafter "Draft Amended EA").



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)<sup>2</sup> and an Essential Fish Habitat assessment under the Magnuson-Stevens Fishery Conservation and Management Act.<sup>3</sup>

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).

25 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.

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

<sup>2</sup> 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.

<sup>3</sup> 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.



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)**

26 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."<sup>4</sup> 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**

27 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 . . ."<sup>5</sup> 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.<sup>6</sup> 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.

28 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.<sup>7</sup>

29 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

<sup>4</sup> 16 U.S.C. § 1456(c)(3)(A).

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

<sup>6</sup> *Id.*

<sup>7</sup> 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).



29 between calving and feeding grounds.<sup>8</sup> 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.

30 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

31 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.

32 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  $\mu$ Pa (RMS) as a threshold for estimating behavioral, sublethal take in all marine mammal species affected by the proposed survey.<sup>9</sup> 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."<sup>10</sup> 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.<sup>11</sup> The best available science indicates that NMFS must use a more conservative threshold.

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

<sup>8</sup> *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.

<sup>9</sup> 77 Fed. Reg. at 58260.

<sup>10</sup> 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.

<sup>11</sup> 78 Fed. Reg. 78822 (Dec. 2013).



linear risk functions that endeavor to account for risk and individual variability and to reflect the potential for take at relatively low levels.<sup>12</sup>

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.<sup>13</sup> 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.<sup>14</sup>

33

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.<sup>15</sup> 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.<sup>16</sup>

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.

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

<sup>13</sup> 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).

<sup>14</sup> 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).

<sup>15</sup> 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).

<sup>16</sup> 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.

34 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**

35 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**

36 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 effects 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**

37 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."<sup>17</sup> 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."<sup>18</sup>

- 37 The Draft Amended EA falls 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.

- 38 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."<sup>19</sup> 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."<sup>20</sup> 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

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

<sup>18</sup> 40 C.F.R. § 1508.7.

<sup>19</sup> 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.

<sup>20</sup> 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.

39 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."<sup>21</sup> 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.

40 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."<sup>22</sup> 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**

41 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

<sup>21</sup> Draft Amended EA, p. 12.

<sup>22</sup> Draft Amended EA, p. 6-7.



whales are approximately 60 minutes,<sup>23</sup> but individuals have been observed to remain submerged for over 80 minutes.<sup>24</sup> Sperm whales have a grand mean dive time of approximately 45 minutes,<sup>25</sup> but have been known to remain underwater for up to 55 minutes.<sup>26</sup> 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").<sup>27</sup>

42 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."<sup>28</sup> The essential fish habitat consultation should include an evaluation of the effects of the action on essential fish habitat and proposed mitigation.<sup>29</sup> 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.

43 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

<sup>23</sup> 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](http://www.nsf.gov/geo/oce/envcomp/hatteras-fall2014/appendix_f_publiccomments.pdf).

<sup>24</sup> 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.

<sup>25</sup> 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.

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

<sup>27</sup> 16 U.S.C. §§ 1801-1884.

<sup>28</sup> 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](http://sero.nmfs.noaa.gov/hcd/pdfs/efhdocs/gom_guide_2010.pdf).

<sup>29</sup> 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.

44 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.<sup>30</sup> 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."<sup>31</sup> 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."<sup>32</sup> 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**

45 The EA provides mention to wreck diving, noting that it is "a popular form of recreation in the waters off New Jersey"<sup>33</sup> 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,"<sup>34</sup> but does not account for smaller dive sites that may not be included in NOAA's system.

46 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**

47 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."<sup>35</sup> CEQ regulations require NMFS to "rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed

<sup>30</sup> Draft Amended EA, p. 52.

<sup>31</sup> Draft Amended EA, p. 52.

<sup>32</sup> Id.

<sup>33</sup> Draft Amended EA, p. 32.

<sup>34</sup> Draft Amended EA, p. 32.

<sup>35</sup> 42 U.S.C. §§ 4332(2)(C)(iii), 4332(2)(E).



