GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION

MARK WILLIAMS
COMMISSIONER

A.G. 'SPUD' WOODWARD
DIRECTOR

Mr. Gary D. Goeke, Chief, Regional Assessment Section
Office of Environment (MS 5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, Louisiana 70123-2394

RE: Comments on the Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Areas Draft Programmatic Environmental Impact Statement (EIS)

Dear Mr. Goeke,

Thank you for the opportunity to provide comments on the Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Areas Draft Programmatic Environmental Impact Statement (EIS). As mentioned in our letter dated May 17, 2010 (attached), The Georgia Department of Natural Resources' Coastal Resources Division (GADNR/CRD) is the lead agency responsible for federal consistency coordination with our networked sister agencies.

GADNR/CRD would like thank you for taking several of the comments provided in the May 17, 2010 letter into consideration of the Draft EIS. After further coordination with GADNR/CRD Marine Fisheries Section and GADNR Wildlife Resources Divisions' Nongame Conservation Program, we provide the following additional comments:

Affected Resources and Impact Analysis: Commercial and Recreational Fisheries

The DPEIS finds that a 'negligible percentage' of seafloor within the Area of Interest (AOI) would be disturbed by G&G activities and concludes that seafloor disturbance, would have only a negligible impact on commercial fisheries and no impact at all on recreational fisheries. The DPEIS further states that because BOEM would require prior approval of G&G activities involving seafloor-disturbing activities or placement of bottom-founded equipment or structures, most impacts on commercial and recreational activities are expected to be avoided and thus negligible. Marine species are not evenly distributed and if the small area of disturbance occurs in prime fishing grounds or spawning areas, impacts could be more than negligible. The significance criteria for seafloor disturbances on commercial and recreational fisheries should be increased to Negligible to Minor for commercial fisheries and Negligible for recreational fisheries.

The DPEIS finds that active acoustic sound sources, specifically seismic airguns, are likely to produce Minor impacts to commercial species and Negligible impacts to recreational species. Behavior and mortality in fishes as a result of seismic surveys are not well understood and difficult to quantify. Because all fish species show behavioral avoidance for some period of time, the significance criteria for seismic sound sources on both commercial and recreational fisheries should be increased to Minor to Moderate.

ONE CONSERVATION WAY | BRUNSWICK, GEORGIA 31520-8686
912.264.7218 | FAX 912.262.3143 | WWW.COASTALGADNR.ORG

The DPEIS finds that accidental fuel spills are likely to produce Negligible impacts to commercial and recreational fisheries since accidental spills are likely to be small in size. Any oil spill, no matter how small the impact area, may tarnish commercial fisheries enough that the public may hesitate from buying the product for fear of contamination and not knowing where it was caught. Similarly, recreational fisheries would also be expected to decline. The significance criteria for commercial and recreational fisheries should be increased to Minor.

Alternatives and Mitigation Measures: Commercial and Recreational Fisheries

The South Atlantic Fishery Management Council (SAFMC) has designated several Habitat Areas of Particular Concern (HAPCs) within the Area of Interest (AOI) to protect deepwater coral communities from physical damage by fishing gear. The DPEIS states that because BOEM would require prior approval of G&G activities involving seafloor-disturbing activities, drilling discharges, or placement of bottom-founded equipment or structures, impacts on sensitive benthic communities such as coral, live/hard bottom, chemosynthetic, and deepwater canyons communities are expected to be avoided. A more effective and reassuring solution to case-by-case review of proposed individual actions would be for BOEM to include a prohibition of G&G activities within HAPCs in their Preferred Alternative.

Impact-producing factors (IPCs), most notably seafloor disturbance and seismic sound activities, are of most significance on commercial and recreational fisheries when conducted within 20 nautical miles (nm) of the shoreline. The significance criteria of these IPFs would be greatly reduced if BOEM would include a prohibition of seismic activities and seafloor disturbances within 20 nm of the Georgia shoreline in their Preferred Alternative.

Alternatives and Mitigation Measures: Marine Mammals

The mitigation measures outlined in Alternative A are not as protective of coastal resources as could reasonably be expected given the magnitude of reasonably foreseeable impacts. Alternative B, which includes expanding the time-area closure for North Atlantic right whales and nesting sea turtles, separation between simultaneous seismic airgun arrays, and passive acoustic monitoring, is likely to mitigate more impacts to marine mammals from proposed geological and geophysical activities than Alternative A. While acknowledging that Alternative B includes mitigation measures that would add direct costs for operators undertaking G&G activities in the AOI (e.g. staff to perform passive acoustic monitoring) as well as impose indirect costs (e.g. inconvenience of deploying when and where an operator desires), it still falls short of offsetting or balancing protection of the coastal environment with competing coastal uses.

The most significant impact-producing factor (IPF) from G&G activities is active acoustic sound sources from seismic airgun arrays and their anticipated impacts on marine mammals. Even though potential impacts of anthropogenic noise on baleen whales are poorly understood (e.g., Southall et al. 2009[i]), the Atlantic Ocean waters along the Southeast U.S coast are the only known calving grounds for endangered North Atlantic right whales. As such, potential impacts to the right whale calving habitat need to be evaluated conservatively. The following mitigation measures should be included in BOEM's Preferred Alternative.

Time-Area Closure for North Atlantic Right Whales

The geographic extent of Alternative A does not adequately encompass the area used by North Atlantic right whales in the Southeast and Mid-Atlantic U.S. Georgia DNR supports the expanded time-area closure for seismic air gun arrays and non-airgun high-resolution geophysical (HRG)

surveys proposed in Alternative B with the following caveats:

- Deep stratigraphic and shallow test drilling should not be authorized within the right whale time-area closure due to the high source levels associated with drillships during drilling (up to 191 re 1 µPa; Chapter 3, Page 3-28).
- The geographic extent of the time-area closure proposed in Alternative B should be expanded an additional 10 nautical miles (NM) eastward *for seismic air gun surveys* to further reduce ensonification of right whales and their habitat. BOEM predicts that acoustic energy from seismic air gun arrays may propagate up to 12,737 m (~7 NM) at sufficient received pressure levels to cause Level B harassment to whales (i.e., 160 dB re 1 µPa; Appendix D, Table D-21).
- The geographic extent of the time-area closure proposed in Alternative B is sufficient to limit impacts from electromechanical acoustic devices, given their shorter propagation distances (i.e., a 10 NM eastward buffer is not necessary for electromechanical acoustic devices).
- NMFS is currently revising right whale critical habitat boundaries. Unfortunately the revised boundaries are not available at this time. However, previous modeling and telemetry studies suggest that right whales utilize all Atlantic Ocean waters within 20-30 NM of shore from Cape Canaveral, FL and northward along the GA, SC and NC coast (Keller et al. 2006[ii], Garrison 2008[iii], Good 2008[iv], Schick et al. 2009. The time-area closure proposed in Alternative B encompasses the majority of right whale habitat delineated by these studies. Any subsequent expansion of right whale critical habitat by NMFS in the Southeast and Mid-Atlantic U.S. should be reflected in the proposed time-area closure, along with a 10 NM eastward buffer for seismic air gun surveys.

High Resolution Geophysical (HRG) Survey Protocol for Renewable Energy and Marine Mineral Sites

Georgia DNR supports an exemption within the right whale time-area closure for non-air gun HRG surveys for renewable energy and marine minerals with the following caveat:

- Non-air gun HRG surveys proposed within the right whale time-area closure should be permitted on a case-by-case basis. BOEM should require applicants to utilize acoustic devices that operate at frequencies higher than 22 kHz when operationally feasible. Right whales are likely unable to hear sounds above 22 kHz (Parks et al. 2001[v]).

Guidance for Vessel Strike Avoidance

Vessel collisions are a leading cause of North Atlantic right whale mortality. Reducing vessel speeds to 10 kts or lower likely reduces the risk of whale mortality (Pace and Sliber 2005[vi], Vanderlaan and Taggart 2007[vii]). Georgia DNR supports the vessel strike avoidance measures outlined in Alternative A and B with the following caveats:

- All vessels 65 ft or greater, including federal and federal contract vessels, should travel at speeds of 10 kts or less within the right whale time-area closure to reduce risk of right whale collisions.
- Vessels less than 65 ft in length should reduce their speed within the right whale time-area closure when traveling at night and during other periods of reduced visibility.
- All vessels operating within the right whale time-area closure should have a properly installed and operational Automatic Identification System (AIS) on board. The vessel call sign, vessel name and BOEM permit number should be provided to NMFS prior to entering the time-area closure.
- North Atlantic right whales are the primary species of whale observed within the portion of the time-area closure located offshore of SC, GA and FL (Georgia DNR, *unpublished data*).

As such, vessel crews should assume that all whales observed within the time-area closure offshore of SC, GA and FL are likely North Atlantic right whales and maintain 1,500 ft separation accordingly.

Acoustic Modeling and Marine Mammal Incidental Take Methodology

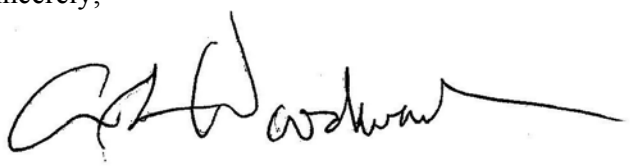
The animal behavior values selected for right whales in the AIM model were taken from studies of right whale foraging in the Northeast U.S. and Canada and do not accurately reflect behavior and habitat in the Southeast U.S. Right whales are not known to feed in the Southeast U.S. and their Southeast U.S. habitat is considerably shallower (10-30 m) than the dive values selected in the AIM model (113-130 m; Appendix E, page E-32). Nousek-McGregor (2010[viii]) found that right whales tagged in the Southeast U.S. either submerged immediately below the surface for 2 min on average, or dove to the bottom to a depth of only 10-20 m for 7 min on average. Surface intervals in that study averaged 1-2 min, although we have documented surface intervals in excess of 30 min in the case of females with calves (Georgia DNR, *unpublished data*). BOEM should re-run the AIM model for right whales with values that more accurately reflect right whale behavior and habitat in the Southeast U.S. Any resulting changes in take estimates should be highlighted in the Final EIS.

Alternatives and Mitigation Measures: Sea Turtles

GADNR supports the proposed time-area closure offshore of Brevard County, FL outlined in Alternative B to protect nesting loggerhead sea turtles.

In summary, the State of Georgia appreciates the opportunity to review the Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Area Draft Programmatic EIS. The State of Georgia is in support of the proposed activities provided that negative impacts to living marine resources and their habitats are fully addressed and minimized or eliminated. Toward that end, we ask that comments provided herein are given full consideration and incorporation into the final EIS. If you have questions concerning these comments, please contact me at (912) 264-7218.

Sincerely,



A.G. "Spud" Woodward
Director

enclosures: May 17, 2010 Comment Letter

cc: Brad Gane, GADNR/CRD Ecological Services Section Chief
Pat Geer, GADNR/CRD Marine Fisheries Chief
Jason Lee, GADNR/WRD Nongame Conservation Program Manager

[i] Southall, B.L., A.E. Bowles, W.T. Ellison, J.J. Finneran, R.L. Gentry, C.R. Greene Jr., D. Kastak, D.R. Ketten, J.H. Miller, P.E. Nachtigall, W.J. Richardson, J.A. Thomas, and P.L. Tyack. 2007. Marine mammal noise exposure criteria: Initial scientific recommendations. Aquatic Mammals 33:411-521.

[ii] Keller, C. A., L. I. Ward-Geiger, W. B. Brooks, C. K. Slay, C. R. Taylor, and B. J. Zoodsma. 2006. North Atlantic right whale distribution in relation to sea-surface temperature in the southeastern United States calving grounds. Marine Mammal Science 22:426-445.

[iii] Garrison, L.P. 2007. Defining the North Atlantic Right Whale Calving Habitat in the Southeast United States: an Application of a Habitat Model. NOAA Technical Memorandum NMFS-SEFSC-553.

[iv] Good, C.P. 2008. Spatial Ecology of the North Atlantic Right Whale (*Eubalaena glacialis*). Dissertation, Duke University.

[v] Parks, S.E., D.R. Ketter, J.T. O'Malley, J. Arruda. 2007. Anatomical predictions of hearing in the North Atlantic right whale. The Anatomical Record 290:734-44.

[vi] Pace, R.M. and G.K. Silber. 2005. Simple analyses of ship and large whale collisions: Does speed kill? Abstract, Sixteenth Biennial Conf. Biol. Marine Mammals, San Diego, December 2005.

[vii] Vanderlaan, A.S.M. and C.T. Taggart. 2007. Vessel collisions with whales: the probability of lethal injury based on vessel speed. Marine Mammal Science 23: 144-156.

[viii] Nousek-McGregor, A.E. 2010. The Cost of Locomotion in North Atlantic Right Whales *Eubalaena glacialis*. Duke University, Dissertation.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

SONNY PERDUE
GOVERNOR

CHRIS CLARK
COMMISSIONER

May 17, 2010

Mr. Joseph Christopher, Regional Supervisor
Leasing and Environment (MS 5410)
Minerals Management Service
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

RE: Atlantic G&G PEIS Scoping Comments

Dear Mr. Christopher:

Thank you for the opportunity to provide comments on the scope of the Programmatic Environmental Impact Statement (PEIS) for Geological and Geophysical (G&G) Activities in the South Atlantic Planning Area. The State of Georgia supports environmentally sound efforts to expand renewable energy opportunities and to increase domestic oil and gas reserves of the United States. However, there are many issues that must be addressed when developing a Programmatic plan involving Georgia's offshore waters.

Under Georgia's Coastal Management Program, the Georgia Department of Natural Resources' Coastal Resources Division (GADNR/CRD) is the lead agency responsible for federal consistency coordination with our networked sister agencies. General information requests and dissemination will be handled by GADNR/CRD. Several other GADNR Divisions focus on discrete groups of marine resources and have technical specialists that would like to serve as Coordinating Agencies to assist in the development of the G&G PEIS.

The GADNR Wildlife Resources Divisions' (GADNR/WRD) Nongame Section would like to serve as Georgia's Coordinating Agency for Marine Mammals, Sea Turtles, and Coastal and Marine Birds. Their concerns and recommendations are based on direct field observations from staff biologists and on published scientific literature. These comments are in response to, and their understanding of, potential seismic activity as described in documents provided by the Mineral Management Service (MMS) during their Atlantic PEIS Public Scoping Meeting in Savannah on April 23, 2010.

2 MARTIN LUTHER KING, JR. DRIVE, S.E., SUITE 1252 | ATLANTA, GEORGIA 30334-9000
404.656.3500 | FAX 404.656.0770 | WWW.GADNR.ORG

Marine Mammals:
In the documents "Recommended Mitigation Measures for Cetaceans during Geophysical Operations," and "Seismic Surveys and Marine Mammals" authored in part by the International Association of Geophysical Contractors (IAGC), minimum mitigation measures are described. These measures are recommended by IAGC in the absence of any "operation-specific risk assessment to the contrary," and include 1) a visually monitored 500m Exclusion Zone around the seismic tow arrays, and 2) Soft Start (ramp up) of seismic pulses from an array to allow cetaceans to leave the area. In the case of the ocean waters off of the coasts of South Carolina, Georgia, and northeast Florida, those measures, along with the addition of "future technology" Passive Acoustic Monitoring (PAM), will not be adequate to address the potential risk of geologic and geophysical activities on the population of North Atlantic right whales (Eubalina glacialis) seasonally inhabiting those waters. This entire population of this exceptionally rare great whale is approximately 400 individuals, and less than one hundred of those are females old enough to be capable of reproduction.

This specific area of the Western Atlantic is the only known calving ground for this species. Along with migrating pregnant females, as much as 50% of the entire population of the right whale travels to the coastal waters of the southeastern states annually from summer feeding grounds off of New England and Canadian Maritime provinces. While there has been some research on toothed whales in the Pacific Ocean and Gulf of Mexico, the sensitivity of baleen whales (mystesites) to acoustic activity similar to that generated in the low frequency range, 5-200 Hz, by air-gun array seismic techniques is currently unknown. Right whales are believed to communicate in the 5-5000 Hz range.

Prior to initiation of any seismic activity, significant additional mitigation measures will be required to meet the needs of these whales, and to bring G&G activity into compliance with federal laws that protect them (ESA, MMPA).

GADNR Considerations and Need for right whales to be included in Mineral Management Service's DPEIS:

1. Ship-based visual detection mitigation techniques for right whales are inadequate due to the animal's ability to lie just under the surface and remain undetected.
2. Communication between adult female right whales and their calves is either non-auditory or at a frequency not detected with conventional acoustic equipment. As such, towed passive acoustic arrays as described by AIGC will not be adequate in and around the calving grounds to detect the most important population demographic, adult females.
3. Geologic and Geophysical activity, including seismic testing, may have dramatic and potentially lethal impacts on the behavior and health of the population of right whales. The effects of air-gun arrays used during geophysical seismic surveys on baleen whales are not well known.
4. A thorough understanding of acoustic sensitivities of baleen whales does not exist and is needed.

5. Right whales do not move out of the way from approaching vessels, making them extremely vulnerable to ship strike, particularly from larger ships traveling faster than 10 knots.
6. The deployment of sensory arrays during seismic activity in the Atlantic may cause a physical threat to right whales through creating a potential entanglement source in the array, and by ship strike risk from associated vessel transects.
7. Right whales are present in southeastern U.S. waters from shore to a minimum of 40 nm seaward of land from November 15-April 15 every year. This area includes, but is more extensive than the designated Critical Habitat at described in the Right Whale Species Recovery Plan.

8. The North Atlantic right whale population is severely compromised from historic hunting pressure but remains suppressed. Entanglement in fishing gear and collision with ships remain significant threats. The continued existence of this species is strongly dependent on the continued integrity of the calving grounds, as well as regulation to protect them throughout their migratory year.

Preliminary GADNR Recommendation Regarding Right Whales:

Temporally restrict any Geologic and Geophysical activities, including seismic studies and any ship related activities, to a period outside of the right whale winter season off of the southeastern US coast, from November 15 to April 15. The minimum standard mitigation measures described by IAGC are not adequate to protect right whales.

Sea Turtles:

Sea turtles are found in Georgia's coastal waters year round. The species composition and abundance of sea turtles varies seasonally based on water temperature and migratory patterns. The shallow continental shelf waters off the Georgia coast are important developmental foraging habitat for juvenile loggerhead, Kemp's Ridley and green sea turtles. Juvenile sea turtles are less abundant in winter when they move offshore to warmer waters near the edge of the Gulf Stream. Leatherback turtles are found in Georgia's coastal waters during the winter months foraging on jellyfish. Leatherback densities increase in the spring (April-May) as they migrate along our coast on their way to feed in the north Atlantic during the summer. During the nesting season (April through August), loggerhead nesting females are concentrated within 10 miles of shore. Loggerheads nest an average of 4.5 times per season on a 9-13 day cycle. Loggerhead turtles remain relatively inactive during the inter-nesting period while they prepare for each nesting cycle (ovulate and shell eggs, return to nesting beach).

