



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Land Use Regulation

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CHRIS CHRISTIE
Governor

KIM GUADAGNO
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BOB MARTIN
Commissioner

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

RE: Federal Consistency Determination for Marine Geophysical Survey by the R/V *Marcus G. Langseth* in Atlantic Ocean off New Jersey, Summer 2015 - Inconsistent
DLUR File No. 0000-14-0030.1 CDT 150001

Dear Ms. Smith:

The New Jersey Department of Environmental Protection (Department) Division of Land Use Regulation (Division), acting pursuant to Section 307 of the Federal Coastal Zone Management Act (CZMA) of 1972 (P.L. 92-583) as amended, finds the above referenced request to be inconsistent with enforceable policies of the New Jersey Coastal Management Program (NJCMP).

Project Description

The National Science Foundation (NSF) is funding a research project proposed by lead Principle Investigator Dr. Gregory Mountain of Rutgers University and collaborators Drs. J. Austin, C. Fulthorpe, and M. Nedimovic of University of Texas Austin to study sea level rise in the Atlantic Ocean off of the coast of New Jersey, which includes a marine geophysical survey. The project includes the use of a 3-D seismic reflection survey to map sequences around existing drill sites and analyze their spatial/temporal evolution. Objectives include establishing the impact of known Ice House base-level changes on the stratigraphic record; providing greater understanding of the response of nearshore environments to changes in elevation of global sea-level; and determining amplitudes and timing of global sea-level changes during the mid-Cenozoic era.

Administrative History

On March 17, 2014, the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NFMS) published a Federal Register Notice (79 FR 14779, March 17, 2014) announcing the proposed issuance of an Incidental Harassment Authorization to the Lamont Doherty Earth Observatory in collaboration with NSF to take marine mammals by harassment incidental to conducting a marine geophysical (seismic) survey in the northwest Atlantic Ocean from May through August 2014.

On April 22, 2014, a conference call was held between NJCMP, NOAA's Office of Ocean and Coastal Resource Management (OCRM) and NSF staff to discuss the proposed activity. During that conference call, it was determined that Rutgers University will be the recipient of the NSF funding as the Principal Investigator for the scientific research related to the surveys that require the proposed incidental harassment authorization.

On May 7, 2014 another conference call was held between NJCMP, OCRM, and NSF to discuss alternate arrangements to assuage the NJCMP's concerns over potential impacts to New Jersey's resources. On this call, OCRM also provided NJCMP with the details necessary for the Department to appropriately request NSF submit a Consistency Determination request to the Department. While the conference call was beneficial to lay the foundation for an alternative resolution to this matter, the NJCMP made clear that the State of New Jersey would pursue this request since a final resolution was not agreed upon and the NJCMP is required to timely submit this request.

On May 16, 2014 the Department notified OCRM, NSF, and Rutgers University of the Department's intent to review the project for consistency with the enforceable policies of the NJCMP. The Department contended that the project would have both direct and indirect reasonably foreseeable effects on the uses and resources of New Jersey's coastal zone relating to commercial fishing, recreational fishing and boating; marine fish, sea turtles and marine mammals; shipwrecks and historical and archeological resources.

On June 18, 2014, the Department was advised of OCRM's concurrence that the project is considered federally funded assistance to a state entity and is therefore, subject to Subpart F requirements of the CZMA Federal Consistency regulations. However, OCRM ultimately denied the Department's review request due to untimeliness and OCRM did not address the Department's analysis of the project's reasonably foreseeable effects.

On June 25, 2014 the Department provided OCRM with information demonstrating that the request was timely and requested a reconsideration of the denial decision.

On July 1, 2014 the project commenced.

On July 3, 2014, the Department filed a complaint in federal District Court seeking injunctive and declaratory relief. On July 10, 2014 the District Court denied the Department's complaint, but issued a temporary injunction to afford the Department an opportunity to appeal. The Department subsequently filed an appeal to U.S. Court of Appeals for the Third Circuit (Third Circuit). On July 14 2014, the Third Circuit denied the Department's appeal. On August 12, 2014 the matter was dismissed from District Court without prejudice.