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

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.

48

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,<sup>38</sup> 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.<sup>39</sup> 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

<sup>36</sup> 40 C.F.R. § 1502.14(a).

<sup>37</sup> *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)).

<sup>38</sup> Draft Amended EA, p. 4.

<sup>39</sup> 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.

49 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  
Jersey Coast Anglers Association

Jim Lovegren  
Fishermen's Dock Cooperative

Peter Grimbilas

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

Mayor Kirk O. Larson  
Barnegat Light, NJ  
Commercial Fisherman

Captain Paul Eldman  
Anglers Conservation Network

Captain Edward K. Yates, President  
United Boatmen of New Jersey

Ernie Panaceck, General Manager  
Viking Village, Barnegat Light

Tim Burden, President  
Beach Buggy Association of New Jersey

Britta Wenzel, Executive Director  
Save Barnegat Bay

Dede Shelton, Executive Director  
Hands Across the Sand

Richard Charter, Senior Fellow  
Coastal Coordination Program  
The Ocean Foundation





**From:** Megan Brunatti <Megan.Brunatti@dep.nj.gov>  
**Sent:** Monday, February 09, 2015 6:24 PM  
**To:** NSF COMMENT NJ  
**Subject:** NJDEP Comment Letter - Draft Amended EA of a Marine Geophysical Survey in the Atlantic Ocean off New Jersey Summer 2015  
**Attachments:** NJDEP Comment Letter - NSF Draft Amended EA.pdf

Attached please find NJDEP's comment letter regarding the Draft Amended EA of a Marine Geophysical Survey by the R/V Marcus G. Langseth in the Atlantic Ocean off New Jersey Summer 2015. Thank you for providing the NJDEP with the opportunity to review and provide comments on this proposed project.

Please confirm receipt of the attached.

Thank you,

Megan Brunatti  
Office of Permit Coordination & Environmental Review  
401 East State Street  
PO Box 420  
Mail Code 401-07J  
Trenton, NJ 08625-0420  
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**State of New Jersey**

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF PERMIT COORDINATION AND ENVIRONMENTAL REVIEW  
P.O. Box 420 Mall Code 401-07J Trenton, New Jersey 08625-0420  
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**CHRIS CHRISTIE**  
*Governor*

**BOB MARTIN**  
*Commissioner*

**KIM GUADAGNO**  
*Lt. Governor*

February 9, 2015

Holly Smith  
National Science Foundation  
4201 Wilson Blvd., Room 725  
Arlington, VA 22230

**RE: Marine Geophysical Survey by the  
R/V Marcus Langseth in the Atlantic Ocean off New Jersey  
Summer 2015  
Comments on the Draft Amended Environmental Assessment**

Dear Ms. Smith:

The New Jersey Department of Environmental Protection's (Department) Office of Permit Coordination and Environmental Review (PCER) distributed the Draft Amended Environmental Assessment (Amended EA) for the proposed Marine Geophysical Survey by the R/V Marcus Langseth in the Atlantic Ocean off New Jersey in the summer of 2015 for review and comment. We offer the following comments from several Department programs for your consideration.

**Marine Fisheries Administration**

The proposed area for seismic testing off the coast of New Jersey extends from Barnegat Ridge to the 35 fathom line and runs in a northwest to southeast direction intersecting fathom curves at a general perpendicular nature along its extent. The entire reach of the survey area is utilized by commercial and recreational fishermen from New Jersey and the proposed survey timeframe coincides with the peak of many commercial and recreational fisheries. There is also at least one known ship wreck within the study area that is popular among scuba divers and spearfishing enthusiasts.