GADNR Considerations and Need for sea turtles to be included in Mineral Management Service's DPEIS:

1) The Loggerhead turtle population on the Georgia coast is compromised by depressed numbers but believed to be stable at this time.

2) Disruption of nesting and foraging activity from seismic survey noise is a real possibility.

3) An increase boat collision mortality from support vessels associated with seismic surveys.

The effects of air gun arrays used during geophysical seismic surveys on sea turtles are not well known. Petroleum seismographic cannons produce intense noise at frequencies within the auditory sensitivity of sea turtles. Pressure waves from air gun arrays used during geophysical testing is not likely to cause death or life-threatening injury to sea turtles. In addition, it is not likely to result in permanent destruction of habitat or permanent displacement of sea turtles from foraging habitats. However, controlled studies on captive turtles showed increased swim speed and erratic behavior when sea turtles were subjected to air gun frequencies and sound levels (Ohara and Wilcox 1990). During the nesting season (April through August), loggerhead nesting females are concentrated within 10 miles of shore and are known to be relatively inactive while they produce eggs for nesting. Seismic surveys during the nesting season could result in increased movement of nesting females and disrupt physiological processes necessary to produce eggs for reproduction.

Sea turtle stranding data shows an increase in the number and proportion of sea turtles stranding in Georgia with boat collision injuries over the last 20 years. Vessels engaged in seismic activity generally travel at low speed (5 knots) and are generally not considered a threat to sea turtles. However, any significant increase in vessel traffic from support operations could result in significant impacts to sea turtles, particularly during the nesting season when loggerhead females are concentrated along the coast.

Preliminary GADNR Recommendation for Sea Turtles:

Surveys should be designed to eliminate noise in the near shore area (< 10 nm from shore) from May through August to ensure nesting activity is not disrupted.

To summarize, the Programmatic Environmental Impact Statement should address several issues related to sea turtles including: 1) the potential disruption of loggerhead nesting activity by seismic surveys and 2) potential increase in sea turtle mortality from increased vessel traffic associated with seismic surveys.

The GADNR/WRD Nongame Program Coordinating Agency contact is:

Mr. Brad Winn
GADNR/WRD Nongame Program
One Conservation Way, Ste 328A
Brunswick, Georgia 31520

912-262-3128
Brad.Winn@dnr.state.ga.us

Commercial and Recreational Fisheries:

The GADNR Coastal Resources Division (GADNR/CRD) Marine Fisheries Section would like to serve as a Georgia's Coordinating Agency for Commercial and Recreational Fisheries. Soft sediments with sporadic outcroppings of limestone colonized by sessile organisms characterize the coastal waters of the Atlantic Ocean adjacent to Georgia. The wide expanse of the continental shelf provides a relatively shallow habitat with a mixture of coarse and sediment bottoms. These sediment types support unique fish assemblages. In addition, live bottom and artificial reefs provide three-dimensional structure for nursery, spawning, and feeding of a number of coastally important fishes.

Nearshore Soft Bottom Habitats:
The nearshore fine sediment habitats are characteristic of low energy areas and result from the transport and deposit of silt and detritus from the inshore marshes. The commercially important white shrimp is found throughout Coastal Georgia and is the predominant species in these habitats. Adults migrate offshore in the spring to spawn and can typically be found out to six nautical miles. Other important species found in these low energy habitats are members of the family Sciaenidae, red drum, spot, Atlantic croaker, whiting, and star drum. In addition, flatfishes such as southern and summer flounders are also common.

Coarse sediment habitats are found in high-energy waters and areas with reduced estuarine influence. Brown shrimp are the most common and important commercial species found in these sediments ranging out nine nautical miles. Rays, sharks, and sea robin species are the common fishes species.

Hard Bottom Habitats:
Further from shore, outcroppings of live bottom provide relief and habitat. Grays Reef National Marine Sanctuary is located 21 nm east of Sapelo Island and is one of the largest near-shore reefs (22 square miles) of the southeastern United States. The encrusting organisms, sponges, and rocky ledges provide a source of food and shelter for numerous recreationally important species, with such finfish as: sharks and rays, groupers, sea basses, snappers, jacks, mackerels, porgies, and numerous schooling species (Atlantic spadefish, Atlantic menhaden, bluefish, cobia, dolphin).

In addition to live bottoms, a network of artificial reefs constructed of various materials ranging from tug boats to concrete occur throughout the coastal waters of Georgia. Encrusting and fouling organisms establish on these materials, which in turn provide food and habitat for invertebrates and small fish, and ultimately creating a complete ecosystem with numerous fishes similar to those found on naturally occurring reefs.

Pelagic Open Water Habitats:
The Gulf Stream is typically 70 nm east of Georgia and its fish assemblages several large shark species (mako and silky), billfishes (marlins, sailfish, and swordfish), herrings, dolphins, and tuna. These species inhabit the water column in depths greater than 200m. These species are highly migratory and important both commercial and recreationally. Floating

seaweed (*Sagassum)* also provides habitat for juvenile fishes and forage opportunities for larger predators.

Impacts:
The predicted impact of G&G activities on fish and invertebrates appears minimal. However, some G&G activities (such as seismic surveys) can produce an avoidance behavior in fishes but studies show large discrepancies (distance) of the affected area. There are small impacts on eggs and larval fishes, but the levels are well below the natural mortality rate of 5-15% per day for most species (Gausland, 2003[1]).

The impact of such surveys on adult fishes is greatest during spawning and migration to spawning areas, and diminishes with distance from the origin. Gausland (2003) suggests
a safe zone of a few kilometers, although no study documented lasting effect on fishing or fish stocks as a result of seismic surveys.

The GADNR/CRD Marine Fisheries Section Coordinating Agency contact is:

Mr. Patrick Geer
GADNR/CRD Marine Fisheries Section
One Conservation Way, Ste. 323
Brunswick, Georgia 31520

912-262-3121
Pat.Geer@dnr.state.ga.us

[1] Gausland, I. 2003 Seismic Surveys Impact on Fish and Fisheries. Report for Norwegian Oil Industry Association (OLF). Stavanger, March 2003. http://www.anp.gov.br/brasil-rounds/round6/guias/SISMICA/SISMICA_R6/biblio/Biblio2004/Ingebret%20Gausland_2003.pdf

In summary, the State of Georgia supports Outer Continental Shelf oil and gas exploration provided that negative impacts to living marine resources and their habitats are fully addressed and minimized or eliminated. The Georgia Department of Natural Resources looks forward to working with the Minerals Management Service and other federal agencies during the development of the Programmatic Environmental Impact Statement for Geological and Geophysical Activities in the South Atlantic Planning Area. If you have questions concerning these comments, please contact Spud Woodward (912-264-7218), Director of the Coastal Resources Division of the Georgia Department of Natural Resources.

Sincerely,

Chris Clark
Commissioner

CC/km

CC: Mr. Spud Woodward, GADNR/CRD
Mr. Brad Winn, GADNR/WRD/Nongame Program
Mr. Pat Geer, GADNR/CRD/Marine Fisheries

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

May 30, 2012

Mr. Gary D. Goeke, Chief, Regional Assessment Section
Office of Environment (MS 5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1202 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

RE: Comments on the Draft Atlantic G&G PEIS

Dear Mr. Goeke,

Thank you for the opportunity to review and provide comments on the Draft Programmatic Environmental Impact Statement (DPEIS) for proposed Geological and Geophysical (G&G) Activities in the Mid-Atlantic and South Atlantic Planning Areas prepared under the direction of the Bureau of Ocean Energy Management (BOEM). The DPEIS provides information and an evaluation of potential environmental effects from geological and geophysical survey activities in Federal waters in the Mid-Atlantic and South Atlantic OCS and adjacent State waters. As South Carolina's coastal management agency, SC Department of Health and Environmental Control's Office of Ocean and Coastal Resource Management (SCDHEC-OCRM) is responsible for ensuring compliance with our state's federally approved coastal management program including federal consistency.

There are numerous coastal resources occurring within and adjacent to South Carolina's coast that could be impacted by the proposed survey activities subject to consistency review by SCDHEC-OCRM. It will be critically important that applicants applying to BOEM for permits to conduct survey activities covered by this DPEIS coordinate with SCDHEC-OCRM to ensure they are fully consistent with our State's Coastal Management Program.

South Carolina's coastal resources are vitally important to our State's overall economy. Tourism and commercial and recreational fishing are significant coastal activities. The G&G survey activities described in the DPEIS could result in reasonable foreseeable effects on South Carolina's coastal resource and uses which would initiate the consistency review process.

Some of the resources occurring in South Carolina's Coastal Zone subject to consistency review include historic and culturally important sites, sea turtles, avian species, marine mammals, nearshore and offshore habitats which support numerous species of commercial and recreational importance to South Carolina

SCDHEC-OCRM appreciates the opportunity to review and comment on this DPEIS and looks forward to working with BOEM and future applicants seeking G&G permits.

Yours truly,

Barbara Neale

Barbara Neale
Senior Program Analyst
SCDHEC-OCRM

cc: Mrs. Carolyn Boltin-Kelly, Deputy Commissioner, SCDHEC-OCRM

Thank you for the opportunity to participate as a cooperating agency on development of the Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Areas Draft Programmatic Environmental Impact Statement (PEIS). We appreciate the effort towards collaboration in fulfilling obligations under the National Environmental Policy Act for the proposed activities, in light of NOAA's special expertise with regard to trust resources under our jurisdiction.

During the preliminary draft phase of PEIS development, we were afforded ample opportunity to provide such expertise and enjoyed a productive working relationship with BOEM. Many of our concerns were appropriately addressed in response to dialogue with BOEM during that period. Please contact Ben Laws at (301) 427-8425 with any questions related to these comments.

After review of the draft PEIS, we provide the following additional comments:

Protected Species

- NMFS' Level A harassment criteria are for both pulsed and continuous sounds. There are numerous locations where the PEIS states that Level A criteria are specific to pulsed sounds, with the first example found in the summary on page xiii. Please revise accordingly.
- The additional language regarding jurisdictional authority included in the PEIS is helpful (notably, additions to Sections 2.3, 3.3.1, 3.4.1). However, it remains unclear what jurisdictional relationship may exist between BOEM and COE authorities as relates to survey activities in State waters. Our concern is that consultations required by law for protected species be conducted as appropriate, whether by BOEM, COE, or individual operators. The PEIS should include sufficient information to clarify for the reader what entity would be responsible for requesting required consultations under various scenarios (e.g., site characterization surveys for renewable energy projects in state waters).

Example questions for clarification: Section 3.3.1 states that BOEM does not permit site characterization surveys but requires the results of these surveys to be made available before a COP may be approved. Are these surveys permitted by COE in state waters? What if they occur outside of state waters – is there any permitting authority there? These surveys could potentially be non-compliant with the MMPA unless consultation regarding incidental take were conducted, but there is no apparent mechanism by which operators are made aware of this requirement. How and when do results of COE-permitted prospecting surveys, as described in Section 3.4.1, come into BOEM's permitting process?

- The PEIS references degrees of take avoidance that may be accomplished through permutations of time-area closure for right whales (e.g., Section 2.1.2.1, "avoid about two-thirds of incidental takes"). Location in the document where details of these analyses may be found should be referenced.

- Regarding time-area closures, the PEIS contains a notable departure from language provided for NOAA's review during the preliminary draft phase. That document specified that no G&G surveys would occur in critical habitat during the breeding and calving period for right whales (11/15-4/15), while allowing non-airgun surveys within Seasonal Management Areas during the period of effectiveness (11/1-4/30) in support of the renewable energy and marine minerals program areas. The PEIS has been changed to allow these types of surveys (i.e., non-airgun HRG surveys for renewables/marine minerals) in right whale critical habitat. We recommend that the original requirements be restored (i.e., no surveys at all within critical habitat during the specified time period) or, if not, request that BOEM describe explicitly what mechanism exists in the jurisdictional relationship between BOEM and COE that would ensure these "case-by-case" surveys are subject to interagency consultation under section 7 of the ESA. Note that figures 2-1 and 2-3 reflect preliminary draft language (i.e., they show that critical habitat is a 'no-survey' zone rather than a 'non-airgun HRG survey on case-by-case basis' zone).
- The options for time-area closures are based upon right whale critical habitat and SMAs. As such, we request that BOEM note these would be responsive to any future revisions of critical habitat or changes to SMAs.
- New language describing HRG survey protocols (Section 2.1.2.3; Appendix C, Section 3.3.1.4) is problematic, as it implies prior agreement with NMFS that use of these measures would preclude possibility of incidental harassment and eliminate need for ITA under the MMPA. We suggest BOEM describe the required measure using different language that simply describes the measure and why it is proposed (i.e., why it would be effective in mitigating impacts to marine mammals) without suggesting that the inclusion of such a measure indicates any regulatory decision or course of action on NMFS' part.

Specific example, Measure 3a: We would not suggest rejecting these measures, but you should be very clear that this does not infer compliance with the MMPA. It is unlikely that we would concur with a determination that recurring action of this nature would absolutely not result in incidental harassment due to the fact that not all marine mammals are likely to be detected. The language used - "BOEM will consult with NMFS about additional requirements" - implies that NMFS has agreed that use of these measures eliminates potential for harassment. Further, use of the word "authorize" may be confused with take authorizations that may be issued by NMFS.

In addition, it is unclear how an applicant could "demonstrate" that a zone of any given size could be effectively monitored. There is a distinction between "effectively monitored" and being able to detect 100% of animals that may occur within a zone ensonified to 160 dB. The follow-on passage does not draw that distinction.

Example language: "The BOEM anticipates that if an operator can effectively monitor the 160-dB zone to prevent both Level A and B harassment of marine mammals, then it would be reasonable to assume that an ITA under the MMPA may not be necessary for that particular

survey. Therefore, the protocol would allow an operator to monitor a radius larger than 200 m (656 ft) if the operator demonstrates that it can be effectively monitored."

BOEM is explicitly drawing conclusions about future regulatory decisions to be made by NMFS and is equating "effective monitoring" with 100% detection of marine mammals, which is likely impossible.

- In the draft seismic airgun survey protocol, there are a number of instances where BOEM proposes specific time periods (e.g., time period for ramp-up, time period not requiring new ramp-up, requirements relating to borehole surveys) without explaining the rationale for the specific measures. We reiterate our recommendation, provided during the preliminary draft phase, to justify the specifics of the draft protocol.

Habitat Conservation

- BOEM indicates that as a result of many years of oil and gas development activity in the Gulf of Mexico Region (GOMR), extensive surveys have identified known areas of sensitive biological resources that are avoided through the implementation of Notices to Lessees (NTLs). BOEM indicates mitigative measures similar to the GOMR NTLs are expected to provide protective buffers to the benthic resources of the South Atlantic; however, specific measures have not been developed. Because oceanic features, such as the Gulf Stream, and the extent of important and valuable benthic habitats (e.g., corals, live bottoms, hard bottoms) in the South Atlantic differ from those in the Gulf of Mexico the mitigative measures contained in GOMR NTLs may not be directly transferable for application in the South Atlantic. BOEM should indicate that specific avoidance measures (e.g., buffer zones) will be established through required consultations such as the EFH Consultation with NMFS. Reference: 2-9; C-18
- BOEM indicates site-specific information will be required, to include mapping and pre-deployment photographic surveys, to effectively avoid impacting important and valuable benthic communities. Minimum standards for benthic mapping and surveys should be described and defined. As an example, the Florida Department of Environmental Protection's *Guidelines for Conducting Offshore Benthic Surveys* provides guidelines for developing appropriate protocols for deep water habitat mapping and biological resource surveys. Reference: 2-9; C-18
- BOEM should also consider adoption of a classification scheme to standardize habitat definitions and descriptions for benthic survey reporting requirements. As demonstrated in BOEM's analysis (Section 4.2.5.; pages 4-106 to 4-115), over time a wide variety of terms and descriptors have been used to characterize similar habitats. The Department of the Interior and NOAA have representatives on the Federal Geographic Data Committee developing the *Coastal and Marine Ecological Classification Standard Version 4.0* (CMECS). CMCES is an ecological classification system applicable for coastal and marine systems which facilitates integration of existing data into a single framework. Reference: 2-9; C-18

- Red Drum is no longer managed by the SAFMC and therefore does not have EFH designated in accordance with the Magnuson-Stevens Fishery Conservation and Management Act. Reference: Tables 4-18; 4-20

- BOEM focuses on sound pressure levels in Appendix D and its analysis of fish impacts from seismic surveys (Appendix J). However, many fish and invertebrates are sensitive to particle motion (both otoliths in fish and statocysts in invertebrates act as accelerometers) and to gain a full understanding of the effects of sound on these animals it may be necessary to measure or estimate particle motion. Based on outcomes from a recent BOEM-hosted hydroacoustic workshop for fish and invertebrates, and other efforts (e.g., CEF 2011, Worchester 2006), particle motion may be a more appropriate measure of potential impact for many species. BOEM should consider including discussion of particle motion changes due to seismic surveys.

CEF Consultants Ltd. 201. Report on a Workshop on Fish Behaviour in Response to Seismic Sound held in Halifax, Nova Scotia, Canada, March 28-31, 2011, Environmental Studies Research Funds Report No. 190. Halifax, 109 p.

Worcester, T. 2006. Effects of Seismic Energy on Fish: A Literature Review. DFO Can. Sci. Advis. Sec. Res. Doc. 2006/092: 66p.

Additionally, modeling increased particle motion throughout various portions of the water column to determine affects (i.e., potential exposure conditions) to habitat quality and species should be considered, identified as incomplete or unavailable information, or identified as a future research need.

Office of National Marine Sanctuaries

- ONMS supports Alternative B as the preferred alternative because this alternative reduces peak cumulative ensonification potential from multiple simultaneous surveys through the use of separation distances between surveys and reduces the risk of injury to right whales in and around Monitor and Gray's Reef National Marine Sanctuaries through both more conservative time-area restrictions for airgun surveys and the use of passive acoustic monitoring during surveys, which could enhance detection of vocally-active species like right whales and thus trigger mitigation to reduce their ensonification within sanctuaries.
- Any activity prohibited by ONMS regulations (15 CFR Part 922) occurring inside a national marine sanctuary requires an ONMS permit. BOEM described activities under this category include: drilling, coring, exploratory sampling, and placing sensors on the seafloor. The DPEIS states that these activities will not be permitted in national marine sanctuaries, thus this category of impacts is not commented on further here.
- ONMS recommends that National Marine Sanctuaries Act (NMSA) section 304(d) consultation requirements be clarified.
    - Federal actions occurring inside a national marine sanctuary that are likely to injure a sanctuary resource require consultation with ONMS. The action does not have to be a prohibited activity to trigger sanctuary consultation. BOEM proposed activities under this category could include use of airgun and other sources during full-scale and

HRG surveys conducted inside sanctuaries and vessel traffic associated with survey activities. Generation of noise by these activities is not prohibited and does not require a permit, but is likely to injure sanctuary resources and therefore triggers the sanctuary consultation requirement. Increased risk of vessel-whale collisions within sanctuaries may also be addressed through consultation.