In August 2014, the project was ultimately cancelled due to mechanical issues with the survey vessel, *R/V Marcus G. Langseth*.

On December 22, 2014, the Division received NSF's request for consistency concurrence for a similar project during the period of June to August 2015. The request included a report entitled,

“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” prepared for Lamont-Doherty Earth Observatory and the National Science Foundation’s Division of Ocean Sciences, prepared by LGL Ltd., environmental research associates, and dated December 18, 2014 (Amended EA). Pursuant to 15 CFR Section 930.41, the Division has 60 days to provide a determination and may request an extension period of 15 days or less.

On February 11, 2015 the Department issued a 15 day extension request extending the Department’s decision deadline to March 6, 2015.

Analysis

The following analysis is based on New Jersey’s Rules on Coastal Zone Management, N.J.A.C. 7:7E-1.1 et seq., as amended July 15, 2013. The Department relied on the study’s Programmatic Environmental Impact Statement, dated June 2011 (PEIS), site-specific draft Environmental Assessment dated, December 2013 (EA), and the Amended EA. The Department also considered numerous and significant comments received as part of the Department’s public comment period for this determination.

For purposes of CZMA review, the Department must determine whether an activity will affect a coastal use or resource. This Department’s analysis is embodied in Department published guidance.¹ Coastal effects are defined under National Oceanic and Atmospheric Administration (NOAA) regulations as any reasonably foreseeable effect on any coastal use or resource resulting from a Federal agency activity, Federal license, or permit activity. Effects are not just environmental effects, but also include effects on coastal uses. Effects include both direct effects, which result from the activity and occur at the same time and place as the activity, and indirect (cumulative and secondary) effects that result from the activity and are later in time or farther removed in distance, but are still reasonably foreseeable. The Department’s foreseeability test applies to activities and uses or resources that occur outside a State’s coastal zone, so long as the uses or resources impacted are uses or resources of a State’s coastal zone.

The Department relied on the study’s Programmatic Environmental Impact Statement, dated June 2011 (PEIS), sitespecific draft Environmental Assessment dated, December 2013 (EA), and the draft Amended EA,dated December 2014(Amended EA). The Department also considered numerous and significant comments received as part of the Department’s public comment period for this determination.

In evaluating this project, the Department also looked to other sources to define “foreseeability.” Black’s Law Dictionary (5th Ed.) defines foreseeability as “the reasonable anticipation that harm or injury is a likely result of acts or omissions.” Thus, the test is whether the impact is reasonably related to the activity, not whether an impact is more likely than not to occur.

¹ Federal Consistency in New Jersey, dated September 8, 2010. Available at http://www.state.nj.us/dep/cmp/fc_guidance.pdf

N.J.A.C. 7:7E-3.4 Prime Fishing Areas

Both the project location and the timeframe will foreseeably adversely affect New Jersey's prime fishing areas. The project area will see high commercial and recreational activity off the coast of New Jersey during the study period. The project's timeframe coincides with a period of high to peak population abundance of several commercially and recreationally important fish species at identified prime fishing areas.

Prime fishing areas include tidal water areas and water's edge areas, which have a demonstrable history of supporting a significant local intensity of recreational or commercial fishing activity. These areas include all coastal jetties, groins, public fishing piers or docks, and artificial reefs. Prime fishing areas also include features such as rock outcroppings, sand ridges or lumps, rough bottoms, aggregates such as cobblestones, coral, shell and tubeworms, slough areas and offshore canyons. Prime fishing areas also include areas identified in "New Jersey's Recreational and Commercial Fishing Grounds of Raritan Bay, Sandy Hook Bay and Delaware Bay and The Shellfish Resources of Raritan Bay and Sandy Hook Bay," Figley and McCloy (1988), and those areas identified on the map titled, "New Jersey's Specific Sport Ocean Fishing Grounds."