50

Existing seismic studies and research have documented a variety of fisheries impacts. Studies have shown the noise produced from this activity can cause physical impacts such as short and long term damage to the ears of fish, and in some cases physical impacts lead to mortality. Research has also documented behavioral impacts that show a clear change in "normal" activity and an increase in "alarm" response behavior that results in changing of schooling behavior, change in swimming speeds, change in water column location and avoidance of sound. Studies



have also demonstrated declining catch rates for a number of commercial fisheries during seismic testing activities. It is reasonably foreseeable that the proposed survey may impact fisheries distribution, movement, spawning patterns and accessibility to prey. However, the science is highly variable and the proposed study is different in scope, duration and frequency and is therefore difficult to quantify any specific impact.

50 The proposed time frame referenced in the proposal is a period of high to peak population abundance of several commercially and recreationally important fish species and commercial and recreational activity off the coast of New Jersey. Based on National Marine Fisheries Service data, New Jersey's fisheries, both commercial and recreational, are some of the most productive, highest grossing and employ more people than other states in the Mid-Atlantic and along the Atlantic Coast. These activities will take place offshore from some of New Jersey's important fishing ports, including Barnegat Light, Atlantic City, and Point Pleasant. Data analysis of commercial and recreational landings from 1996 to 2013 indicate that this entire area is not only used by multiple commercial fisheries including gillnetters, otter trawl vessels, scallop boats, and long liners, but also an area heavily utilized by recreational fishermen. Both sectors in combination pursue over 35 species of fish in this area including but not limited to: albacore, bluefish, big eye tuna, Bluefin tuna, bonita, black sea bass, butter fish, cobia, cod, smooth dogfish, spiny dogfish, summer flounder, Atlantic menhaden, monkfish, red hake, skate, tilefish, swordfish, yellow fin tuna, and skipjack tuna.

Considering just two of the several species harvested during 2013; summer flounder and black sea bass, May through August represents 20 percent of the commercial black sea bass harvest, and 22 percent of the commercial summer flounder harvest. This represents \$250,000 worth of black sea bass and \$1,360,000 of potential loss of summer flounder. This period generates 21% of commercial harvest revenue for New Jersey fishermen and represents 60 to 100% of the entire recreational season for the species listed above. Recreationally, 67% of the annual black sea bass are harvested during this period while 89% for summer flounder is represented during this time frame. Local businesses including restaurants, hotels, bait and tackle shops, and other coastal related trades are dependent on this time period generating income.

The time of year, proposed location of this activity (15 – 60 miles offshore), and length of time for the testing (30 consecutive days) are all significant negative factors that may likely adversely affect normal fisheries movement, migration and availability. These impacts could lead to direct and indirect consequences to New Jersey's important commercial and recreational fishing industries. This time period is the peak timeframe for scuba related activities and this sector could be significantly impacted by the sound generated from this activity. Proper consideration and notification needs to be provided to this important recreational sector during any activity. Further, the potential economic impacts of the marine geophysical survey should be noted.

54 A portion of the proposed survey area is a recognized productive and historical fishing area known as "The Fingers" under NJDEP's Prime Fisheries Area Mapping. Areas beyond State waters are also heavily utilized by New Jersey's commercial and recreational fishing industry. Marine fish and fisheries are protected under the New Jersey Coastal Management Program (NJCMP), and public access to and use of natural resources are major components of the Coastal Zone Management Act and the NJCMP. Based on previous studies examining seismic surveys.



and fisheries disturbances, it is reasonably foreseeable that the proposed surveys will have an impact from fisheries distribution, movement, migration and spawning perspectives that will lead to direct and indirect negative consequences to NJ's fishing industries. Svein Løkkeborg, et al., highlighted that "reduced catches on fishing grounds exposed to seismic survey activities have been demonstrated."<sup>1</sup> The conclusions reached by the Løkkeborg study are further supported by other recent studies concluding that catch rates reduced in the presence of seismic studies.<sup>2</sup>

56

Offshore waters also serve as essential habitat for invertebrate species during various stages of their lifecycles. Studies have provided "evidence that noise exposure during larval development produces body malformations in marine invertebrates. Scallop larvae exposed to playbacks of seismic pulses showed significant developmental delays and 46% developed body abnormalities. Similar effects were observed in all independent samples exposed to noise while no malformations were found in the control groups."<sup>3</sup> A reduction in harvestable stock would result in further impacts to our commercial fisheries.