- Federal actions that occur outside national marine sanctuaries and are likely to injure sanctuary resources within the boundaries of the sanctuary also trigger sanctuary consultation. BOEM proposed activities in this category could include such impacts as turbidity from drilling activities occurring adjacent to sanctuary boundaries or noise from airgun or HRG surveys conducted outside a sanctuary that ensonify sanctuary waters and are likely to impact resources within the sanctuary.

- ONMS suggests that, where appropriate, BOEM should identify that BOEM and ONMS are working on the procedures and specific stipulations that will conservatively indicate when sanctuary consultation is likely to be required associated with BOEM permitting of individual surveys. ONMS is providing notice of the need for NMSA consultation by separate letter.

- Additionally, ONMS believes that additional mitigation measures should be considered for the Gray's Reef and Monitor National Marine Sanctuaries that are recognized as important areas for recreational and scientific diving. Ensonification levels in either sanctuary should be no greater than 145dB. Scientific and recreational diving takes place year round in Gray's Reef NMS. ONMS also asserts that notification through "Local Notice to Mariners" is not an adequate strategy to inform the affected public of G&G activities as it is not widely distributed or recognized as a source of information by recreational boaters and/or divers. A well-advertised central source such as a website could be established to provide divers with up-to-date information on G&G activities, in particular those involving air-gun surveys that might impact divers. BOEM should consider conditioning their permits with specific stipulations that require that the operators comply with a communications plan that would include better notification strategies to reach recreational and scientific divers.

- Comments specific to Gray's Reef and Monitor National Marine Sanctuaries appear in the table that follows.

#	Page	Line # or Figure #	Proposed Changes to BOEM Atlantic G&G DPEIS
1.	1-17	Section 1.6.15 National Marine Sanctuaries Act	Thank you for including the authorities of the National Marine Sanctuaries Act (NMSA) in Section 1.6 on Regulatory Framework. In the last paragraph, revise as follows: "Because the review under this document is programmatic in nature and does not address project-specific information regarding potential impacts to sanctuaries, it will not result in ~~a~~ site-specific permit applications and review under ONMS regulations at this time. ~~the NMSA~~. Future, site-specific proposals will be reviewed by BOEM to ensure NMSA consultation and ~~standards or~~ permit requirements are met and that agreed-upon measures will avoid, minimize, or mitigate potential adverse effects. Specifically, BOEM is working with ONMS to develop specific stipulations for sanctuaries that inform applicants for BOEM exploration permits when sanctuary consultation or permits are required and what information is needed about the project at that time."
2.	2-9	Section 2.1.2.7 Guidance for Activities in or Near National Marine Sanctuaries	ONMS suggests the following changes to clarify between ONMS permitting and sanctuary consultation requirements. In the first and second paragraphs, revise as follows: "There are two NMSs within the AOI: Monitor and Gray's Reef (see **Chapter 4.2.11.1.1** for brief descriptions). The BOEM ~~would~~can not authorize seafloor-disturbing activities within the boundaries of an NMS. Any activity (such as seafloor disturbance or placement of buoys) that is prohibited by sanctuary regulations would require a separate permit issued by ONMS under 15CFR Part 922. Operators should contact the relevant sanctuary superintendent for permit application and procedures. Sound-producing activities (such as seismic surveys) proposed in or near the boundaries of an NMS would be assigned a setback distance as a condition of BOEM permit approval to be determined at the time the action is before BOEM and in consultation with the Sanctuary Superintendent pursuant to section 304(d) of the NMSA. ~~Manager. Setbacks of 152 m (500 ft) for seafloor-disturbing activities would be expected that could be modified by consultations with NOAA under the NMSA for specific activities in proximity to an NMS.~~ **Chapter 1.6.15** provides information about the NMSA consultation process. All BOEM authorizations for G&G activities would include instructions to minimize impacts on NMS resources. Additionally, operators proposing to conduct activities within or near the boundaries of Monitor NMS or Gray's Reef NMS would be instructed to exercise caution to ensure that such activities do not endanger any other users of the sanctuaries." ~~Sanctuary. Additionally, if proposed activities involve seafloor-disturbing activities near an NMS or moving the surface marker buoys for the Sanctuary, the operator would be required to contact the Sanctuary Manager for instructions.~~

#	Page	Line # or Figure #	Proposed Changes to BOEM Atlantic G&G DPEIS
3.	3-16	3.3.2.1. High-Resolution Geophysical Surveys	This proposal stipulates a 30m minimum resolution for geophysical surveys pertaining to archaeological resources for wide area assessment. ONMS asserts that this is too low of resolution to determine the presence of archaeological material, particularly older shipwrecks which may have a lower profile on the seabed and especially this is too low for potential pre-historic sites. ONMS recommends that BOEM use higher resolution surveys to the greatest extent practical and to ensure that site-specific actions comply with the National Historic Preservation Act section 110 and interagency compliance procedures at section 106. Second bullet under last paragraph: • line spacing for all geophysical data for archaeological resources assessments (on magnetometer, side-scan sonar, chirp subbottom profiler) should not exceed 30 m (98 ft) throughout the area. The BOEM may require higher resolution surveys where necessary to ensure that site-specific actions comply with the NHPA.
4.	4-107	Section 4.2.5.1.1 Fish Resources/ Demersal Resources/ Dermersal Hardbottom Fishes	Update the estimate of fish species in Gray's Reef NMS and refer to the proper citation. In the fourth paragraph, second sentence, revise as follows: "A conspicuous hard/live bottom feature on the SAB shelf is Gray's Reef NMS offshore Georgia; this site supports an estimated 200 species of fish ~~up to 150 fish species~~ and is a popular site for recreational fishing and diving ~~boating~~ (USDOC, ONMS, 2011)."~~Kendall et al., 2007; Gray's Reef National Marine Sanctuary, 2011~~).
5.	4-162	Section 4.2.9.2.2 Evaluation/ Vessel Exclusion Zones	BOEM acknowledges that GRNMS and other sites in the AOL are popular dive locations. Notification through "Local Notice to Mariners" is not an adequate notification strategy as it is not recognized as a source of information for recreational boaters and/or divers. A well-advertised central location – on line, listserves, message boards, etc – could be established to provide divers with up-to-date information on G&G activities, in particular those involving air-gun surveys that might impact divers. BOEM should consider conditioning their permits to require a communications plan that would include better notification strategies to reach recreational and scientific divers. Gray's Reef and Monitor NMS staff could assist in conducting the outreach, if appropriate. In first paragraph, last sentence revise as follows: "However, a Local Notice to Mariners would be issued that would specify the survey dates and locations and the recommended avoidance requirements for both vessels and divers. In addition, BOEM would require that the operators would also use other communication strategies to notify other affected public, such as recreational divers."

#	Page	Line # or Figure #	Proposed Changes to BOEM Atlantic G&G DPEIS
6.	4-172; 4-173	Section 4.2.11.1.1 Description of the Affected Environment – National Marine Sanctuaries	Under subsection Monitor National Marine Sanctuary, revise as follows: "Federal regulations (15 CFR 922, Subpart F) prohibit certain activities in the Monitor NMS, including (but not limited to) anchoring, diving (except as authorized), cable laying, coring, dredging…" Under subsection Gray's Reef National Marine Sanctuary, revise as follows: "Federal regulations (15 CFR 922, Subpart I) prohibit certain activities in Gray's Reef NMS, including (but not limited to) anchoring; dredging,…"
7.	4-177	4.2.11.2.2. Evaluation - Active Acoustic Sound Sources – National Marine Sanctuaries	ONMS and BOEM will initiate discussions about specific stipulations that would identify when sanctuary consultation would be required. It should be clarified here that the NMSA and the ONMS regulations have a broad definition of the terms "sanctuary resource" and "injury". Of importance is that "injury" includes behavioral disturbance discussed within the section on National Marine Sanctuaries.
8.	4-178	Evaluation - Active Acoustic Sound Sources – National Marine Sanctuaries - Recreational Resources	In other environmental analyses conducted by the US Navy, it has been acknowledged that divers may be affected by sound levels above 145 dB. It is not clear that an exclusion zone would adequately protect sanctuary users from adverse effects of noise. ONMS does not agree that impacts are negligible and minor given the lack of mitigation measures. Ensonification levels should be no greater than 145dB during time periods and within areas when and where diving is taking place. ONMS asserts that notification through "Local Notice to Mariners" is not an adequate strategy to inform the affected public of G&G activities as it is not widely distributed or recognized as a source of information for recreational boaters and/or divers. A well-advertised central source such as a website could be established to provide divers with up-to-date information on G&G activities, in particular those involving air-gun surveys that might impact divers. BOEM should consider conditioning their permits with specific stipulations that require that the operators comply with a communications plan that would include better notification strategies to reach recreational and scientific divers.

#	Page	Line # or Figure #	Proposed Changes to BOEM Atlantic G&G DPEIS
9.	4-180	4.2.11.2.2. Evaluation – Seafloor Disturbance – National Marine Sanctuaries	As previously noted, site-specific bottom disturbing activities in sanctuaries requires an ONMS permit. Revise first paragraph under National Marine Sanctuaries as follows: Insert new second sentence: "In addition, federal regulations (15 CFR 922, Subpart F) prohibit certain activities in the Monitor NMS, including drilling or coring the seabed." Revise the following sentence: "Bottom-disturbing activities proposed within the boundaries of an NMS would not be permitted by BOEM, whereas bottom-disturbing activities proposed near the boundaries of an NMS would be assigned a setback distance (to be determined at the time the action is before BOEM and in consultation with the Sanctuary Superintendent ~~Manager~~) as a condition of permit approval. Given these restrictions, no seafloor-disturbing G&G activities including placement of materials would occur within NMS waters without ONMS approval."
10	5-5	Section 5.4 Distribution of DPEIS for Review and Comment	Edit to indicate that the Office of National Marine Sanctuaries (Monitor and Gray's Reef NMSs) is in NOAA line office National Ocean Service instead of the line office of the National Marine Fisheries Service. *Federal Agencies* Department of Commerce National Oceanic and Atmospheric Administration Silver Spring, Maryland National Marine Fisheries Service Silver Spring, Maryland St. Petersburg, Florida Miami, Florida National Ocean Service Office of National Marine Sanctuaries Silver Spring, Maryland Monitor NMS – Newport News, VA Gray's Reef NMS - Savannah, GA Office of Ocean and Coastal Resource Management, Silver Spring, Maryland
11	Figures-13	Figure 4.4	Figure 4.4 shows "Charleston Bump complex" and the box shown encompasses oceanographic features of the Bump complex (and some additional area), but the boxed area does not include the actual bottom features known as the Charleston Bump, which are off SC and GA. For maps of the actual bottom feature, contact: NOAA's Ocean Exploration & Research http://explore.noaa.gov/" The map is still unpublished and unavailable elsewhere

#	Page	Line # or Figure #	Proposed Changes to BOEM Atlantic G&G DPEIS
12	Appendix		Consider including the frequently referred to "BOEM Guidelines for Providing Geological and Geophysical Hazards and Archaeological Information Pursuant to 30CFR 285, BOEM 2011" in the appendices. It seems that this document may be relevant to the substantive provisions in this DPEIS.

Mid-Atlantic Fishery Management Council
800 North State Street, Suite 201, Dover, DE 19901-3910
Phone: 302-674-2331 | Toll Free: 877-446-2362 | FAX: 302-674-5399 | www.mafmc.org
Richard B. Robins, Jr., Chairman | Lee G. Anderson, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

Gary D. Goeke
Chief, Regional Assessment Section
Office of Environment (GM23E)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

Dear Mr. Goeke,

Please accept these comments from the Mid-Atlantic Fishery Management Council (MAFMC or "Council") in response to the Draft Programmatic Environmental Impact Statement (PEIS) to evaluate potential environmental effects of multiple geologic and geophysical (G&G) activities in the Mid- and South Atlantic OCS Planning Areas. After receiving briefings on the proposed seismic activities and the potential impacts at the June Council meeting, the Council made the following motion:

Move to submit written comments opposing the BOEM seismic testing on the US east coast due to our grave concerns of the enormous Level A and Level B marine mammal takes and the unexamined but suspected deleterious effects on other marine species that our Council manages.

The Council's primary mission is to manage fishery resources in federal waters off the coast of the Mid-Atlantic region through the implementation of management measures that prevent overfishing while achieving optimum yield (OY) from each of 13 managed fisheries. Although the Council's focus is on sustainable fisheries management, this objective is only feasible in the context of a healthy and resilient ecosystem. It is clear that G&G activities have substantial impacts on marine environments, yet the Draft PEIS provides insufficient information about how the specific proposed G&G activities may affect fish, marine mammals, benthic communities, and ecosystem structure and function. We understand that these impacts are difficult to predict or quantify, but given the existing value of marine resources to the region and the nation, it is clear that the potential benefits do not outweigh the risks of initiating the proposed G&G activities at this point.

Marine fisheries provide food, employment, recreational opportunities for millions of people in the Mid-Atlantic region, and many coastal communities depend on the utilization of fishery resources. For example, in 2009, the dockside value of commercial landings in the Mid-Atlantic region was $511.6 million. In addition, more than 2.6 million recreational anglers took 17 million fishing trips and spent more than $800 million on trip expenses. The commercial and recreational fishing industries in the Mid-Atlantic region support more than 166,000 jobs with an associated income exceeding $6 billion. In light of the insufficient data and analysis about potential impacts of G&G activities on these valuable marine resources, the Council cannot support the Draft PEIS.

MID-ATLANTIC
FISHERY MANAGEMENT COUNCIL

Over the past decades the Council has implemented management strategies to maintain sustainable levels of fishing and, in some cases, to rebuild overfished stocks. These efforts have often necessitated sacrifices from both the commercial and recreational fishing sectors in the form of economic losses and foregone fishing opportunities. After many years of working to rebuild Mid-Atlantic fisheries to sustainable levels, the potential negative impacts of G&G activities on these rebuilt resources are extremely troubling.

The Council recently hosted two scientists, Chris Clark and Aaron Rice of Cornell University, at a meeting in June. Dr. Clark reviewed the physical propagation of sound from seismic airgun surveys, and Dr. Rice addressed the potential for negative impacts of acoustic surveys on fish and fish populations. Their remarks suggest that highly mobile fish are able to easily relocate within 50 meters to avoid lethal effects of the airgun array. They may also avoid sub-lethal damage by maintaining even greater distances from areas subject to noise disturbance from the survey. However, the extensive (months long) survey timeframe makes it likely that prolonged avoidance of the arrays will be necessary and could lead to interruptions in fish spawning and access to forage. More importantly, the area under consideration in the PEIS, which includes the entire continental shelf along the mid- and South Atlantic, is enormous, and much of the shelf is at a depth (< 50 m) that would place the entire water column within the "lethal range" of the array.

The Council also has substantial concerns about the potential and unknown adverse impacts of G&G activities on marine mammals. The Council has participated in the development of Take Reduction Plans under the Marine Mammal Protection Act for Atlantic Large Whales, Harbor Porpoise and Bottlenose Dolphin. These efforts have resulted in area and gear restrictions for several fisheries within the Council's jurisdiction. In the case of north Atlantic right whales, which are among the most endangered whales in the world, protection measures have been extended to include seasonal vessel speed restrictions along the U.S. East Coast where endangered right whales travel to protect them from being injured or killed by ships. Initiating the activities described in the PEIS, many of which could harm or endanger marine mammals, would counteract many of the conservation measures that have taken years to enact.

The general lack of information included in the PEIS relative to impacts of G&G activities on fish, marine mammals, and the surrounding ecosystem is of serious concern. The Council recognizes the importance of energy exploration to U.S. economic security, but the activities described in the Draft PEIS have the potential to contravene the Council's efforts to conserve and manage living marine resources and habitat. Thank you for the opportunity to submit comments on this Draft PEIS. The Council looks forward to working with BOEM to ensure that any future G&G activities in the Mid-Atlantic region are conducted in a manner that minimizes negative impacts on the marine environment.

Sincerely,

Christopher M. Moore, PhD
Executive Director, Mid-Atlantic Fishery Management Council

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL
89 KINGS HIGHWAY
DOVER, DELAWARE 19901

Office of the
Secretary

Phone: (302) 739-9000
Fax: (302) 739-6242

May 30, 2012

Gary D. Goeke
Chief, Regional Assessment Section
Office of Environment (MS 5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

RE: DNREC Comments on Draft Atlantic G&G Programmatic EIS

Dear Mr. Goeke:

The Bureau of Ocean Energy Management (BOEM) published the availability of the *Atlantic OCS Proposed Geological & Geophysical (G&G) Activities: Mid-Atlantic and South Atlantic Planning Areas; Draft Programmatic Environmental Impact Statement (PEIS)* on March 30, 2012. The Department of Natural Resources and Environmental Control (the Department) previously sent comments on the Notice of Intent to prepare a PEIS in a letter dated March 19, 2009 and on the Reopening of the Comment Period for the PEIS in a letter dated May 17, 2010. Those comments remain relevant and should be considered throughout the PEIS process. The Department appreciates the opportunity to comment further on the draft PEIS.

The Department is committed to development of clean domestic sources of energy and the development of sand and mineral resource areas and is concerned with the potential adverse environmental and economic effects of G&G activities supporting oil and gas exploration (particularly the deep penetration seismic airgun surveys). For these reasons, the Department is supportive of Alternative C analyzed in the PEIS; the no action alternative for oil and gas activities in the Mid-Atlantic Region and the status quo for renewable energy and marine mineral G&G activity.

The Department recognizes the need for secure, reliable, and safe energy sources and the importance of the 5-Year Outer Continental Shelf Oil and Gas Leasing Program in meeting this need. However, as stated in previous letters, we see no documented scientific justification why the unknown and unlikely benefits of oil and gas exploration in the Mid-Atlantic warrant further risks to the environment and public health. Further ocean related tourism remains one of Delaware's largest initiatives and the consequences of a drilling accident as experienced recently in the Gulf of Mexico would be catastrophic for our state economy. For this reason the

Department continues to have significant concerns about oil and gas leasing in the Mid-Atlantic OCS Planning Region. In addition to long term concerns about our coastal resources, the Department is concerned about the impact of large-scale seismic surveys on the safety of migratory cetaceous mammals, sea turtles, and other listed and important species and habitats offshore of Delaware's coast. Small-scale and site specific (shallow test drilling and deep stratigraphic test wells) activities would also focus the potential negative impacts upon smaller regions; through focused seismic noise, electromagnetic emissions, operational wastes, and seabed disturbance due to seabed-impacting equipment (e.g. anchors, cable lines, sensors, and drilling).