The project is located off the coast of New Jersey, extending 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. This location is offshore from some of New Jersey's most important fishing ports, including: Barnegat Light, Atlantic City, and Point Pleasant. Pursuant to the aforementioned "New Jersey's Specific Sport Ocean Fishing Grounds" map, a portion of the proposed survey area is a State-recognized productive and historical fishing area known as "The Fingers." Contrary to the portrayal in the Amended EA, areas beyond State waters are heavily utilized by New Jersey's commercial and recreational fishing industry. It should also be noted that according to National Marine Fisheries Service data, New Jersey's commercial and recreation fisheries are some of the most productive, highest grossing and employ more people than other states in the Mid-Atlantic and along the Atlantic Coast. Lastly, there is at least one known shipwreck, *Lillian*, within the project area that is popular with scuba diving and spearfishing enthusiasts.

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 is also heavily utilized by recreational fishermen. In combination, both commercial and recreational sectors 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.

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.”² A reduction in harvestable stock would result in further impacts to New Jersey’s commercial fisheries.

While seismic surveys are not expressly prohibited pursuant to the N.J.A.C. 7:7E-3.4(b)2, based on studies examining seismic survey impacts, it is reasonably foreseeable that the project would affect fishery distribution, movement, migration and spawning at identified prime fishing areas. This also foreseeably results in adverse impacts to the high productivity of New Jersey’s commercial and recreational fishing industry. In conclusion, the project is found to be inconsistent with prime fishing areas rule, N.J.A.C. 7:7E-3.4, due to the foreseeable effect on utilization of prime fishing areas.

N.J.A.C. 7:7E-8.2 Marine Fish and Fisheries

Both the project location and the timeframe will foreseeably affect New Jersey’s fisheries. The project area and timeframe sees consistently high commercial and recreational activity based out of New Jersey. The Department finds the study inconsistent with the NJCMP for the following reasons: research indicates adverse impacts to fisheries are likely and New Jersey’s rules discourage activities that adversely impact the natural functioning of marine fish; NSF’s failure to minimize or mitigate for adverse impacts to a commercially important fishery, which is inconsistent with NSF’s own guidance; National Marine Fisheries Service (NMFS) findings and guidance; and the significant concerns raised by the Department’s stakeholders, including members of New Jersey’s commercial and recreational fishing industry.

Numerous studies identify responses of fish to high energy sound. Studies have shown that 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, 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 changes to schooling behavior, swimming speeds, water column location and sound avoidance. Studies have also demonstrated declining catch rates for a number of commercial fisheries during seismic testing activities. For example, Arill Engas, et al., found that catch rates fell within the seismic shooting region and surrounding areas immediately after shooting started and continued after shooting ended.³ More recently, Svein Løkkeborg, et al., highlighted that “reduced catches on fishing grounds exposed to seismic survey activities have been demonstrated.”⁴ 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.⁵ Based on this information, it is reasonably foreseeable that the project will adversely impact New Jersey’s marine fish and fisheries resources.

² 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.

³ A. Engas, S. Løkkeborg, E. Ona and A.V. Soldad, 1996. Effects of Seismic Shooting on Local Abundance and Catch Rates of Cod (*Gadus morhua*) and Haddock (*Melanogrammus aeglefinus*). *Can. J. Aquat. Sci.* 53: 2238-2249.

⁴ 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.

⁵ 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.

Department rules define marine fisheries as one or more stocks of marine fish that can be treated as a unit for the purposes of conservation and management, and which are identified on the basis of geographical, scientific, technical, recreational and economic characteristics. Any activity that would adversely impact the natural functioning of marine fish, including the reproductive, spawning and migratory patterns or species abundance or diversity of marine fish, is discouraged.⁶ In addition, any activity that would adversely impact any New Jersey based marine fisheries or access thereto is discouraged. Based on the above cited research and lack of appropriate mitigation and threat reduction strategies, the Department concludes that any benefits for the study's research are outweighed by the risk posed to New Jersey's coastal resources.