57

In reference to section IV. Environmental Consequences – Alternative Action: Another Time, the Marine Fisheries Administration proposes a September – October timeframe. This would not be during the winter months (weather) and outside the migration of the North Atlantic right whale which occurs mostly between November and April. Some marine mammal species are expected to occur in the area year-round, so altering the timing of the proposed project would likely result in no net difference for those species. In response to *"The proposed dates for the cruise (~34 days in June–August) are the dates when the personnel and equipment essential to meet the overall project objectives are available; if the date of the cruise were changed, for example to late spring or early fall, it is likely that the Langseth would not be available"*, this appears to propose that the Langseth is booked into the foreseeable future. The geologic formations which this project proposes to map are static and not likely to change if this project is rescheduled to September – October in a year in which the personnel and equipment essential to meet the overall project objectives are available.

58

The Amended EA describes the proposed survey area to represent less than one half percent (0.28%) of the area of waters from the NJ shore to the EEZ (600 km<sup>2</sup>/210,768 km<sup>2</sup>). While this description may be true, it is also misleading. A better comparison would be the percent of survey area to the Exclusive Economic Zone (EEZ), where *"During 2002–2006 (the last year reported), commercial catch in the EEZ along the U.S east coast has only been landed by U.S. and Canadian vessels, with the vast majority of the catch (>99%) taken by U.S. vessels (Sea Around Us Project 2011)."* or the distinct areas which the commercial fisheries target.

<sup>1</sup> Løkkeborg, S.; Ona, E.; Vold, A.; & Salthaug, A., 2012. Effects of Sounds from Seismic Air Guns on Fish Behavior and Catch Rates. *Advances in Experimental Medicine and Biology*, 730, 415-419.

<sup>2</sup> Fewtrell, J.L. & McCauley R.D., 2012, Impact of Air Gun Noise on Behavior of Marine Fish and Squid. *Marine Pollution Bulletin*, 64, 984-993.

<sup>3</sup> de Soto, N.; Delorme, N.; Atkins, J.; Howard, S.; Williams, J. & Johnson, M. 2013. Anthropogenic noise causes body malformations and delays development in marine larvae. *Scientific Reports*. 3. Article No. 2831.



### Endangered and Nongame Species Program (ENSP)

59 New Jersey's Atlantic Ocean waters act as a migration corridor for several endangered marine mammals and sea turtles which transit between habitats farther north and south. Marine mammals, especially cetaceans, may be adversely affected by noise created during seismic testing activities. Cetaceans' primary means of communication, navigation, locating food, locating mates, and avoiding predators and other threats is through their sense of hearing, which is much more highly developed than that of humans and can detect sounds within a much wider range of frequency. Noise pollution, in the form of repeated or prolonged sounds may adversely impact marine mammals by disrupting otherwise normal behaviors associated with migration, feeding, alluding predators, rest, breeding, etc. Any alterations to these behaviors may jeopardize the survival of an individual simply by increasing efforts directed at avoidance of the noise and the perceived threat. In addition, animals distressed by noise generated by survey activities may become more susceptible to disease or predation by species which are not directly affected themselves. Furthermore, the proposed activities will add to an existing and increasing cacophony of anthropogenic noise pollution which may already be negatively impacting species. Acoustic detections of whale calls by Geo-Marine, Inc. confirmed the presence of right whales within 37 km of the shoreline, approximately between Seaside Park and Stone Harbor, during all seasons, concluding that some individual right whales occur in the nearshore waters off New Jersey either transiently or regularly.

Other listed marine mammals were also found year round, including humpback and fin whales (GMI, Inc. 2010). Similarly, the ENSP has records of harbor porpoise occurring in the project vicinity and within the proposed project period. Despite the time of year and fairly short duration of seismic surveys, individual whales and other marine mammals remaining in the area may still be impacted by project activities.