The Department stands firm in its commitment to energy efficiency and alternative energy development. We see this commitment as critical in our efforts to combat climate change and rebuild our economy. Our priority is working with our neighboring states to develop a comprehensive long-term domestic energy strategy that will seize and maximize the environmental and economic development benefits of adopting cleaner sources of energy.

The Department is also committed to the coastal management strategy of maintaining healthy beaches through beach nourishment as beaches act as buffers for storm protection, are destinations for recreation, and are foundations for our $6 billion tourism industry. The Department is continually searching for new sand sources and is invested in designating and developing areas of significant sand resources and avoiding potential conflicts with other OCS uses.

The Department acknowledges that a characterization of potential OCS resources is a necessity in better managing our marine uses, resources and habitats. However, this vital information must not come at the sacrifice of other safety and environmental considerations. Even with the mitigation and monitoring measures outlined in the PEIS, significant adverse environmental impacts will still likely result from seismic airgun surveys. Considering the lack of critical data and incomplete information on Mid- and South Atlantic marine resources and the potential significant adverse direct and cumulative impacts to these resources and habitats from G&G activities in support of oil and gas activities, BOEM should limit these activities as much as possible.

As the proposed action moves forward, please be advised of the following comments and concerns as there are a number of issues with the draft PEIS that deserve correction and consideration.

i. Biological Assessment / Biological Opinion

The draft PEIS is not complete without the Biological Assessment that is to be included as Appendix A. The public should be afforded the opportunity to review and comment on this important part of the draft PEIS before the final PEIS and Record of Decision. The Biological Opinion should also be a part of the Final PEIS.

ii. 'Take', Cumulative Impacts, & Potential Biological Removal

Individual estimates of Level A (and Level B) 'takes' of some marine mammals are given separately for seismic airgun surveys and non-airgun HRG surveys. For some species, 100s to nearly 1,500 individuals per year were listed as potential 'take' by these activities.

Cumulative impacts of estimated 'take' levels should be compiled and presented for all of the proposed activities (seismic airgun surveys, non-airgun surveys, vessel strikes, COST and test well drilling etc.). In addition, because there are other sources of 'take' not associated with the proposed activities (fisheries interactions, vessel strikes, pollution, etc.) additive 'take' caused by the proposed activities should be evaluated. Further, there is no assessment of how the proposed activities could impact the potential biological removal[1] (PBR) for each species. It should be noted that population estimates are not known for many of these species and the impact of 'take' from the proposed activities on the sustainability of those species may not be predictable or credibly determined.

iii. Data Gaps

It is acknowledged in the draft PEIS that '*there is incomplete or unavailable information (40 CFR 1502.22) for all marine mammals with respect to: (1) seasonal abundances; (2) stock or population size; (3) population trends, whether they are increasing, stable, or decreasing; (4) the hearing range for mysticetes; and (5) the basic biology of specific species and their physiology for underwater hearing*' (pp. 4-43). Yet very specific conclusions are drawn regarding the potential level of impact to an 'adequate degree of certainty'. Inferences are drawn for those species for which there is little information based on known information for unrelated species. The PEIS should be clear about what is considered an adequate degree of certainty and if it is the same for all species or just those for which a certain level of information is available.

iv. Sea Turtles

There are no 'take' estimates for sea turtles such as presented for marine mammals. All the sea turtle species that occur within the Area of Interest are listed as threatened or endangered under the Endangered Species Act (ESA) and take is defined in the ESA. The PEIS also states that sea turtle hatchlings will be insulated from the most harmful components of the propagated sound field because of their location at or near the sea surface. The PEIS should explain how they are not impacted by the source signal which, although directed downward, also travels upward hitting the surface (which acts as a mirror reflecting another signal downward with opposite polarity-called a source ghost?)[2].

v. Seals

The Harp seal (*Phoca groenlandica*) is not included with the list of pinniped species (harbor, gray, hooded). However, more frequent sightings of harp seals have been noted in Delaware than both hooded seals and gray seals (MERR Institute[3]). The presence of pinnipeds in Delaware should not be described as extralimital. The annual seasonal occurrence (typically November to May) of pinnipeds in Delaware is well documented and the preparers of this document should consult local sources for data including representatives from the NOAA-Northeast Stranding Network which track seal strandings and live sightings from Maine to Virginia.

vi. Sturgeon

[1] PBR is the maximum number of animals, not including natural mortality, which may be removed from a marine mammal stock while still allowing that stock to reach or maintain its optimum sustainable population.
[2] http://www.geoexpro.com/article/Marine_Seismic_Sources_Part_I/5db4dd34.aspx. From Geo Expro-Marine Seismic Sources Part 1. Accessed May 16, 2012.
[3] Marine Education, Research and Rehabilitation Institute, Inc. (MERR). P.O. Box 411, Nassau, DE 19962

The PEIS should be updated to reflect the current status of Atlantic sturgeon *(Acipenser oxyrinchus oxyrinchus)* which was listed as an endangered species within the area of interest on April 6, 2012 by NOAA-National Marine Fisheries Service as per the Endangered Species Act.

vii. Invertebrates

The PEIS states that there are no known systematic studies of the effects of sonar sound on invertebrates. The following study provides evidence of the trauma caused to cephalopods from low frequency sound produced by large scale offshore activities such as the ones being proposed:

Michel André, Marta Solé, Marc Lenoir, Mercè Durfort, Carme Quero, Alex Mas, Antoni Lombarte, Mike van der Schaar, Manel López-Bejar, Maria Morell, Serge Zaugg, Ludwig Houégnigan. Low-frequency sounds induce acoustic trauma in cephalopods. *Frontiers in Ecology and theEnvironment*, 2011; : 110408135918022 DOI: 10.1890/100124

viii. Mitigation & Monitoring

All G&G activities, including those for alternative energy and marine minerals, are expected to be required to use the appropriate mitigations to reduce environmental impacts. The Department supports a program that would monitor and track all G&G activities on the Atlantic OCS. This would enable Delaware and other coastal states to better manage and monitor OCS activities that could possibly negatively impact the State's coastal resources. Additionally, a comprehensive tracking system of proposed and ongoing G&G activities would foster increased inter-state and federal coordination on OCS resource management and promote regional cooperation.

ix. State Coastal Zone Management Programs

The Federal Coastal Zone Management Act of 1972, as amended, requires that actions on the OCS that will have reasonably foreseeable effects on a State's natural resources or coastal uses must be consistent with federally approved State Coastal Management Programs. As such, individual exploration activities on the OCS with foreseeable impacts to Delaware's coastal resources or uses are subject to review to ensure compliance with Delaware's coastal management policies. As applicable G&G projects are submitted for a federal consistency determination, the Delaware's Coastal Management Program will review potential impacts. The details of the survey type, location, and equipment used will dictate the State's position on each project. Appendix B of the PEIS should also be updated to reflect that the Delaware Coastal Management Program has an updated Program and Policy Document as of June 2011.

Thank you for the opportunity to comment. The Department looks forward to coordinating with the BOEM as the process continues.

Sincerely,

Collin P. O'Mara
Secretary

DIVISIONS
ENERGY
GAS AND OIL
GEOLOGY AND MINERAL RESOURCES
MINED LAND RECLAMATION
MINERAL MINING
MINES
ADMINISTRATION

COMMONWEALTH OF VIRGINIA

Department of Mines, Minerals and Energy
Washington Building, 8th Floor
1100 Bank Street
Richmond, Virginia 23219-3638
(804) 692-3200 FAX (804) 692-3237
www.dmme.virginia.gov

May 29, 2012

Mr. Gary D. Goeke
Chief, Regional Assessment Section
Office of Environment (MS5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123–2394

Dear Mr. Goeke:

I am writing to comment on the federal Bureau of Ocean Energy Management's Draft Programmatic Environmental Impact Statement for Geological and Geophysical Activities in the Mid- and South Atlantic Planning Areas of the Outer Continental Shelf. Our comments extend to such activities for oil and gas and renewables.

Analysis of existing offshore geological and geophysical data by the federal Department of the Interior and Virginia's Department of Mines, Minerals and Energy indicated that the Atlantic Outer Continental Shelf had experienced geologic conditions conducive to the generation and entrapment of oil and natural gas. Geochemical analysis of samples from a well drilled just north of Virginia's Offshore Administrative Boundary indicated that source rocks in the area are more prone to the generation of natural gas than oil.

Although no wells had ever been drilled within Virginia's offshore administrative boundary, the then-Minerals Management Service (MMS) produced a resource estimate based on other wells drilled in the Atlantic and seismic data collected in the 1970s and 1980s. The resource estimate was published by the MMS in their 2006 National Assessment of Undiscovered Technically Recoverable Oil and Gas Resources on the Outer Continental Shelf. For the entire Atlantic OCS, the mean estimate of undiscovered technically recoverable resources (UTRR) was 3.82 billion barrels of oil and 37 trillion cubic feet of natural gas. The portion of the UTRR that may be attributable to Virginia's portion of the OCS was estimated to be 0.13 billion barrels of oil and 1.14 trillion cubic feet of natural gas.

The recently released 2011 Assessment by the Bureau of Ocean Energy Management (BOEM) yielded a UTRR for the entire Atlantic of 3.30 billion barrels of oil and 31.28 trillion cubic feet of natural gas, a decrease of about 15% compared to the 2006 Assessment. The decrease is attributed to advances in processing existing geophysics (seismic, gravity, and magnetic data) and incorporation of information from new analogs in the Canadian Atlantic. The proposed "G&G" permitting in the Atlantic OCS would enable the area to be examined utilizing modern acquisition and processing techniques. BOEM reports that several companies have already submitted applications for new seismic acquisition. Issuance of these permits would represent a major step forward in understanding the hydrocarbon resource potential of Virginia's Outer Continental Shelf.

We understand that BOEM's Call for Information and Nominations for renewable energy development on Virginia's OCS generated considerable interest from the renewable energy industry. Virginia's Wind Energy Area (WEA) was developed through extensive collaboration between the Virginia Coastal Energy Research Consortium, BOEM's Virginia Renewable Energy Task Force, and other stakeholders, including the U.S. Coast Guard and the commercial shipping industry. The revised WEA has been carefully drawn to minimize conflicts between competing uses. A proposal for a renewable energy research lease by the Virginia Department of Mines, Minerals and Energy falls within the bounds of the revised WEA and has been deemed compatible with proposed commercial renewable energy activities. Development of both commercial and research leases will involve geological and geophysical surveys in preparation for the placement of supports for renewable energy structures on the seafloor. The issuance of permits for these activities by BOEM without further delay will expedite the development of this valuable new energy resource.

We urge the BOEM to proceed with Alternative A, the Proposed Action, as being the least restrictive of the three alternatives presented in the DEIS, and the most supportive of developing all of Virginia's available energy resources.

Sincerely,

Conrad T. Spangler
Director

Florida Department of
Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

May 29, 2012

Mr. Gary D. Goeke, Chief
Regional Assessment Section
Office of Environment (MS 5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

Re: Draft Programmatic Environmental Impact Statement to evaluate potential environmental effects of multiple Geological and Geophysical activities in the Mid- and South Atlantic Planning Areas of the OCS.

Dear Mr. Goeke:

The State of Florida has completed a review of the Bureau of Ocean Energy Management's (BOEM) Draft Programmatic Environmental Impact Statement (PEIS) Atlantic Outer Continental Shelf (OCS) Proposed Geological and Geophysical (G&G) Activities, Mid-Atlantic and South Atlantic Planning Areas. The Draft PEIS was required pursuant to the Conference Report for the Department of the Interior, Environment and Related Agencies Act, 2010. In addition, BOEM currently has no National Environmental Policy Act (NEPA) coverage for permitting G&G activities in Atlantic OCS waters. Therefore, this PEIS was prepared to ensure compliance with the NEPA and other laws such as the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA). Because of the nature and scope of the proposed action involving acoustic sources and the potential for impacts to sensitive marine resources, especially marine mammals and other marine species, including those listed under the ESA, the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) cooperated in the preparation of this Draft PEIS.

The Draft PEIS examines G&G activities for three programs areas (1) oil and gas exploration and development; (2) renewable energy development; and (3) marine minerals detection (especially sand for shoreline restoration) in the Mid- and South Atlantic Planning Areas during the 2012-2020 time period. The proposed action is to permit G&G activities in support of the three program areas and the PEIS evaluates impacts and identifies mitigation and monitoring measures to avoid, reduce or minimize impacts. G&G activities analyzed in the PEIS include:

- Deep penetration seismic surveys used almost exclusively for oil and gas.
- Other activities used only in support of oil and gas, including electromagnetic surveys, deep strategic and shallow test drilling, and several remote sensing methods.

- High resolution geophysical surveys used in all three program areas to detect geohazards, archeological resources and certain types of benthic communities.
- Geological and geotechnical bottom sampling used in all three program areas to assess the suitability of the seafloor sediments to support structures (e.g. platforms, pipelines, wind turbines, etc.) or to evaluate the quality and quantity of sand for shoreline restoration.

The PEIS assumes that high resolution geological (HRG) surveys for marine minerals (e.g., sand) and renewable energy surveys, will not use air guns.

Three alternatives are assessed in the draft PEIS, including a no action alternative. Alternative A, the proposed action, would authorize G&G activities in all program areas in the area of interest (AOI) from shore to 350 nmi offshore. Mitigation for alternative A includes: (1) for the protection of North Atlantic Right Whales - no surveys (Critical Habitat November 15 - April 15) and no air-gun surveys (others case-by-case) in Southeast Seasonal Management Area offshore Florida and Georgia during the same time period; (2) required survey protocols for renewable and marine minerals; and (3) guidance regarding vessel strike avoidance, marine debris, protection of historic/prehistoric and sensitive benthic resources.

Alternative B also authorizes G&G activities in all program areas and includes the same regulatory requirements and mitigation measures as Alternative A. However, this alternative requires additional time closures for air gun surveys for the protection of North Atlantic Right Whales (additional 20 mile closure offshore Florida Nov 15 – April 15) and sea turtles (closure offshore Broward County May 1 – Oct 31); requires passive acoustic monitoring, and establishes a 25-mile separation distance between simultaneously operating deep-penetration seismic airgun operations.

Implementation of the requirements of Alternative A is expected to result in the following regarding marine mammals and sea turtles, including protected species:

- Overall impacts to marine mammals from seismic airgun surveys are expected to be moderate and from non-airgun HRG surveys are expected to be minor.
- The proposed time-area closure for North Atlantic right whales reduces the ESA Level A and B incidental take by about 67% as compared to no closure.
- Impacts to sea turtles from seismic airgun surveys is expected to be minor to moderate and from non-airgun HRG surveys are expected to be negligible to minor.

Implementation of the requirements of Alternative B reduces impacts to North Atlantic right whales and sea turtles as follows:

- Increases avoidance of incidental take to right whales from 67% to 80%.
- Reduces expected impacts to sea turtle from moderate to minor.

Florida supports G&G activities on the South Atlantic OCS as they will play a significant role in supporting the siting of renewable energy projects and helping to locate offshore sand deposits

important to beach and shoreline restoration. However, care must be taken to ensure that marine and coastal resources, especially protected species and ecosystems are provided maximum protection. Florida recommends that final requirements be the most protective but do not impose unnecessary regulation or restrictions that increase costs without providing significant benefits to environmental resources. We defer to NOAA Fisheries for final recommendations of protected resources under their jurisdiction. The Department of Environmental Protection (DEP) Bureau of Beaches and Coastal Systems expressed concerns about the application of mitigation in state waters and potential inconsistencies with Chapter 161, *Florida Statutes.* Their comments are enclosed for your consideration.

In addition, while not critical to the implementation of the requirements of the PEIS, the description of Florida Coastal Management Program (FCMP) in Appendix B should be corrected since the Department of Community Affairs no longer exists and has been replaced by the Department of Economic Opportunity. Please refer to http://www.dep.state.fl.us/cmp/partners/state_agencies.htm for corrections. In addition, the 2010, not the 2005, Florida Statutes are the most recent approved by NOAA for inclusion in the FCMP.

Comments also received from the Florida Department of State and DEP's Florida Geological Survey and the Northeast District Office are enclosed for your consideration. We look forward to continue working with you to finalize the PEIS. Should you have any questions, please contact me at (850) 245-2163.

Sincerely,

Deborah L. Tucker
Environmental Administrator

Enclosures

May 11, 2012

TO: Debby Tucker and Shana Kinsey-Carlsen
Office of Intergovernmental Programs

FROM: Roxane Dow
Bureau of Beaches and Coastal Systems

SUBJECT: Draft PEIS-Atlantic Geological and Geophysical (G&G) Activities
SAI# FL201204106187C

The Bureau of Ocean Energy Management (BOEM) has developed this draft to evaluate potential environmental effects of multiple geological and geophysical (G&G) activities on the Atlantic Outer Continental Shelf (OCS), including new oil and gas exploration and development and new renewable energy development, as well as the more traditional marine minerals management searches. The Area of Interest for this DPEIS in Florida extends from Duval County through Brevard County.

Three alternatives, including the "no action" alternative are presented. BOEM has not identified a preferred alternative at this time (Section 2.7), and may alter any of the proposed alternatives in this draft.

It is unclear if the time-area closures proposed for right whale and sea turtle protection will apply to G&G activities, which do not use airguns, related to sand searches for beach projects, or what factors would be considered in the case-by-case decision.

> [Section 2.1.2.1: " However, HRG surveys proposed in critical habitat area and SMAs may be considered on a case-by-case basis only if: (1) they are proposed for renewable energy or marine minerals operations; and (2) they use acoustic sources other than air guns."]

Imposition of the area-time closures for both sea turtles and right whales would leave only two, two week periods for surveying (April 16 – April 30 and November 1 – November 14).

Such a limitation would significantly affect the timeframe for sand searches, especially if the remote sensing data would have to be reviewed prior to any seafloor-disturbing activities. What type (s) of site-specific information is required? Would new remote-sensing or other data for an area be required, or would a review of existing data from previous studies and reports be sufficient? The restriction of having to do seismic/remote sensing first, getting it reviewed, and then approving vibracoring greatly increases the time and operational costs of sand searches, as multiple deployments would be required.

Throughout this document G&G activities (that do not use airguns) in support of marine minerals have negligible to minor impacts on resources. Florida has reviewed numerous G&G activities for sand searches in state waters and have found them to be negligible in impacts to resources. Legislation passed this year now exempts them from permitting [CS/HB 691]. The BOEM proposal to apply the proposed mitigation measures in state waters would appear to contradict the intent of this legislation.