The time of year and project duration (30 consecutive days) are considered significant negative factors that may adversely affect normal fisheries movement, migration and availability. The project's timeframe 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. These impacts could lead to direct and indirect consequences to New Jersey's important commercial and recreational fishing industries. The results of a harvest analysis from May through August 2013 showed that 20% of the commercial black sea bass harvest and 22% of the commercial summer flounder harvest occurred within an area that includes the study area. 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. Generally during any given year from May through August, 67% of the annual black sea bass and 89% of summer flounder are recreationally harvested. Local businesses including restaurants, hotels, bait and tackle shops, and other coastal related trades are dependent on this time period for generating income.

The NSF established guidance for surveys occurring in areas with commercially important fisheries. The PEIS states that "pre-survey planning *would be conducted*...to minimize adverse impacts to the associated populations."⁷ From March 2014 to March 2015, the Department and many other stakeholders, including members of the commercial and recreational fishing industries, made known that the study area and period coincide with commercially important fisheries. Yet, the Amended EA offers no plan, and simply reasserts that impacts are unlikely, or at most temporary. Under the terms of NSF's own guidance, the NSF is obligated to work with the Department and other stakeholders to minimize harms when commercially important fisheries are present. The Department has repeatedly raised concerns that NSF's tack of refuting the likelihood of harm is inconsistent with NSF's own guidance that instructs NSF to work collaboratively with stakeholders on the study's scope and mitigation strategies when commercially important fisheries are present. Since commercially important fisheries are present during the proposed study period and area, and the NSF has failed to provide any appropriate mitigation or risk reduction strategies in a pre-survey plan, the Department finds the study poses a foreseeable impact to New Jersey's coastal resources.

⁶ N.J.A.C. 7:7E-8.2(b)

⁷ PEIS, 3-49 (June 2011) (emphasis added).

Even though studies identify impacts to fish from high energy sound, the Department recognizes the science is variable, with research documenting a variety of impacts. Both the Department and NSF have explored peer-reviewed literature regarding seismic activities' various impacts on fish. Quantifying impacts to New Jersey's marine fish and fisheries impacts is difficult because of the various findings and quality of research. However, the difficulty to quantify impacts is a poor excuse not to take necessary steps to more appropriately address the issue. The National Marine Fisheries Service concluded as such in a letter to NSF, dated June 18, 2014. The letter states that because of the lack of scientific consensus within current research, future seismic studies should include additional monitoring and planning to mitigate for potential impacts. The Department has steadfastly held that NSF is obligated to incorporate fisheries monitoring and mitigation as part of the study's current scope because of the lack of scientific consensus.

Various new studies concerning effects of sound on marine fish and fisheries are summarized in the Amended EA. According to the Amended EA, the information presented in the studies did not affect the conclusion that the project would not result in significant impacts on populations despite possible changes in behavior and other non-lethal, short-term, temporary impacts, and injurious or mortal impacts on a small number of individuals within a few meters of high-energy acoustic source. In reviewing this information, the Department has determined there is insufficient evidence to support the conclusion that impacts on New Jersey's coastal fishery resources are insignificant and unlikely to occur.

Despite the Amended EA's consideration of impacts to New Jersey's marine fish and fisheries, the Department contends that there is insufficient information to conclude that there will be insignificant impacts to New Jersey's marine fish and fisheries. Moreover, the NSF's own failure to provide appropriate mitigation violates NSF's own agency guidelines embodied in the PEIS. Therefore, the project is found to be inconsistent with the Marine fish and fisheries rule, N.J.A.C. 7:7E-8.2.

N.J.A.C. 7:7E-3.38 Endangered or Threatened Wildlife or Plant SHSpecies Habitats

Despite the Amended EA's consideration of impacts to sea turtles and marine mammals and the proposed monitoring and mitigation measures, the Department contends that there is insufficient information to conclude that there will be insignificant impacts to the habitat of New Jersey's endangered and threatened wildlife species.