60 Sea turtles likely use sound for navigation, predator avoiding, locating prey, and other activities (Piniak et al. 2012). Although information regarding the impacts of anthropogenic noise on sea turtles is somewhat lacking, there is evidence to suggest that observed effects due to airguns may include behavioral changes, as well as temporary or even permanent hearing loss (Moein et al. 1995). The marine waters off New Jersey provide critical migration and feeding areas for sea turtle species such as Kemp's Ridley, Green, Atlantic Loggerhead and Leatherback turtles, the Draft Amended Environmental Assessment fails to include the numerous sea turtle sightings reported from the Oyster Creek Nuclear Generating Station, located in Forked River, NJ. These sea turtles, mostly reported between June and September, travelled through Barnegat Inlet and are presumably using Barnegat Bay as a feeding area. It is possible, therefore, that sea turtles may be migrating through the study location during the critical June-July period, making them susceptible not only to impacts (e.g. behavior changes, hearing loss) from seismic activity, but to entanglement in the seismic array gear, and injuring/mortality due to ship strikes. Although the EA states that "recent monitoring studies show that some sea turtles do show localized movement away from approaching airguns", the extent to which sea turtles will exhibit avoidance behavior, along with the impacts to airgun exposure, remain unclear. Many of the sea turtles migrating near NJ during the proposed project period are juveniles. Effects from air gun noise to smaller turtles will undoubtedly be greater than those observed in monitoring studies, while their ability to swim away/avoid the array due to their size will be reduced.

61



62 It is encouraging that the researchers plan to reduce the sonic signature to a more reasonable level than was previously proposed by using the smaller source array. To further protect marine species, we recommend that an aerial survey be performed over the project area just prior to the vessel leaving its home port. The purpose of the flyover would be to determine if there is a feeding, static, or migrating population of marine mammals (especially right whales, and also harbor porpoise, which have a lower recommended PTS threshold level, according to new NMFS guidelines, now undergoing public comment) or sea turtles in the vicinity. If marine mammals or sea turtles are not observed during the flyover, then the survey could be performed as scheduled. If marine mammals or sea turtles are found within or near the project area during the flyover, then delaying the survey for 3-4 days would be prudent.

64 In addition to the flyover, we recommend the incorporation of a QA/QC plan that would designate one person as responsible for ensuring the cessation of sound producing activities if marine mammals or sea turtles are observed during transect runs. The vessel should stop all noise for at least 30 minutes after the animal is no longer observable in the area. The designee would document any observations of marine mammals or sea turtles, and send all relevant occurrence information to the ENSP for inclusion into the Biotics database.

#### Division of Land Use Regulation

65 The Division of Land Use Regulation (DLUR) is currently reviewing a Federal Consistency for the proposed National Science Foundation (NSF) marine geophysical survey. NSF submitted the request for the Federal Consistency determination on December 22, 2014. The Department expects to provide a final determination by February 19, 2015. If necessary, the Department can request a 15 day extension, and the final determination would therefore be provided by March 5, 2015.

#### Office of Permit Coordination and Environmental Review (PCER)

66 DEP's PCER is responsible for coordinating all Federal National Environmental Policy Act (NEPA) projects to ensure that the Department is proactively involved in the early review and comment of projects in New Jersey. The central element in the environmental review process is an evaluation of alternatives, including the "no action" alternative. NEPA requires consideration and evaluation of reasonable alternatives that meet the project's purpose and need while minimizing or avoiding environmental impacts. NEPA also requires the evaluation of a No Action Alternative and a practical range of other "reasonable" action alternatives.