The Bureau of Beaches and Coastal Systems is charged in Chapter 161, F. S. to plan and implement a program that cost-effectively restores and maintains Florida's coastal system and beaches. It would be inconsistent with this statute if unnecessary costs and restrictions were placed on sand searches.

Thank you for the opportunity to comment. Please contact me if you have any questions.

cc. Danielle Fondren
Bob Brantly
Elizabeth Kromhout
Paden Woodruff

Florida Department of Environmental Protection

Memorandum

To: Debby Tucker
Environmental Administrator
Department of Environmental Protection
3900 Commonwealth Boulevard, MS 47
Tallahassee, Florida 32399-3000

From: Daniel C. Phelps, P.G.
Geological Investigations Section
Florida Geological Survey
Florida Department of Environmental Protection
903 W. Tennessee St.
Tallahassee, FL 32304-7700

Date: April 27, 2012

Subject:

The US Department of the Interior's, Bureau of Ocean Energy Management (BOEM) is soliciting comments regarding a Programmatic Environmental Impact Statement (PEIS), SAI#: FL201204106187C, to evaluate the environmental effects of multiple geological and geophysical (G&G) activities in the Mid- and South Atlantic Planning areas of the outer continental shelf (OCS). The document states that the activities envisioned are "...to gather state-of-the-practice data about the ocean bottom and subsurface. These data would provide information about the location and extent of oil and gas reserves, seafloor conditions for oil and gas or renewable energy installations, and marine minerals deposits off the U.S. Atlantic Coast".

The activities envisioned include, but are not limited to, seismic surveys, side scan sonar surveys, electromagnetic surveys, geological and geochemical sampling and various forms of remote sensing. The draft PEIS considers G&G activities for three program areas managed by the BOEM:

- Oil and gas exploration and development,
- renewable energy and
- marine minerals (primarily sand for beach replenishment).

The document under review states that:

"The following types of G&G activities are included in this draft PEIS:

- various types of deep penetration seismic airgun surveys used almost exclusively for oil and gas exploration and development;
- other types of surveys and sampling activities used only in support of oil and gas exploration and development, including electromagnetic surveys, deep stratigraphic and shallow test drilling, and various remote sensing methods;
- high-resolution geophysical (HRG) surveys used in all three program areas to detect geohazards, archaeological resources, and certain types of benthic communities; and

Scope of Comments

The FGS's comments relate to the mission of the FGS to collect, interpret and provide objective quality geologic information about Florida.

Potential Risks

A review of the document provided suggests that the data collection operations discussed present the potential to impact the integrity of the natural resources of Florida. The potential direct impacts of data collection operations which are not intended to disturb the seabed would appear to be negligible. Those commonly used methods that do disturb the seabed and approximately the first 20 feet of sub-seabed sediments; bottom sampling (e.g., gravity and piston coring and vibracoring) would in our experience also have negligible impact on those sediments. The drilling of deep stratigraphic test wells for the purposes of data collection preliminary to either oil and gas exploration or carbon sequestration, the drilling of shallow borings either preliminary to the placement of seabed supported structures or to facilitate research related to shallow gas hydrates and the placement of foundations into the seabed to facilitate oceanographic and meteorological data collection installations present various risks. The risks associated with those operations consist of, but are not necessarily limited to, the following:

- the uncontrolled release of hydrocarbons from either deep accumulations of traditional hydrocarbon resources or shallow gas hydrates, and

- a breach of confinement of the Floridan aquifer system which might allow the uncontrolled release of groundwater or allow salt water intrusion into the aquifer..

Deep stratigraphic tests are typically drilled at sites which have little or no potential of encountering commercial accumulations of oil or gas. Thus the risk of uncontrolled releases of hydrocarbons as a result of such operations is presumed to be negligible.

Borings to investigate accumulations of shallow gas hydrates present the potential risk of localized massive gas release. While that risk is assumed to be low, it is, due to a lack of data, unquantifiable, as are the potential impacts of such a release on coastal development proximal to it.

Deep stratigraphic test wells and borings to facilitate an understanding of the competence of sediments to support seabed structures present the potential to allow the activation of artesian flow from the Floridan aquifer system or other aquifers in the area. While the risk of such is presumed to be negligible, buried, infilled karstic collapse features, i.e. buried sinkholes, lying beneath the seafloor of the inner continental shelf off the east coast of Florida within the AOI are known to exist. The avoidance of such features during the placement of stratigraphic test wells, borings and foundations into the seabed is suggested.

General Comments

The FGS has the ability to archive geologic samples (e.g., cores and cuttings) and geophysical data collected offshore of Florida and to make those samples and data available for future research. It is requested that the FGS be given access to any geological, geochemical and geophysical data, to include bottom samples, borings and stratigraphic test information as well as high resolution shallow penetration sub-bottom profiler, side scan sonar, swath bathymetry, and traditional bathymetric survey data that might be collected proximal to the coast of Florida. The FGS is interested in what these data sets might reveal regarding the geology of Florida. For example, these data sets would provide insights into groundwater/seawater interaction, help determine the location of submarine springs and thus enhance our understanding of the hydrogeology of Florida. They would be useful in addressing potential geo-hazards to bottom

RECEIVED
APR 20 2012
DEP Office of
Intergovt'l Programs

FLORIDA DEPARTMENT of STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

April 18, 2012

Ms. Debby Tucker
Department of Environmental Protection
Office of Intergovernmental Programs
Mail Station 47
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Re: Draft PEIS – Atlantic Geological and Geophysical (G&G) Activities
SAI No. FL201204106187C / DHR Project File No. 2012-1600
Outer Continental Shelf – Mid and South Atlantic Planning Areas

Dear Ms. Tucker:

Our office received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended and *36 CFR Part 800: Protection of Historic Properties*, and with this agency's responsibilities under Section 267.061, *Florida Statutes*. The State Historic Preservation Officer is to advise Federal and State agencies as they identify historic properties (listed or eligible for listing, in the *National Register of Historic Places*), assess effects upon them, and consider alternatives to avoid or minimize adverse effects.

The purpose of this document is the identification and evaluation of possible impacts of geological and geophysical activities in the Mid and South Atlantic Outer Continental Shelf and adjacent state waters, and the mitigation of impacts by avoidance or minimization. This agency has concerns about potential impacts to archaeological resources off of the east coast of Florida. Proposed project activities which may impact archaeological resources include seafloor disturbing activities among other, less detrimental activities.

Nevertheless, Section 2.1.2.6.1. Avoidance and Reporting Requirements for Historic and Prehistoric Sites addresses these concerns. Site specific information will be required prior to approval of seafloor disturbing activities or placement of equipment or structures on the seafloor. We concur that archaeological resource surveys be required and stipulations be in place for the protection of any significant archaeological resources. Procedures for the reporting of fortuitous finds must also be enforced.

Thus, conditioned upon archaeological resource surveys being conducted prior to the initiation of project activities, the protection and preservation of any significant archaeological resources, and effective measures in place to deal with fortuitous finds, the agency's concerns regarding potential adverse impacts to significant resources will be satisfied.

If you have any questions concerning our comments, please do not hesitate to contact Susan Harp at 850.245.6333. Thank you for your interest in protecting Florida's historic resources.

Sincerely,

Laura A. Kammerer

Laura A. Kammerer
Deputy State Historic Preservation Officer
For Review and Compliance

Tucker, Debby

From: Chin, Sheena
Sent: Thursday, May 03, 2012 12:50 PM
To: Kinsey, Shana; Tucker, Debby
Subject: DRAFT PEIS - Atlantic Geological and Geophysical (G&G) Activities - SAI# FL201204106187C

Good Afternoon Shana and Debby,

Below please find the Responses for **Draft PEIS – Atlantic Geological and Geophysical (G&G) Activities Project - SAI#FL201204106187C**

Northeast District Clearinghouse Review Response

SUBJECT: Draft PEIS – Atlantic Geological and Geophysical (G&G) Activities
SAI# SAI # FL201204106187C

Northeast District Staff have reviewed the above mentioned project and offer the following input:

If the comment field below is blank, staff offered no response. Please contact me if you would like a response from that Program	
Program/Reviewer	**Comments**
Air	
Brent Steele (904) 256-1565 (cc Khalid Al-Nahdy)	The Air Program has no comments on this project at this time.
Waste	
Solid Waste: Emerson Raulerson (904) 256-1581	
Hazardous Waste: Ashwin Patel (904) 256-1668	As the project is off Florida coast, HW does not have any comments.
Waste Cleanup: Rick Rachal (904) 256-1543	Based upon an initial look at the document, there appear to be no issues with existing WCU projects.
Tanks: Tim Dohany (904) 256-1681	As the project is off Florida coast, Tanks does not have any comments.
Water	
Potable Water: Blanca Rodriquez (904) 256-1603 (cc Blanche Waller on drinking water systems)	I reviewed the information submitted in the link. The Potable Water Section does not have any comments to offer regarding this document (Atlantic Geological and Geophysical Activities) because it is not related to the Drinking Water Program.
Wastewater: Jeff Martin (904) 256-1614	Based on this information, I did not see any wastewater related activities and have no comment.
Stormwater: Junhong Shi (904) 256-1645	I have no comment for this type of activity since it is outside of ERP stormwater field.
Surface: Pat O'Connor (904) 256-1685	
Groundwater: Rob Martin (904) 256-1613	This project does not require a ground water

	review, and I do not have any comments.
NOTE: Collection and Wastewater Systems – please copy Drew Brown	
ERP	
Connie Webel: (904) 256-1652	I have reviewed the Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Areas Draft Programmatic Environmental Impact Statement dated March 2012. In accordance with the St Johns River Water Management District Operating Agreement, any work within waters of the state of Florida (from the shore to within 3 nmi) would require an environmental resource permit (ERP) as well as a state lands authorization from the Department for use of those sovereign bottoms where applicable. It appears as though the proposed exploration area covers two DEP regulatory districts (Northeast and Central) and both districts should be contacted. As Jacksonville is home to Naval Station Mayport, Naval Air Station Jacksonville, and JaxPort, any activities that would interrupt shipping channels or daily operations of any of these facilities would be of concern. In addition to the above named facilities, the proposed exploration area is adjacent to and includes some environmentally sensitive areas such as Fort Clinch State Park Aquatic Preserve and the Nassau River-St Johns River Marshes Aquatic Preserve.

Sheena Chin-Greene
Sheena Chin-Greene
Planner 1
Florida Department of Environmental Protection - Northeast District
7825 Baymeadows Way, Suite 200B
Jacksonville, FL 32256
Direct Phone: 904.256.1513
Main Phone: 904.256.1700
Fax: 904.448.4366
Sheena.Chin@dep.state.fl.us

2.

Bureau of Ocean Energy Management
Geological and Geophysical
Exploration on the Atlantic Outer Continental Shelf (OCS)

April 24, 2012
Norfolk, Virginia

On behalf of Virginia Governor Bob McDonnell, let me welcome you to the Energy Capital of the East Coast.

My name is Doug Domenech and I serve as Secretary of Natural Resources for the Commonwealth of Virginia. In my Secretariat, I oversee six state environmental agencies and assist the Governor in implementing the Commonwealth's energy policy.

Governor McDonnell is a strong advocate of an "all of the above" energy security strategy. However, unlike the President, when we say "all of the above" we mean it. Since his inauguration in 2010, the Governor has been busy promoting both conventional and renewable sources of energy, both on shore and off shore, including coal, gas, oil, nuclear, solar, wind, and energy efficiency. Just last week he signed 13 pieces of legislation to strengthen and expand Virginia's energy infrastructure and expand alternative energy resources.

The Governor continues in his strong support for exploration and development of oil and natural gas resources off the coast of Virginia. And I was pleased to join Secretary Salazar and BOEM Director Beaudreau ("BO-drow") last month to applaud the Administration's completion of the Draft Programmatic Environmental Impact Statement (PEIS) to evaluate potential environmental effects of multiple Geological and Geophysical (G&G) activities in the Mid- and South Atlantic Planning Areas of the OCS.

Virginia is preparing formal comments and will submit those before the May 17 deadline.

I would add that this very hearing feels a little like Ground-hog day. Two years ago we were here commenting on similar plans for G&G and exploration after President Obama awarded Virginia a lease sale in the 2007-2012 5-year plan. In fact, the Director of the then Minerals Management Service herself informed us that Virginia would be scheduled for its first oil and gas lease sale in March of 2012. Now two years later, while we are glad the draft PEIS for G&G has been prepared, the Commonwealth again must reiterate our strong disappointment that the Administration has decided to keep Virginia out of the next five year plan for 2012 to 2017.

In announcing 2012-2017 plan, Secretary Salazar stated two objections to holding a Virginia lease sale: a lack of existing infrastructure, and potential conflicts with the military. Apparently these issues that now keep a Virginia sale from proceeding were not an issue to the Secretary or the President in March of 2010.

In March of 2010 in announcing his plan to expand offshore oil and gas exploration off Virginia, President Obama said, "this is not a decision that I've made lightly. It's one that Ken and I -- as well as Carol Browner, my energy advisor, and others in my administration -- looked at closely for more than a year. But the bottom line is this: Given our energy needs, in order to sustain economic growth and produce jobs, and keep our businesses competitive, we are going to need to harness traditional sources of fuel...".

As I have testified in the past, Virginia could not agree more with this statement. Again, the question is, what exactly has changed since then that now prohibits Virginia's sale from being allowed to proceed in this five-year plan?

We urge the Administration to amend the 2012-2017 OCS 5 year plan to allow for an oil and gas lease sale off Virginia in this cycle.

The Governor is equally interested in moving forward with citing for offshore wind energy as well. We are pleased this PEIS will consider G&G activities for all three program areas managed by BOEM: (1) Oil and gas exploration and development; (2) renewable energy; and (3) marine minerals. We feel Virginia is also ideal for the development of offshore wind resources and we have been working with all the interested military and civilian stakeholders to prepare and plan for this development.

To summarize a few key points:

- Virginia is pleased that BOEM is taking this important step toward leasing off the Virginia coast.
- Virginia's official policy (in the Code of Virginia) favors offshore oil and gas exploration and production.
- Governor McDonnell's Energy Plan calls for an "all of the above" approach, including offshore conventional and renewable energy development.
- 80% of Virginia's voters favor expanded offshore energy development and our elected officials at all levels support development on a bi-partisan basis.
- America needs this domestic energy resource and, while Virginia enjoys a lowering unemployment rate, we need the jobs.
- The lack of modern data hinders efforts to assess available resources.

In conclusion, on behalf of Governor McDonnell, we want to thank Interior and the BOEM for coming to Norfolk to hold this hearing. As a former Interior employee myself, I know the Department and agency are filled with hard-working, dedicated public servants.

Thank you.

St. Johns County Board of County Commissioners

Growth Management | Environmental Division

June 28, 2012

Mr. Gary D. Goeke, Chief
Regional Assessment Section
Office of Environment (MS5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard,
New Orleans, LA 70123-2394

Re: Draft Programmatic Environmental Impact Statement

Dear Mr. Goeke:

Thank you for extending the review time for this important document and please accept this second letter addressing the Draft Programmatic Environmental Impact Statement (PEIS). The PEIS was prepared to describe and evaluate the potential environmental impacts of geological and geophysical survey activities in Federal waters of the Mid- and South- Atlantic Outer Continental Shelf (OCS) and adjacent State waters for the 2012-2020 time period for three program areas: oil and gas; renewable energy; and, marine minerals. St. Johns County has a vested interest as any activity approved in the South Atlantic OCS would potentially impact the waters and beaches in the County.

I am requesting that you address the following issues, restating some from my previous letter, and providing additional comments after this extended review period:

- Royalties from gas/oil wells in the gulf are shared with adjacent States/Counties. There is no provision in federal law that requires royalties gained in the Atlantic Ocean be shared with adjacent States/Counties. This should be addressed prior to any lease issuance.

- Chapter 377, Florida Statutes, prohibits structures for drilling in Florida territorial seas (shore to three geographic miles). The PEIS reads that the Area of Interest is from, "the shoreline to 350 nautical miles from shore". Please address how Florida law will not be compromised.

- The military's Atlantic Fleet Training and Testing Area lies of the coast of St. Johns County which may pose a conflict of activities if offshore seismic survey activity and oil drilling were to occur. Any proposed or planned drilling operations in the Atlantic Ocean that would impair restrict or negatively impact the ability of the United States military, to fully utilize and specifically the existing Jacksonville Range Complex airspace and surface waters for ongoing or planned aircraft test, weapons test and/or training missions should not occur.

- The PEIS failed to disclose the financial impacts to adjacent States/Counties for the potential mass stranding of impacted or dead marine mammals on County beaches. For example looking at just dolphin the EIS reports that potentially one million dolphin may be acoustically impacted and it is a real possibility that impacted animals would end up on the County beach requiring removal. A funding source needs to be identified and details provided in the PEIS to address this issue and funding needs to be guaranteed to adjacent States/Counties.

- The invasive seismic survey procedure of blasting pulsating shocks of noise loud enough to penetrate deep into the sea bed and across vast ocean areas to search for possible oil and gas reserves would detrimentally impact marine habitat and potentially destabilize marine ecosystems. As an example, the PEIS reads the loud blasting and repeated sound waves from this process can cause temporary or permanent hearing impairment and loss, serious injury from tissue trauma and hemorrhaging, or even death for dolphins, fish, whales and sea turtles. This level of detrimental impact on the marine environment is unacceptable. As well, the PEIS was drafted only to address the exploratory survey activities and this is seen as a shortsighted approach. The PEIS failed to disclose the financial impacts to adjacent States/Counties for the potential impacts to marine habitat, potential destabilization of marine ecosystems, oil spills or mass oil release from future drilling and this needs to be addressed.

- Obviously the next activity will be oil drilling. NOAA responds to as many as 150 oil spills every year as stated on their website. This demonstrates the potential for the County beaches to become impacted by this activity. In June of 2011, a well operated by ConocoPhillips and a Chinese state company leaked more than 3,200 barrels of oil, producing a 324-square mile slick and a comparable spill occurred last November from a well off Brazil operated by Chevron. If either of these events occurred off the coast of St. Johns County this would greatly affect the County's economy which is largely based on tourism and on both recreational and commercial fishing. Provisions should be made now to address the monetary impacts to the County if oil wells are drilled offshore.

- I have reviewed the Seismic Survey Mitigation Measures and Marine Mammal Observer Reports, OCS Study BOEM 2012-015, and based on the potential that similar sighting, reporting and mitigation measures will be required for the Atlantic seismic testing I offer the following comments:

    - The ramp up requirement for the seismic survey may be seen as an adequate measure for adult animals but not sufficient to protect hatchling marine turtles. Please address protections for hatchling marine turtles.