Endangered or threatened wildlife or plant species habitats are terrestrial and aquatic, including marine, estuarine, or freshwater,, areas known to be inhabited on a seasonal or permanent basis by, or to be critical at any stage in the life cycle of, any wildlife or plant identified as "endangered" or "threatened" species on official Federal or State lists of endangered or threatened species, or under active consideration for State or Federal listing. Development of endangered or threatened wildlife or plant species habitat is prohibited unless it can be demonstrated, through an Endangered or Threatened Wildlife or Plant Species Impact Assessment as described at N.J.A.C. 7:7E-3C.2, that endangered or threatened wildlife or plant

species habitat would not directly, or through secondary impacts on the relevant site or in the surrounding area, be adversely affected.

New Jersey's Atlantic Ocean waters act as a migration corridor for several endangered sea turtle species which transit between habitats farther north and south. More specifically, the marine waters off New Jersey shore provide critical migration and feeding areas for sea turtle species such as Kemp's Ridley, Green, Atlantic Loggerhead and Leatherback turtles. 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 conclusively 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).

Numerous sea turtle sightings have been reported from June through September in and around Barnegat Bay. It is believed that the sea turtles are utilizing the area as feeding grounds. It is believed that sea turtles are using the areas as feeding grounds. Therefore, sea turtles may be migrating through the project area during the critical June to 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 injury or mortality due to ship strikes. Although the Amended 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, remains unclear. Many of the sea turtles migrating near New Jersey during the 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 or avoid the array due to their size will be reduced.

In addition to several turtle species, New Jersey's Atlantic Ocean waters act as a migration corridor for several endangered marine mammals which transit between habitats farther north and south. Listed marine mammals found year round off of New Jersey include humpback and fin whales (GMI, Inc. 2010). Acoustic detections of whale calls by Geo-Marine, Inc. confirmed the presence of North Atlantic right whales within 37 km of the shoreline, approximately between Seaside Park and Stone Harbor, during all seasons, concluding that some individual North Atlantic right whales occur in the nearshore waters off New Jersey either transiently or regularly. Similarly, the Department's Endangered and Nongame Species Program has records of harbor porpoise occurring in the project vicinity and during the project period. Despite the time of year and 30 day duration, the project would still impact individual whales and other marine mammals remaining in the area.

Marine mammals, especially cetaceans, would be adversely affected by noise created during seismic testing activities. Cetaceans' primary means of communication, navigation, locating food and mates, and avoiding predators and other threats is through their sense of hearing. Cetaceans' sense of hearing 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 would adversely impact marine mammals by disrupting otherwise normal behaviors associated with migration, feeding, alluding predators, resting, and breeding, etc. Any

alterations to these behaviors would 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 from survey activities may become more susceptible to disease or predation by species which are not directly affected themselves. Furthermore, the project will add to an existing and increasing cacophony of anthropogenic noise pollution which may already be negatively impacting species.

The Endangered or threatened wildlife or vegetation species habitats rule, N.J.A.C. 7:7E-3.38, seeks to protect endangered and threatened species which are facing possible extinction in the State in the immediate future due to loss of suitable habitat, and past overexploitation through human activities or natural causes. Extinction represents a loss of biodiversity, which would adversely affect education, research and the interrelationship of all living creatures within the coastal ecosystem. Despite the Amended EA's consideration of impacts to sea turtles and marine mammals and the proposed monitoring and mitigation measures, the Department contends that there is insufficient information to conclude that there will be insignificant impacts to the habitat of New Jersey's endangered and threatened wildlife species. Therefore, the project is found to be inconsistent with the Endangered or threatened wildlife or plant species habitats rule, N.J.A.C. 7:7E-3.38.

Considerations

The New Jersey Department of Environmental Protection opposes this study as currently proposed. We respectfully request that if NSF proceeds with the study, the NSF consider the following recommendations to be included in the study.

The Department proposes a September to October timeframe. This timeframe would most likely reduce adverse impacts to New Jersey's prime fishing areas, marine fish and fisheries, and endangered or threatened wildlife habitats. In addition, this timeframe would likely avoid hazardous weather conditions and take place outside of 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 therefore, altering the project during September to October would likely result in no net difference for those species. Furthermore, the geologic formations which this project proposes to map are static and not likely to change if this project is rescheduled to September to October in a year in which the personnel and equipment essential to meet the overall project objectives are available.