67 It is the Department's position that the Amended EA's Alternative Action is inadequate in minimizing or avoiding certain environmental impacts. The Department notes that the Amended EA did not incorporate any changes to the scope or timing of the study between last year and this year. The project was not amended to change the study period, or incorporate other harm minimization strategies like additional monitoring. [The Department finally notes that the current project still does not incorporate suggestions offered by the National Marine Fisheries Service in a letter to National Science Foundation, dated June 18, 2014. This letter specifies that: "some level of adverse effect to [Essential Fish Habitat (EFH)] may occur"; and "additional research



and monitoring is needed to gain a better understanding of the potential effects these activities may have on EFH...and should be a component of future NSF funded seismic survey activities." The Amended EA failed to consider these elements as part of any alternative.

70 It is also the Department's position that the Amended EA's No Action Alternative does not adequately explain the need for conducting this seismic study. The Amended EA fails to substantiate how the data collected from this study is necessary for a much greater effort to analyze and report information. The Amended EA further fails to explain the need to conduct the marine geophysical survey during the summer months. As stated in the Amended EA, "not conducting the cruise (no action) would result in less data and support for the academic institutions involved." The Department does not dispute this fact, but the Amended EA fails to explain the need for this data to be collected this year. The geologic formations which this project proposes to map are relatively static and not likely to change if this project is rescheduled in the fall of a different year.

71 Based upon DEP's concerns in response to the marine geophysical survey proposed last year, the timing of the proposed 2015 study should have been moved to the fall/winter months. The Department recommends that the study be moved to an alternate time of year, such as September to October to reduce the impact to fisheries and marine mammals. If this is not possible in 2015 due to the schedule of the R/V Marcus Langseth, the Department recommends that the study be rescheduled to September-October of another year.

72 Since the Department and NSF have agreed that there is not enough data available to definitively project the impact of the proposed survey on fisheries and marine mammals off the coast of New Jersey, the Department recommends that NSF incorporate a study of these impacts into the proposed marine geophysical survey. A bio-assessment study should be conducted in conjunction with the marine geophysical survey and by an independent researcher. A study of this type would provide data that would be essential to future marine geophysical surveys in the Atlantic Ocean, particularly off the coast of New Jersey.

Thank you providing the New Jersey Department of Environmental Protection an opportunity to comment on the Draft Amended Environmental Assessment. If you have any questions regarding these comments, please contact Megan Brunatti at (609)292-3600 or [Megan.Brunatti@dep.nj.gov](mailto:Megan.Brunatti@dep.nj.gov).

Sincerely,



John Gray, Deputy Chief of Staff  
New Jersey Department of Environmental Protection

C: Ginger Kopkash, Assistant Commissioner, LUM  
Kelly Davis, NJDEP – DFW  
Brandon Muffley, Marine Fisheries Administration  
Megan Brunatti, PCER

January 20, 2015

Mr. Richard W. Murray  
Division Director, Division of Ocean Sciences  
Directorate for Geosciences  
National Science Foundation  
4201 Wilson Boulevard  
Arlington, Virginia 22230

**RE: Request for a 30-day extension on the comment period for 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**

Dear Mr. Murray:

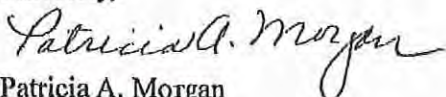
As a concerned citizen who lives on the New Jersey shore, I am requesting a 30-day extension to the public comment period for the Draft Amended Environmental Assessment (EA) of a Marine Geophysical Survey by the R/V *Marcus G. Langseth* in the Atlantic Ocean off New Jersey, Summer 2015.

73 Any proposal to perform seismic surveys off the coasts of New Jersey and New York is a matter of significant public import. Seismic surveys may do significant harm to marine mammals, sea turtles, fish, and invertebrates, and may threaten human uses of the ocean for activities such as fishing and recreation. Accordingly, individuals and organizations should be afforded the adequate time and opportunity to take a hard look at the proposed seismic survey and investigate research findings from similar activities.

This project is of great interest and concern to many groups with which I am affiliated and individuals in the environmental, fishing, diving, and tourism sectors, as well as to the New Jersey State Legislature and several federal and state elected officials.

I thank you for your consideration.

Sincerely,



Patricia A. Morgan