- Observers were required only at water depths greater than 200 meters. Figure F-2 includes the bathymetry off of St. Johns County and demonstrates that in order to exceed the 200 m water depth you would need to be at least 150 km off the shore. This is a large area, from shore to 150 km, where seismic blasting could occur and no observations for marine mammals or turtles would be required. Please require observations in this area.

- The report only included sighting information and I could not find where animal impact data where collected. As well, I could not find any scientific resource publications used to create the PEIS that researched any long term affects including any resulting stranding events from this activity. An animal may be sighted and leave the blasting area but also have been impacted to the point of causing permanent hearing impairment, serious injury from tissue trauma or hemorrhaging whereby future stranding or death of the animal may then end on the beaches of the County. Please address.

- The County finds that the less protective Alternative A is not in the best interest of the County to protect the County interests and requests that Alternative A not be implemented.

And lastly, I again request to be placed on any notification and distribution list of any future documents, adequate descriptions, objectives, and schedules for all activities associated with a project; specific information on the natural resources potentially affected by the proposed activities; and specific information on onshore support base, support vessels, shallow hazards, oil-spill response, wastes and discharges, transportation activities, and air emissions. I thank you for your attention to this issue and will await your response.

Sincerely,

Jan P. Brewer
Environmental Division Director
St. Johns County, Florida

Cc: Mark P. Miner, Chair, Board of County Commission
Michael D. Wanchick, County Administrator

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code: 401-07E
Sustainability & Green Energy
401 East State Street, 7th Floor
PO Box 402
Trenton, New Jersey 08625-0402
TEL # (609) 292-8601
FAX # (609) 292-1921

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

May 30, 2012

VIA EMAIL GGEIS@boem.gov

Mr. Gary D. Goeke, Chief
Regional Assessment Section, Office of Environment (MS 5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

Re: Comments on the Draft PEIS for Atlantic G&G Activities

Dear Mr. Goeke:

This letter responds to the Notice of Availability of a Draft Programmatic Environmental Impact Statement (PEIS), published in the Federal Register, March 30, 2012. The PEIS is intended to evaluate potential environmental effects of multiple geologic and geophysical (G&G) investigations in the Mid and South-Atlantic Planning Areas for oil and gas exploration and production, renewable energy projects, and marine minerals extraction.

The Draft PEIS is detailed in its consideration of potential impacts of activities that may be proposed. Although New Jersey is part of the North Atlantic Planning Area, our coast and marine environment could be affected by activities in the Mid and South-Atlantic Planning Areas. The enclosed comments for your consideration identify technical deficiencies in the draft PEIS and are not intended to limit the scope of review necessary for proposed actions that may impact the North Atlantic Planning Area.

Sincerely,

Jerri Lynn Weigand
Supervising Environmental Specialist

Enclosure

Comments
New Jersey Department of Environmental Protection,
Draft Programmatic Environmental Impact Statement, Geological and Geophysical Exploration on the Atlantic Outer Continental Shelf (OCS),
Notice of Availability, Federal Register of March 30, 2012.

This letter responds to the Notice of Availability of a Draft Programmatic Environmental Impact Statement (PEIS), published in the Federal Register, March 30, 2012. The PEIS is intended to evaluate potential environmental effects of multiple geologic and geophysical (G&G) investigations in the Mid and South-Atlantic Planning Areas for oil and gas exploration and production, renewable energy projects, and marine minerals extraction. Although New Jersey is part of the North Atlantic Planning Area, our coast and marine environment could be affected by activities in the Mid and South-Atlantic Planning Areas. The enclosed comments for your consideration identify technical deficiencies in the draft PEIS and are not intended to limit the scope of review necessary for proposed actions that may impact the North Atlantic Planning Area.

Geology and Geophysics

Under the Survey Type, COST wells, the number of sampling events is listed as 0-3. Unless BOEM is accessing data from previous COST wells, the number of sampling events should be in the range of 10 – 15, as was the case for the studies conducted in the 1970s.

The Draft PEIS does not recommend a specific alternative. Alternative B would dramatically lower the projected impacts to several endangered species, including the North Atlantic Right Whale, sea turtles, and loggerhead turtles.

The PEIS limits the number of concurrent G&G surveys and Alternative B addresses the issue of increasing the distance between concurrent surveys to limit marine biological impacts. Alternative B, however, does not address the issue of time overlap of surveys. For example, G&G surveys could be undertaken with a corridor of at least 25 miles between them but there could be a long time period during which one survey or the other is active. The impacts on marine life under the different scenarios could vary. The Draft PEIS should consider time separations as well as distance separations.

It is significant that BOEM is not responsible for submarine cable infrastructure, although G&G, HRG and geotechnical surveys related to submarine cable siting and placement may have the same impacts as G&G activities for purposes identified in the Draft PEIS. This subject needs to be addressed.

Endangered and Nongame Species

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 G&G survey

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, as well as less regular but high decibel noise 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 of conservation concern.

New Jersey's marine habitat provides a critical calving and nursery area during the summer for coastal bottlenose dolphins (*Tursiops truncates*). Although proposed time-area closures are intended to be protective of species such as federally endangered right whales (*Eubalena glacialis*), restrictions must be expanded in order to mitigate for impacts to the breeding coastal population of bottlenose dolphins within the Mid-Atlantic region. According to Toth et al. (2011), neonates, young-of-year, and adults occur in the state's coastal southern waters from late May through late September. Adhering to the proposed timing restriction of November 1 – April 30 would put female dolphins and their calves at risk from G&G activities, including airgun survey impacts, vessel and equipment noise, and vessel strikes.

Acoustic detections of right whale calls by Geo-Marine, Inc. confirmed the presence of right whales within their study area (within 37 km of the shoreline, approx. between Seaside Park and Stone Harbor, NJ) 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). It is assumed that this is the case off Delaware as well. Despite proposed timing restrictions on airgun surveys designed to protect right whales, individual whales remaining in the area may still be impacted by noise, boat traffic, and other project activities.

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). In addition, research by Piniak et al. (2012) suggests that sea turtles are able to hear much of the pervasive low frequency and high intensity noise in the ocean, including sonar, shipping and oil and gas exploration.

The southern marine waters off New Jersey, along with Delaware Bay, provide critical migration and feeding areas for sea turtle species such as Kemp's Ridley, Green, Atlantic Loggerhead and

Leatherback turtles. Turtles are known to be present in these locations between the months of May through September. The current timing restriction would therefore be placing turtles at risk of behavioral changes and possibly hearing loss due to airgun noise. Also, even having observers on board vessels during appropriate seasons will not eliminate the potential of injury or mortality from ship strikes.

Noise generated from air guns has been shown to alter the behavior of captive fishes, with an increase in alarm response as noise level was increased (Fewtrell and McCauley 2012). In addition, activities such as pile driving have the potential to impact fish survival with effects such as burst swim bladder and massive internal bleeding (Halverson et al. 2011).

In April 2012, the National Marine Fisheries Service listed the New York Bight distinct population segment of Atlantic sturgeon, which includes fish from New Jersey waters, as Federally Endangered. Further, a recent status assessment conducted by the New Jersey Division of Fish and Wildlife resulted in a recommended state status of Endangered. Recent tracking data estimate the Delaware River spawning population to be fewer than 100 individuals.

In New Jersey, Atlantic Sturgeon occur along the coast, with some individuals spawning in the lower portion of the Delaware River. If impacts from air gun noise and other project activities disturb Atlantic sturgeon migrating into Delaware Bay for spawning in the river, an entire year class could potentially be lost, accelerating the decline of an already diminishing river stock. In addition, Atlantic Sturgeon are vulnerable to injury and mortality from ship strikes, especially in the Delaware River. It is possible that increased traffic coupled with behavioral changes due to G & G survey activities may place Atlantic sturgeon at increased risk from ship strikes. Activities such as bottom sampling, drilling of test wells, and placement of equipment/structures on the sea floor could also potentially impact this demersal species, along with Shortnose sturgeon (federally endangered), that on occasion migrate into ocean waters.

Transient Species

Although the PEIS study area is south of NJ waters (starting at the southern boundary of the NJ OWPEBS area), there could potentially be residual effects on transient/migratory species impacted in those areas that subsequently pass through or overwinter in NJ waters. Some of the exploratory activities, whether acoustic or drilling (e.g., disturbance to benthic habitats, increased turbidity, loss of prey, oil leaks, etc.), may cause migratory species to alter their movements, thus impacting species activities in NJ waters. Effects may be temporary or permanent, depending on the size and duration of the disturbance.

Mitigation

The PEIS lists some of the mitigation measures and other ecological/species considerations that will be used during G&G deployments. However, NJ has concerns with the use of the air gun seismic technology and acoustic-induced impacts, specifically whether the mitigation measures

identified will adequately protect species within the vicinity of these deployments. BOEM is to be commended for the depth of their species distribution analysis, as shown in the numerous figures showing species hot spots along the entire eastern seaboard.

Consultation with NJ Ocean/Wind Power Ecological Baseline Studies

Concerning future studies, if these or similar activities were to take place within or near NJ waters, New Jersey asks that NJ's Ocean/Wind Power Ecological Baseline Studies data and results be thoroughly consulted and considered first, and added to information regarding affected species along the Atlantic coast, before proceeding with survey and other associated G&G exploration activities.

Center for Regulatory Effectiveness

Suite 500
1601 Connecticut Avenue, N.W.
Washington, D.C. 20009
Tel: (202) 265-2383 Fax: (202) 939-6969
Secretary1@mbsdc.com www.TheCRE.com

May 30, 2012

SUBMITTED ELECTRONICALLY AT GGEIS@boem.gov

Mr. Gary D. Goeke
Regional Assessment Section
Office of Environment (MS5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123–2394

Re: **Center for Regulatory Effectiveness Comments on Bureau of Ocean Energy Management Draft Programmatic Environmental Impact Statement ("DPEIS") For Geological and Geophysical Exploration on the Atlantic Outer Continental Shelf;**
Comments due on May 30, 2012[1]

Dear Mr. Goeke:

The Center for Regulatory Effectiveness ("CRE") is pleased to submit the following comments on the Bureau of Ocean Energy Management's ("BOEM") Draft Programmatic Environmental Impact Statement ("DPEIS") for Geological and Geophysical ("G&G") Exploration on the Atlantic Outer Continental Shelf ("OCS").

I. EXECUTIVE SUMMARY

Seismic and other oil and gas G&G has caused no harm under current, longstanding regulation by BOEM.

Nevertheless, the DPEIS proposes a new Draft Protocol for regulating seismic airgun surveys. The CRE asks BOEM to confirm or deny that the DPEIS' Draft Protocol is only proposed for the Atlantic, and is not intended for any other water body.

[1] Available online at http://www.boem.gov/oil-and-gas-energy-program/GOMR/GandG.aspx

The DPEIS' new Draft Protocol is significantly more stringent than BOEM's currently effective NTL 2012 G0-2.[2] BOEM's responses to CRE's comments on BOEM's seismic Information Collection Requests ("ICRs") mean that current regulation under NTL 2012 G0-2 is sufficient, and that there can be no significant change in this NTL without new ICRs and new OMB review under the Paperwork Reduction Act ("PRA"). BOEM's current ICRs do not authorize the DPEIS' new Draft Protocol.

The current BOEM ICRs would not have been submitted and approved if current regulation were inadequate, unless there's been a significant change in knowledge since the ICRs were submitted. There has been no significant change in knowledge except that it's even more obvious now that seismic compliant with NTL 2012 G0-2 is harmless.

NMFS' external Peer Review Report for the Acoustic Integration Model ("AIM") recommends that there be additional peer review each time AIM is applied. The additional peer review should be performed in accordance with OMB's Peer Review Bulletin. The additional peer review should be performed in order to determine each AIM application's compliance with Council for Regulatory Environmental Modeling ("CREM") Guidelines.

There is no public record showing that AIM has been peer reviewed for its proposed application in the Atlantic PEIS. BOEM should identify in the public record each and every AIM peer review that they believe has occurred. BOEM should allow public comment on those and all other peer reviews relevant to the DPEIS.

All AIM peer reviewers should be advised of the Information Quality Act ("IQA") requirements applicable to BOEM.

NMFS' Peer Review Report for AIM states that the AIM input data on behavioral effects are inadequate. BOEM also repeatedly states that adequate input data do not exist for most of the marine mammals that AIM models.

Consequently, before BOEM uses AIM to estimate Takes BOEM should conduct external peer review of AIM in order to determine, among other issues, whether the behavioral effects data input into the model are adequate to estimate Takes.

Passive Acoustic Monitoring ("PAM") should be required in the Atlantic, and PAMGUARD should be encouraged. PAM is already being required in most NMFS regulation of seismic, and it is "strongly encouraged" by BOEM's NTL 2012 G0-2, so this is not a significant change in current regulation.

Finally, the DPEIS, and all BOEM information disseminations, must meet IQA requirements. These IQA requirements apply to any outside or third-party information that BOEM uses or relies on.

[2] Available online at http://www.bsee.gov/Regulations-and-Guidance/Notices-to-Lessees/2012/2012-JOINT-G02-pdf.aspx

II. SEISMIC AND OTHER OIL AND GAS G&G CAUSE NO HARM UNDER CURRENT, LONGSTANDING REGULATION

With regard to oil and gas G&G in the Arctic, NMFS recently stated:

> "There is no specific evidence that exposure to pulses of airgun sound can cause PTS [physical injury] in any marine mammal, even with large arrays of airguns."
>
> ***
>
> "To date, there is no evidence that serious injury, death, or stranding by marine mammals can occur from exposure to airgun pulses, even in the case of large airgun arrays."
>
> ***
>
> "NMFS does not expect any marine mammals will incur serious injury or mortality in the Arctic Ocean or strand as a result of the proposed seismic survey."
>
> ***
>
> "Thus, the proposed activity is not expected to have any habitat-related effects on prey species that could cause significant or long-term consequences for individual marine mammals or their populations."
>
> ***
>
> "Data on short-term reactions by cetaceans to impulsive noises are not necessarily indicative of long-term or biologically significant effects. It is not known whether impulsive sounds affect reproductive rate or distribution and habitat use in subsequent days or years. However, gray whales have continued to migrate annually along the west coast of North America despite intermittent seismic exploration (and much ship traffic) in that area for decades (Appendix A in Malme *et al.* 1984; Richardson *et al.* 1995), and there has been a substantial increase in the population over recent decades (Allen and Angliss 2010). The western Pacific gray whale population did not seem affected by a seismic survey in its feeding ground during a prior year (Johnson *et al.* 2007). Similarly, bowhead whales have continued to travel to the eastern Beaufort Sea each summer despite seismic exploration in their summer and autumn range for many years (Richardson *et al.* 1987), and their numbers have increased notably (Allen and Angliss 2010). Bowheads also have been observed over periods of days or weeks in areas ensonified repeatedly by seismic pulses (Richardson *et al.* 1987; Harris *et al.* 2007)."[3]

[3] NMFS' Federal Register notice available online at http://www.gpo.gov/fdsys/pkg/FR-2012-05-01/pdf/2012-10386.pdf

A recent NMFS Biological Opinion concluded that marine mammals are flourishing and increasing in the Arctic during increasing oil and gas seismic activities there:

> "Data indicate that bowhead whales are robust, increasing in abundance, and have been approaching (or have reached) the lower limit of their historic population size at the same time that oil and gas exploration activities have been occurring in the Beaufort Sea and, to a lesser extent, the Chukchi Sea."
>
> ***
>
> "To our knowledge, no whales or other marine mammals have been killed or injured by these past seismic operations, and the BCB population of bowhead whales continues to increase at an annual rate estimated more than 3 percent."[4]

BOEM, when it was still MMS, concluded with regard to the entire Outer Continental Shelf that:

> "[T]here have been no known instances of injury, mortality, or population level effects on marine mammals from seismic exposure…"[5]

In reaching this conclusion, BOEM relied on a report by the National Academy of Sciences' National Research Council, which stated:

> "With the exception of the beaked whale strandings, connections between anthropogenic sound in the oceans and marine mammal deaths have not been documented. In the presence of clear evidence of lethal interactions between humans and marine mammals in association with fishing and vessel collisions (Clapham et al., 1999; Laist et al., 2001), the absence of such documentation has raised the question of the relative importance of sound in the spectrum of anthropogenic effects on marine mammal populations. Anthropogenic ocean noise is thought not to be a factor in any of the recent major declines in marine mammal populations, such as Steller sea lions (*Eumetopias jubatus*; NRC, 2003a), harbor seals (*Phoca vitulina*; Pitcher, 1990), fur seals (York, 1987), and Aleutian Island sea otters (*Enhydra lutris*; Doroff et al., 2003). No scientific studies have conclusively demonstrated a link between exposure to sound and adverse effects on a marine mammal population."[6]

BOEM itself recently issued a Final Supplemental Environmental Impact Statement for a Gulf of Mexico OCS Oil and Gas Lease Sale. This final SEIS for the GOM concluded that, despite more

---

[4] Pages 64-65, ENDANGERED SPECIES ACT: SECTION 7 CONSULTATION BIOLOGICAL OPINION, Incidental harassment authorization to allow for incidental takes of marine mammals during shallow hazards survey in the Chukchi Sea, Alaska, 2011 (NMFS 2011), available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/statoil_biop2011.pdf

[5] See, *e.g.*, Outer Continental Shelf Oil & Gas Leasing Program,2007-2012 Final Environmental Impact Statement, page V-64 (MMS April 2007), available online at http://www.boemre.gov/5-year/2007-2012DEIS/VolumeII/5and6-ConsultationPreparers.pdf

[6] Marine Mammal Populations and Ocean Noise: Determining when Noise causes Biologically Significant Effects, Oceans science board (2005), page 15, available online at http://www.nap.edu/openbook.php?isbn=0309094496 .

than 50 years of oil and gas G&G, "there are no data to suggest that activities from the preexisting OCS Program are significantly impacting marine mammal populations":

> "Overall, within the CPA [GOM Central Planning Area], there is a long-standing and well-developed OCS [oil and gas] Program (more than 50 years); there are no data to suggest that activities from the preexisting OCS Program are significantly impacting marine mammal populations."[7]

In sum, past regulation of OCS oil and gas G&G has adequately protected the environment. With the possible exception of reasonable temporal and zoning restrictions in order to protect the endangered right whale, there is no reason to believe a different approach is required in the Atlantic. [8]

III. NEW ICR AND OMB REVIEW ARE NECESSARY BEFORE BOEM COULD IMPLEMENT ITS DRAFT PROTOCOL FOR ATLANTIC SEISMIC

CRE has previously filed two comments that are relevant to the PEIS and seismic.[9] BOEM's responses to these two comments agree with CRE on an important point: BOEM will have to prepare a new Information Collection Request ("ICR") for public comment and for Office of Management and Budget ("OMB") review before BOEM could regulate seismic in a manner that is significantly different from current regulation under NTL No. 2007-G02.