If the project cannot be postponed to this year's September to October period, the Department recommends the study be rescheduled to September to October of another year. According to the Amended EA, alternative timeframes for the project were considered but deemed unworkable due to personnel and equipment needs, as well as weather conditions. The Amended EA proffers that the survey vessel is booked into the foreseeable future, however documentation demonstrating such was not provided. Following the cancelled 2014 survey, the Department finds it remarkable and expresses regret that the vessel is being rescheduled for the identical time period in 2015.

If the project is to take place during the proposed June to August timeframe, the Department recommends the inclusion of a field study focused on assessing the project's impacts on fisheries and marine mammals. More specifically, the Department recommends that the study include monitoring of fish behavior, abundance and catch rates. The monitoring should start a minimum of one month prior to project commencement, continue through the duration of the project, and last a minimum of one month after project cessation.

The Department also recommends that an aerial survey be performed over the project area just prior to the vessel leaving its home port to facilitate marine species protection. The flyover would determine if there is a feeding, static, or migrating population of sea turtles or marine mammals. This is especially important for North Atlantic right whales and harbor porpoise in the vicinity of the project area, which these species have a lower recommended PTS threshold level, according to new National Marine Fisheries Service guidelines, currently undergoing public comment. 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.

In addition to the flyover, the Department recommends the incorporation of a QA/QC plan that would designate one independent person as responsible for ensuring the cessation of sound producing activities if sea turtles or marine mammals 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 sea turtles and send all relevant occurrence information to the Department's Endangered and Nongame Species Program for inclusion into the Biotics database.

The Department is disappointed this proposed seismic study takes a myopic view on research needs. While the study's focus is on climatology and geology, several important issues touch on other areas of research needs, including aquatic biology and fisheries management. The Department views this as contrary to NSF's mission to promote collaborative work on novel, complex issues. In addition, because of the significant concerns raised by multiple states and stakeholders throughout the United States, the Department sees this as an opportunity for NSF to develop scientifically valid consensus on seismic studies' impacts to marine life.

Conclusion

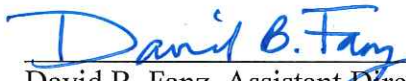
As discussed herein, the Department finds the project inconsistent with the N.J.A.C. 7:7E-3.4 Prime fishing areas, N.J.A.C. 7:7E-8.2 Marine fish and fisheries, and N.J.A.C. 7:7E-3.38 Endangered or threatened wildlife or plant species habitats, due to anticipated, foreseeable adverse impacts to New Jersey's coastal resources. In conclusion, the Department has determined that the project is inconsistent with the Rules on Coastal Zone Management.


The Department views this project as an opportunity to address issues surrounding the impacts of seismic activities on marine life. These issues are consistently raised by a number of stakeholders, including state agencies, members of the commercial and recreational fishing industry, as well as other environmental advocates across various seismic studies. On March 5,

2015, a group of 75 world leading ocean scientists urged President Obama to halt seismic studies for oil and gas exploration because of the “significant, long-lasting and widespread impacts on the reproduction and survival” of threatened whales and commercial fish populations. While this group of prominent scientists focused on seismic studies around oil and gas exploration, it is reflective of the need for further assessments for any study using high-energy sound. If the project proceeds, we urge the NSF to use this study as an opportunity to build scientific consensus on the impacts of high-energy sound on marine life.

Thank you for your attention to and your cooperation with New Jersey’s Coastal Zone Management Program. If you have any questions with regard to this determination, please contact Jessica Cobb of my staff at Jessica.Cobb@dep.nj.gov, at the above address, or at (609) 633-2289. Be sure to indicate the Division’s file number in all communication.

Sincerely,


David B. Fanz, Assistant Director
Division of Land Use Regulation


Date

cc: John Gray, Deputy Chief of Staff
Virginia Kopkash, Assistant Commissioner, Land Use Management
Elizabeth Semple, Division of Coastal and Land Use Planning
Brandon Muffley, Marine Fisheries Administration
Kelly Davis, Division of Fish & Wildlife
Megan Brunatti, Office of Permit Coordination and Environmental Review