First, on September 30, 2011, BOEM published Federal Register notice that BOEM was submitting an ICR to OMB for review. This notice also responds to comments that CRE submitted on BOEM's draft ICR. This ICR is for regulations that apply to offshore seismic.[10]

Second, on October 21, 2011, BOEM published Federal Register notice that BOEM was submitting another ICR to OMB for review. This notice responds to comments that CRE submitted on BOEM's draft ICR. This ICR is also for regulations that apply to offshore seismic.[11]

---

[7] Page 4-231 of document available online at http://www.boem.gov/Environmental-Stewardship/Environmental-Assessment/NEPA/nepaprocess.aspx. Click on "Gulf of Mexico OCS Oil and Gas Lease Sale: 2012; Central Planning Area Lease Sale 216/222; Final Supplemental Environmental Impact Statement; Volume I: Chapters 1-4; Volume II: Chapters 5-8, Appendices, and Keyword Index."

[8] CRE takes no position in these comments on the DPEIS' specific proposed temporal and zoning restrictions for the North Atlantic Right Whale.

[9] CRE's comments on the September 30th ICR are available in www.regulations.gov, Docket ID # BOEM-2011-0011-0003, http://www.regulations.gov/#!documentDetail;D=BOEM-2011-0011-0003. CRE's comments on the October 21st ICR are available in www.regulations.gov, Docket ID # BOEM-2011-0036-0003, http://www.regulations.gov/#!documentDetail;D=BOEM-2011-0036-0003.

[10] BOEM's September 30, 2011 Federal Register notice of the ICR's submission to OMB is available online at http://www.gpo.gov/fdsys/pkg/FR-2011-09-30/html/2011-25262.htm. The OMB file for this ICR is available online at http://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=201108-1010-003.

[11] BOEM's October 21, 2011 Federal Register notice of the ICR's submission to OMB is available online at http://www.gpo.gov/fdsys/pkg/FR-2011-10-21/html/2011-27331.htm .
The OMB file for this ICR is available online at

BOEM's September 30th Federal Register notice explains:

> "We received two comments in response to the Federal Register notice. The first comment, from the Marine Mammal Commission, supported our request to OMB. The second comment, from the Center for Regulatory Effectiveness, requested that we should state that we are not submitting any ICRs for seismic regulations that are more stringent than current regulations, including NTL 2007-G02. Response: For the renewal of this ICR, we are not requesting anything more stringent than in current NTL 2007-G02 and 30 CFR 250, subpart B regulations, which are covered under OMB Control Number 1010-0151. We have no plans, at this time, to change the content of or the resultant burdens imposed by NTL 2007-G02. Therefore, BOEMRE should move forward with the required information collection to ensure compliance with OMB deadlines. If the lawsuit settlement or resulting decree requires changes to the NTL and/or DOI regulations, information collection coordination and OMB approval will occur before any NTL is reissued or regulations are promulgated."[12]

Similarly, BOEM's October 21st Federal Register Notice explains:

> "We received two comments in response to the Federal Register notice. The first commenter, the Marine Mammal Commission stated that it was in support of our submission to OMB. The second commenter, Center for Regulatory Effectiveness, requested two actions. One, that we should state that we are not submitting any ICR for seismic regulations that is more stringent than current regulations, including NTL 2007-G02. Response: For the renewal of this ICR, we are not requesting anything more stringent than in current 30 CFR 551 regulations; NTL 2007-G02 is covered under OMB Control Number 1010-0151. Second, that we wait to submit the ICR to OMB. There is current on-going litigation pertaining to seismic regulations (BOEM vs environmental plaintiff(s)). Response: This particular ICR renewal pertains mostly to revising the form currently in use due to new developments in technology; we are not requesting any new requirements. If the lawsuit settlement or decree requires changes to the form and/or DOI regulations, information collection coordination and OMB approval will occur before the form is reissued or regulations are promulgated.[13]

The referenced NTL No. 2007-G02 is entitled "Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program." Since the above-quoted Federal

---

http://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=201106-1010-004

[12] Page 60681 of BOEM's September 30, 2011 Federal Register notice of the ICR's submission to OMB, available online at http://www.gpo.gov/fdsys/pkg/FR-2011-09-30/html/2011-25262.htm.

[13] http://www.gpo.gov/fdsys/pkg/FR-2011-10-21/html/2011-27331.htm, page 65523.
In the above-quoted Federal Register notices, BOEM responds to CRE comments which explain in greater detail that environmental group plaintiffs are suing BOEM in New Orleans federal court over regulation of seismic in the GOM. CRE's ICR comments state concerns regarding the regulatory impact of any settlement, and the need for public comment on and OMB review of any such impact.

register notices, BOEM has replaced this 2007 NTL with a 2012 NTL: *Notice to Lessees and Operators of Federal Oil, Gas, and Sulphur Leases in the OCS, Gulf of Mexico Region, Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program.*[14] This 2012 NTL is substantially the same as the 2007 NTL. The 2012 NTL states that it:

> "supersedes and replaces NTL No. 2007-G02. It does not introduce any new types of mitigation measures; however, it clarifies how you should implement seismic survey mitigation measures, including ramp-up procedures, the use of a minimum sound source, airgun testing and protected species observation and reporting. The measures contained herein apply to all onlease/ancillary activity surveys you conduct under 30 CFR 550 and all off-lease surveys you conduct under 30 CFR 551."[15]

By contrast, on page C-39, Vol. II, of the DPEIS there is a "Draft Seismic Airgun Protocol." BOEM acknowledges that this Draft Protocol differs significantly from NTL 2012-G02, which we discuss above in these comments.

We assume that the DPEIS' new Draft Protocol is only proposed for the Atlantic, and that it is not intended for any other area. We ask BOEM to confirm or deny our assumption in BOEM's response to CRE's comments.

For the reasons stated above, BOEM's current ICRs do not authorize the DPEIs' new Draft Protocol. This new Draft Protocol could not be applied in the Atlantic or anywhere else without a new ICR and OMB review.

Unless there is something about the Atlantic that requires and justifies a different seismic protocol, the DPEIS Draft protocol should not be applied anywhere.[16] CRE's ICR comments referenced above explain that, for at least two reasons, BOEM should not send OMB any revised ICRs for seismic regulation that is more stringent than currently imposed by NTL-G02. First, BOEM has repeatedly and correctly stated that current regulation of seismic adequately protects the environment. In other words, current regulation of seismic is all that's necessary for the proper performance of BOEM's functions. Therefore, under the Paperwork Reduction Act BOEM should not submit, and OMB should not approve, ICRs for more stringent seismic regulation. Such ICRs would violate the PRA because they would be unnecessary for proper performance of BOEM's functions.

Second, any ICRs for more stringent seismic regulation would also violate the accuracy requirement of BOEM's Information Quality Act Guidelines. The PRA requires that BOEM certify that ICRs are necessary for the proper performance of BOEM's functions. That

---

[14] This document is available online at http://www.bsee.gov/Regulations-and-Guidance/Notices-to-Lessees/2012/2012-JOINT-G02-pdf.aspx.

[15] *Id.*

[16] We acknowledge the possibility that protecting the endangered North Atlantic Right Whale might justify some reasonable time and place restrictions for G&G in the Atlantic. However, the DPEIS' new Draft Protocol does not contain any such provisions.

certification would be inaccurate in the case of ICRs for more stringent seismic regulation. Current regulation of seismic, and ICRs based on current regulation, are all that is necessary for proper performance of BOEM's functions.

CRE's comments on these two ICRS are incorporated by reference into these comments by CRE on the DEIS.[17]

IV. BOEM SHOULD NOT USE THE AIM MODEL UNTIL IT HAS BEEN PEER REVIEWED FOR APPLICATION IN THE ATLANTIC

A) The Application Of The AIM Model in the DPEIS Should Be Peer Reviewed In Order To Determine Whether It Is CREM Compliant. Peer Review Should Be Conducted In Accordance With OMB's Peer Review Bulletin, and the Peer Reviewers Should Be Informed Of BOEM's IQA Requirements.

The DPEIS, Vol. 1, page 2-12, states that

> **"**Incidental take of marine mammals was estimated for the proposed action scenario using the Acoustic Integration Model© (AIM), which is a 4D, individual-based, Monte Carlo statistical model designed to predict the exposure of receivers to any stimulus propagating through space and time (Appendix E)."

The DPEIS, Vol. 2, page E-3, further states that

> "MAI's Acoustic Integration Model©, or AIM, is a software package developed to predict the acoustic exposure of marine animals from an underwater sound source. The unique and principal component of AIM is a 3D movement engine, which programs the geographic and vertical movements of sound sources and simulated marine animals. In 2006, the Center for Independent Experts (CIE) conducted a review and assessment of AIM. The CIE panel concluded that AIM is a credible tool for developing application models (Independent System for Peer Review, 2006)."

The DPEIS neglects to mention that the 2006 AIM Peer Review by CIE also stated that

> "The three terms of reference required that the Panel evaluate whether AIM correctly implements the models and data upon which it is based; whether animal movements are adequately simulated; and whether AIM meets the Council for Regulatory Monitoring [sic] (CREM) guidelines for model development and evaluation."
>
> ***

[17]CRE's comments on the September 30th ICR are available in www.regulations.gov, Docket ID # BOEM-2011-0011-0003, http://www.regulations.gov/#!documentDetail;D=BOEM-2011-0011-0003. CRE's comments on the October 21st ICR are available in www.regulations.gov, Docket ID # BOEM-2011-0036-0003, http://www.regulations.gov/#!documentDetail;D=BOEM-2011-0036-0003.

> "The Panel agreed that AIM appears to be correctly implemented. However, all panelists had recommendations for further testing to be undertaken. They also agreed that animal movement appears to be appropriately modeled within AIM given the inadequacies of the available data.
>
> With regard to whether AIM satisfies the CREM guidelines there was some diversity of opinion. This is understandable given that the CREM guidelines are not *directly* applicable to AIM since it is not an application model (but a tool for developing such models)."
>
> ***
>
> "It follows, that the Panel agree that the use of AIM can lead to models which will meet the CREM guidelines. However, such models, at this stage, would need to be evaluated on a case-by-case basis (i.e., merely using AIM is not sufficient; it must be used appropriately for the specific application)."[18]

There is no public record showing that AIM has been peer reviewed for its application in the Atlantic DPEIS. If BOEM believes that peer review of the DPEIS application of AIM has occurred, then BOEM should identify those peer reviews in the public record, and BOEM should allow public comment on those peer reviews.

Peer review should be performed in accordance with OMB's Peer Review Bulletin, and in order to determine each AIM application's compliance with CREM Guidelines.[19]

The AIM peer reviewers should be advised of the Information Quality Act requirements applicable to BOEM. As OMB explained to EPA in a peer review proceeding:

> "Since the development of Agency Information Quality (IQ) guidelines required by statute, many agencies have been using [peer review] charge language that tracks with the standards of their own IQ guidelines. For example, such language often focuses on whether or not the information in question is accurate, clear, complete, transparently and objectively described, and scientifically justified. We believe it may be useful for EPA to follow a similar approach and incorporate some of the language from your IQ guidelines into the formulation of the [peer review] charge questions."[20]

---

[18] AIM Peer Review, page 1, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/lfa_aim_review.pdf.

[19] OMB's Peer Review Bulletin is available online at http://www.whitehouse.gov/sites/default/files/omb/assets/omb/memoranda/fy2005/m05-03.pdf . The CREM Models Guidance is available online at http://www.epa.gov/crem/cremlib.html#guidance .

[20] OMB document available online at http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cts=1331655089425&ved=0CCUQFjAA&url=http%3A%2F%2Foaspub.epa.gov%2Feims%2Feimscomm.getfile%3Fp_download_id%3D495502&ei=P3FfT-jzLsPh0QGw18SuBw&usg=AFQjCNGd_cMw9iCZalNgLZzgBTspzJwzcg&sig2=Q_vr76vteXyCY3lWiOb98 .

2) The AIM Model should be externally peer reviewed to determine whether the behavioral effects data input into the model are adequate to estimate Takes.

The Aim Peer review report also stated:

> "It was generally agreed by the Panel that the animal movement methods used in AIM were appropriate given the level of available data. The qualifier is important here. The Panel did not perceive a problem with AIM's animal movement methods. They do acknowledge a problem with the absence of the type of data needed to realistically simulate animal movement within AIM.
>
> Relevant extracts:
> • At this point in time, I believe the reliability of AIM to assess the exposure hazard of marine mammals to anthropogenic sound is more limited by the realism of the animate engine module of AIM than the sound propagation modules … animal behavior is far more complicated than behavior of physical systems (Getz 2006).
>
> • … requires that aggregative social, feeding, or predator avoidance behavior of individuals be taken into account. In the absence of data that allows aversion parameters to be set that would simulate such behavior, plausible scenarios need to be investigated under "what if …?" scenarios that assumed that individuals aggregate for various reasons (Getz 2006)."[21]

The inadequacy of AIM's knowledge base is further demonstrated by the discussion of AIM in BOEM's 2011 Application to NMFS for GOM Take rules under the Marine Mammal Protection Act. For example:

> "2.6.6 Animal Behavior Parameters
> The specific animal behavioral parameters that were used in this analysis are provided below. Where the "Surfacing/Dive Angle" column is empty, there were no meaningful data available and, as such, 75º was used as a default value…"[22]

There were "no meaningful data available," and "75º" was used as AIM's default value, for the vast majority of marine mammals modeled: *i.e.*, beaked whales; dwarf and pygmy sperm whales; blackfish: false killer whale, pygmy killer whale, melon-headed whale, and pilot whale; killer whales: Risso's dolphin; bottlenose dolphin; stenella: spinner, atlantic/pantropical spotted, and striped dolphins; fraser's dolphin; and rough toothed dolphin.

The 2011 application candidly acknowledges many other inadequacies in the data that AIM uses to model behavioral effects on specific marine mammals in the GoM. For example:

---

[21] AIM Peer Review, page 7, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/lfa_aim_review.pdf

[22] 2011 Application, Appendix A at page 61, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/boemre_application2011.pdf

"Bryde's Whale
There is a paucity of data for this species. Since they are similar in size, data for both Sei and Bryde's whales have been pooled to derive parameters. Note that Sei whales are rare in the Gulf of Mexico, but their similarities to Bryde's whales was used to determine some of their movement parameters.

"Surface Time
No direct data available, fin whale values used.
Dive Depth
No direct data available, fin whale values used." [23]

***

"Beaked Whales
Data on the behavior of beaked whales are sparse. Therefore, all beaked whale species have been pooled into a single animal." [24]

***

"Dwarf and Pygmy Sperm Whales (Kogia spp.)
Data on dwarf and pygmy sperm whales are rare, and these species are very similar, so data for these two species have been combined.[25]

***

"Blackfish: False iller Whale, Pygmy Killer Whale, Melon-headed
Whale, Pilot Whale
Studies describing the movements and diving patterns of these animals are rare and sparse. Therefore, they have been combined into a single "blackfish" category. As more data become available, these species will be split into separate animats" [26]

***

"Killer Whale
There is a remarkable paucity of quantitative data available for killer whales, considering their coastal habitat and popular appeal. Nevertheless, most data from "blackfish" were used to model *Orcinus orca*, with the exception of dive depth. The different feeding ecology of these species makes very deep dives apparently unnecessary. When additional data allow, separate animats for "resident" and "transient" killer whales will be developed."[27]

***

"Risso's Dolphin
Dive Time

[23] *Id.* at page 61.
[24] *Id.* at page 64.
[25] *Id*. at page 65.
[26] *Id.* at page 66.
[27] *Id*. at page 68.

> No data on dive times could be found. The values for blackfish, which have a similar ecological niche, were used."[28]
>
> ***
>
> "Rough toothed dolphin
> **Dive Depth**
> No dive depth data are available; depths are based upon other species."[29]

Nothing in the DPEIS suggests that these fatal problems with the AIM input data have been solved.

V. PAM SHOULD BE REQUIRED AND PAMGUARD ENCOURAGED

The DPEIS at Vol.1, pages ix-x, asks whether Passive Acoustic Monitoring ("PAM") should be encouraged or required in the Atlantic. For the following reasons, we recommend that PAM be required and use of PAMGUARD should be encouraged.

A) NMFS Already Routinely Includes PAM As a Monitoring or Mitigation Requirement in Ihas, Loas or Rules That NMFS Issues Under the MMPA.

A published article by NMFS' staff discusses NMFS' currently required uses of PAM.[30] In just the year 2011, NMFS included PAM requirements in, *e.g.*:

> ● An L-DEO seismic survey in the Western Gulf of Alaska, available online at http://www.nsf.gov/geo/oce/envcomp/shillington-2011-final-ea-23-may.pdf, and issued permit at http://www.nmfs.noaa.gov/pr/pdfs/permits/ldeo_wgoa_issued_iha.pdf;
>
> ● An industry seismic survey in Cook Inlet, Alaska, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/apache_ak_iha_application2011.pdf;
>
> ● University of Alaska Geophysics Institute seismic survey in the Arctic Ocean, using PAM , available at http://www.nmfs.noaa.gov/pr/pdfs/permits/uagi_iha_issued.pdf;
>
> ● An industry seismic IHA for the Chukchi, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/statoil_iha_issued2011.pdf; and
>
> ● An USGS seismic survey in Central Gulf of Alaska, available online at http://www.nmfs.noaa.gov/pr/pdfs/permits/usgs_goa_iha2011.pdf.

---

[28] *Id.* at page 70.
[29] *Id* at page 74.
[30] "The use of acoustic monitoring in the National Marine Fisheries Service marine mammal incidental take authorizations," Shane Guan, Office of Protected Resources, NOAA/NMFS, presented at 160th Meeting of the Acoustical Society of America (Nov. 15 – 19, 2010), Session 1pAB: Animal Bioacoustics, available online at http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=PMARCW000011000001010002000001&idtype=cvips&doi=10.1121/1.3606451&prog=normal

The Navy and NMFS are also requiring that PAM be used with Navy sonar. With NMFS' concurrence, the Navy stated that "Passive acoustic monitoring for low frequency sounds generated by marine mammals will be conducted when SURTASS [sonar] is deployed."[31]

Recent Brazilian studies have recommended the increased use of PAM to help protect sea life from marine sound:

> "The possibility of detecting marine mammals by hydrophone arrays linked to special software (Passive Acoustic Monitoring – PAM) has shown promise as a monitoring tool for some species of marine mammal with frequent vocalization (e.g. Swartz et al., 2002; Mellinger, 2004). PAM has been suggested as an alternative or additional technique to improve the effectiveness of monitoring marine mammals (Lewis et al., 1998). This acoustic technique has been used to complement visual surveys during periods ofdarkness and may have advantages over the visual technique in areas with strong wind and poor visibility (Swartz et al., 2003). Considering all of these factors, it is recommended to start experiments with PAM in Brazilian waters as an auxiliary tool to document the presence of marine mammals during seismic surveys."[32]

B) BOEM's NTL Comes Close To Requiring PAM

BOEM's *Notice to Lessees and Operators of Federal Oil, Gas, and Sulphur Leases in the OCS, Gulf of Mexico Region, Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program* ("NTL*")* has a section which strongly encourages the use of PAM:

> "**Experimental Passive Acoustic Monitoring**
> Whales, especially sperm whales, are very vocal marine mammals, and periods of silence are usually short and most often occur when these animals are at the surface and may be detected using visual observers. However, sperm whales are at the greatest risk of potential injury from seismic airguns when they are submerged and under the airgun array. Passive acoustic monitoring appears to be very effective at detecting submerged and diving sperm whales, and some other marine mammal species, when they are not detectable by visual observation. BOEM and BSEE strongly encourage operators to participate in an experimental program by including passive acoustic monitoring as part of the protected species observer program. Inclusion of passive acoustic monitoring does relieve an operator of any of the mitigations (including visual observations) in this NTL **with the following exception:** Monitoring for whales with a passive acoustic array by an observer proficient in its use will allow ramp-up and the subsequent start of a seismic survey during times of reduced visibility (darkness, fog, rain,

[31] http://www.surtass-lfa-eis.com/Measures/index.htm.

[32] Effectiveness of Monitoring Marine Mammals during Marine Seismic Surveys off Northeast Brazil, Parente and de Araújo, Journal of Integrated Coastal Zone Management 11(4):409-419 (2011), available online at http://www.aprh.pt/rgci/pdf/rgci-251_Parente.pdf.

> etc.) when such ramp-up otherwise would not be permitted using only visual observers. If you use passive acoustic monitoring, include an assessment of the usefulness, effectiveness, and problems encountered with the use of that method of marine mammal detection in the reports described in this NTL. A description of the passive acoustic system, the software used, and the monitoring plan should also be reported to BSEE at the beginning of its use." [33]

C) BOEM Should Require PAM in the Atlantic Because PAM Is A Valuable Supplement to Visual Monitoring

NMFS rejects as impracticable arguments that seismic should shut down during times of poor visibility. NMFS instead requires PAM during these times in order "to further enhance the detection of marine mammals."[34] For the same reason, BOEM should require PAM use in the Atlantic during times of poor visibility, especially since NMFS is already requiring its use under the MMPA.

D) BOEM Should Encourage Use of PAMGUARD

NMFS recently proposed to issue a seismic IHA to L-DEO which includes PAMGUARD use. NMFS explains here that

> "*Passive Acoustic Monitoring*
> Passive acoustic monitoring will complement the visual monitoring program, when practicable. Visual monitoring typically is not effective during periods of poor visibility or at night, and even with good visibility, is unable to detect marine mammals when they are below the surface or beyond visual range. Acoustical monitoring can be used in conjunction with visual observations to improve detection, identification, and localization of cetaceans. The acoustic monitoring will serve to alert visual observers (if on duty) when vocalizing cetaceans are detected. It is only useful when marine mammals call, but it can be effective either by day or by night, and does not depend on good visibility. The acoustic observer will monitor the system in real time so that he/she can advise the visual observers if they acoustic detect cetaceans. When the acoustic observer determines the bearing (primary and mirror-image) to calling cetacean(s), he/she alert the visual observer to help him/her sight the calling animal(s)….
>
> The acoustic signals received by the hydrophones are amplified, digitized, and then processed by the Pamguard software." [35]

---

[33] This document is available online at http://www.bsee.gov/Regulations-and-Guidance/Notices-to-Lessees/2012/2012-JOINT-G02-pdf.aspx

[34] NMFS' Federal Register of IHA issued to Shell for seismic in Cook Inlet, Alaska, 77 FR 27724 (May 11, 2012), available online at http://www.gpo.gov/fdsys/pkg/FR-2012-05-11/pdf/2012-11296.pdf .

[35] Page 25984 of Federal Register notice available online at http://www.gpo.gov/fdsys/pkg/FR-2012-05-02/pdf/2012-10627.pdf

Academic groups (University of St. Andrews, Oregon State University, Herriot Watt University, and Scripps Institute of Oceanography), environmental groups (EcoLogic), and select oil and gas companies (through the International Association of Oil and Gas Producers) have spent considerable time, effort and money developing the freely available version of PAM called PAMGUARD. The PAMGUARD web site discusses PAMGUARD in considerable detail, and provides free, public access to PAMGUARD.[36]

This site explains why PAMGUARD should be used as a supplement to visual monitoring, and it is worth quoting at some length:

> "The default method for detecting marine mammals at sea is to look for them. Visual observations play a vital role, but marine mammals are difficult to spot on the sea surface, especially when weather and light conditions are poor. In addition…visual techniques are next to impossible at night but often operators wish to continue noise producing activities round the clock….[A]coustic cues can often be detected more reliably at greater ranges and are less affected by weather and sighting conditions and animals can be detected acoustically equally well day and night. Passive Acoustic Monitoring isn't a panacea but for many species it can significantly increase the probability that they are detected and increase the effectiveness of mitigation."
>
> ***
>
> "WHY DID WE NEED PAMGUARD?
>
> Good acoustic monitoring software existed before PAMGUARD but there were a number of reasons that justified developing something new.
>
> In the first place, it was realised that there was a real value in having a single software that marine mammal observers (MMOs) could become familiar with and use on a variety of different vessels. Ideally that software should be freely available, interface to a wide range of hardware configurations and work on many different computer platforms. (Pamguard achieved cross platform compatibility by being written in Java.)
>
> None of the existing programs were open source. This meant that the functioning and performance of the algorithms within them was often not clear and it wasn't possible for a group of users to contribute to and to support it. There was also a long term risk that the software might be withdrawn from use or become outdated.
>
> In most cases there was no commitment to supporting and updating the software and as it wasn't open source it would be difficult for other programmers to

[36] The industry-sponsored PAMGUARD website is available online at http://www.pamguard.org/home.shtml

> provide such support. Some of the software, though excellent, was not designed for real time monitoring by a single operator in field conditions."[37]

PAMGUARD has now undergone beta testing.[38]

BOEM should encourage the use of PAMGUARD by discussing it favorably in the final PEIS for the Atlantic, and in other EISs and other appropriate documents published by BOEM.

VI. BOEM'S IQA REQUIREMENTS APPLY TO THIRD-PARTY OR OUTSIDE INFORMATION IF BOEM USES OR RELIES ON THE INFORMATION

The DOI/BOEM IQA requirements are available online,[39] and they won't be discussed in detail here, except to emphasize their applicability to outside or third-party data that BOEM uses or relies on.

The DOI/BOEM IQA guidelines state they apply to third party information

> "where the Department distributes information submitted by a third party in a manner that suggests that the Department endorses or adopts the information, or indicates in its distribution that it is using or proposing to use the information to formulate or support a regulation, guidance, or other Departmental decision or Position."
>
> ***
>
> **"V. Third Party Information Under the Information Quality Guidelines**.
>
> If the Department relies upon technical, scientific, or economic information submitted or developed by a third party, that information is subject to the appropriate standards of objectivity and utility. The standards of these Information Quality Guidelines apply not only to information that the Department generates, but also to information which can be verified that other parties provide to the Department, if the Department disseminates or relies upon this information. In instances where the information is relied upon but is not verifiable, the source must be made transparent to the public, and such original information will not be subject to these Information Quality Guidelines.
>
> Departmental personnel who conduct scientific activities shall be held accountable for the integrity of the information they collect and analyze, and the conclusions they present." [40]

---

[37] PAMGUARD site available online at http://www.pamguard.org/31_PamguardBackground.html.
[38] Ocean Science Consulting, "Advisors to the New Zealand Government," blog entry dated March 15, 2012, available online at http://www.osc.co.uk/blog/index.php/2012/03/ongoing-beta-testing-of-pamguard/ .
[39] See http://www.boemre.gov/qualityinfo/PDF/MMSQualityInfoGuidelines-Final.pdf for the MMS/BOEM IQA Guidelines, and http://www.doi.gov/archive/ocio/guidelines/515Guides.pdf for the DOI IQA Guidelines.

OMB explains that "if an agency, as an institution, disseminates information prepared by an outside party in a manner that reasonably suggests that the agency agrees with the information this appearance of having the information represent agency views makes agency dissemination of the information subject to these [DQA] guidelines." [41]

Several months later, in reviewing agency-specific DQA guidelines, OMB further explained how the DQA guidelines covered outside or "third party" information relied upon by an agency in a rulemaking. OMB used the draft Department of Transportation ("DOT") DQA guidelines as an example:

> "DOT incorporated these principles from the OMB guidelines by stating that an agency disseminates information if it relies on information in support of a rulemaking. 'If the Department is to rely on technical, scientific, or economic information submitted by, for example, a commenter to a proposed rule, that information would need to meet appropriate standards of objectivity and utility' (DOT, 3). 'The standards of these guidelines apply not only to information that DOT generates, but also to information that other parties provide to DOT, if the other parties seek to have the Department rely upon or disseminate this information or the Department decides to do so.'(DOT, 8). . . . Other agencies, particularly those likely to be involved with using and/or disseminating 'influential' information, must include similar provisions in their guidelines."[42]

In correspondence with CRE, NMFS acknowledges that both the OMB Government-wide and NMFS' own DQA guidelines apply to outside or third-party information if NMFS uses or relies on that information.[43]

VII. BOEM SHOULD ISSUE AN ICR FOR PUBLIC INPUT ON NON-FEDERAL DATA THAT SHOULD BE USED FOR G&G ACTIVITIES IN THE ATLANTIC

BOEM should seek public input on which non-Federal data and information to use for the G&G Activities in the Atlantic. Accordingly, BOEM should obtain an ICR for the public input on non-Federal data to be incorporated, and provide the public with a public comment period on the ICR.

This is the precise procedure followed by the Department of Health and Human Service (HHS) when HHS sought "Public Input to Nominate Non-Federal Health and Health Care Data Sets and Application for Listing on Healthdata.gov." HHS set an important precedent for incorporating

---

[40] Pages 6 ,7 at http://www.doi.gov/archive/ocio/guidelines/515Guides.pdf.
[41] Page 8454 of OMB Federal Register notice available online at http://www.whitehouse.gov/sites/default/files/omb/assets/omb/fedreg/reproducible2.pdf .
[42] *Memorandum for the President's Management Council*, June 10, 2002, on "Agency Draft Information Quality Guidelines," from John D. Graham, Administrator of OMB's Office of Information and Regulatory Affairs, at 6-7 of Attachment, available online at http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/iqg_comments.pdf .
[43] See, *e.g.*, NMFS' letter to CRE available online at http://thecre.com/pdf/NOAA-IWC_Letter.pdf.

non-Federal data into federal databases, specifically data.gov. BOEM should closely follow the process established by HHS by obtaining an ICR.

BOEM should establish "rules of governance" for allowing non-federal parties that contribute to G&G activities in the Atlantic to have a link to the BOEM website. This would permit greater stakeholder involvement and public participation in the Atlantic OCS G&G activities. The rules governing the family of CRE's Interactive Public Dockets should be considered when establishing such rules:

1. *No Barrier to Entry:* Any person or organization can post on a CRE IPD as long as the posts do not contain profanity and do not include personal attacks on federal employees.

2. *Interactive:* All posts on CRE IPD's have the capability for a reader to either post comments on an existing post or initiate a new post.

3. *Accept Criticism:* The host of the IPD must allow dissenting opinions to be expressed on the IPD.

4. *Hassle Free:* CRE IPD's require no registration, no personal information including email address and will accept anonymous posts and with large attachments.

VIII. BOEM SHOULD PROCEED WITH THE PROPOSED G&G ACTIVITIES PURSUANT O THE PROPOSED ACTION, ALTERNATIVE A.

The proposed action, Alternative A, would authorize G&G activities in support of all BOEM program areas – oil and gas exploration and development, renewable energy, and marine minerals – throughout the entire Area of Interest in Atlantic. Importantly, the proposed action should not be controversial because the scope of the PEIS does not evaluate specific proposals for oil and leasing, it merely provides an environmental analysis of G&G activities to gain a better understanding of the ocean bottom and subsurface for the possibility of future renewable energy development, extraction of marine minerals, and oil and gas development. The proposed action "would provide information about the location and extent of oil and gas reserves, bottom conditions for oil and gas or renewable energy installations, and marine minerals off the Atlantic coast of the U.S."[44] The proposed action would provide BOEM with the appropriate knowledge and data to maximize ocean resources in the Atlantic, while also harmonizing competing ocean uses.

The proposed action, Alternative A, is the appropriate manner in which BOEM should conduct G&G activities in the Atlantic. BOEM concludes that "Alternatives A and B would both fulfill the statutory mission and responsibilities of this Agency for permitting G&G activities in the program areas managed by BOEM. Alternatives A and B both provide protective measures for important biological resources in the AOI that in some cases are protected species." And as BOEM concedes, "potential impacts of Alternatives A and B are broadly similar," and "most impacts under all three alternatives would be **negligible** or **minor**, and no **major** impacts were

[44] BOEM, *Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Areas Draft Programmatic Environmental Impact Statement*, page 1-8.

identified."[45] Nevertheless, Alternative A would provide BOEM with the most accurate and comprehensive understanding of the resources available in the Atlantic, while also minimizing impact to marine mammals. Thus, BOEM should proceed with Alternative A, but should do so by incorporating the recommendations in this comment above into the proposed action.

The proposed action will "use the information obtained by the G&G surveys to make informed business decisions regarding oil and gas reserves, engineering decisions regarding the construction of renewable energy projects, and informed estimates regarding the composition and volume of marine mineral resources."[46]

IX. BOEM SHOULD MAKE THE PUBLIC COMMENTS AVAILABLE TO THE PUBLIC

Public access to public comments on a public proceeding is basic prerequisite of open government.

For decades federal agencies have made public comments available to the public, first through docket rooms and then, as the internet developed, through online systems developed by each agency.Agency-specific solutions to providing public access to public comments were superseded by Regulations.gov. President Obama has emphasized the importance of the public comment portal and has enhanced its operation.

Despite the Administration's emphasis on the use of Regulations.gov to promote public participation and collaboration in agency proceedings, the Bureau of Land Management has repeatedly refused to release public comments on the 2012 Oil Shale and Tar Sands PEIS. Instead, BLM has chosen to bypass the open process in favor of their own comment processing system, a system which excludes the public from reading public comments. Moreover, BLM's internal comment processing system has the capabilities to post the comments online, which the previous administration had done in the 2008 Oil Shale and Tar Sands PEIS.[47] Despite these capabilities, BLM has chosen secrecy over transparency in the PEIS process.

BLM's lack of transparency is troubling, especially in light of the current Administration's Open Government Initiative. CRE urges BOEM to embrace a more transparent process in conducting the Atlantic PEIS by making the public comments available to the public immediately after the comment period closes.

---

[45] BOEM, *Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Areas Draft Programmatic Environmental Impact Statement*, page 2-55 (emphasis in the original).

[46] BOEM, *Atlantic OCS Proposed Geological and Geophysical Activities Mid-Atlantic and South Atlantic Planning Areas Draft Programmatic Environmental Impact Statement*, page 1-8.

[47] 2008 PEIS Comments available at http://ostseis.anl.gov/involve/draftcomments/dsp_commentlist.cfm?PageNum=1&browse#rec

X. CONCLUSION AND RECOMMENDED ACTIONS

BOEM should confirm or deny that the DPEIS' new Draft Protocol for seismic airguns is only proposed for the Atlantic, and is not intended for any other water body.

BOEM's current ICRs do not authorize the DPEIS' new Draft Protocol for seismic airguns. BOEM will have to apply for a new ICR and justify this new Draft Protocol before it could be used anywhere. Given the success of the current regulation and ICRs, BOEM will have difficulty supporting the new more stringent Draft Protocols.

BOEM should not use the AIM Model to estimate Takes in the Atlantic until AIM has passed peer review in accordance with OMB's Peer Review Bulletin. The additional peer review should be performed in order to determine in part whether AIM's application in the Atlantic complies with CREM Guidelines. The additional peer review should also be performed in order to determine whether the behavioral effects data input into the model are adequate to estimate Takes.

The public should have an opportunity to participate in this peer review. BOEM should identify in the public record each and every AIM peer review that they believe has occurred. BOEM should allow public comment on those and all other peer reviews relevant to the DPEIS. All AIM peer reviewers should be advised of the IQA requirements applicable to BOEM. Passive Acoustic Monitoring ("PAM") should be required in the Atlantic, and PAMGUARD should be encouraged.

Further, BOEM should obtain an ICR for the public input on non-Federal data and information that should be incorporated into the proposed action, and provide the public with a public comment period on the ICR. In addition, any non-Federal information that BOEM uses or relies on must meet IQA requirements.

Finally, BOEM should pursue Alternative A in the PEIS, but should do so by incorporating all of the above recommendations.

The CRE appreciates the opportunity to submit these comments, and looks forward to the agency's response. If you need further information regarding any issue discussed in this comment letter, please do not hesitate to contact me at secretary1@mbsdc.com or (202) 265-2383.

Respectfully Submitted,

Jim Tozzi
Member, Board of Advisors

From:	Wilson, Joseph R HQ02
To:	G&GEIS
Cc:	Klein, Amy S HQ02; Small, Daniel L SAD; Monte, Linda B NAD
Subject:	US Army Corps of Engineers Comments (UNCLASSIFIED)
Date:	Tuesday, May 29, 2012 12:12:01 PM

Classification: UNCLASSIFIED
Caveats: NONE

Comments from the US Army Corps of Engineers on the PEIS for the Atlantic G&G Activities are below. There may be other comments from other offices in our organization of which I am not aware.

In general, we concur that many Geological and Geophysical Activities (G&G) do not constitute a discharge of dredged or fill material and therefore do not require a Corps Section 404 permit. However, the draft PEIS makes a significant omission regarding permits that may be required by Section 10 of the Rivers and Harbors Act (RHA).

While the Clean Water Act (CWA) is defined with a somewhat limited glossary statement, the Rivers and Harbors Act (RHA) is omitted in the glossary.

In the regulatory citation section the Marine Protection, Research and Sanctuaries Act of 1972 was omitted even though the regulatory aspects of that legislation were included in the text on pages 3-41 and 4-190. Importantly, while referencing the specific ocean dredged material disposal areas on page 4-190 the PEIS failed to mention that G&G exploration activities at those sites would not likely be approved by the Corps.

There are numerous comments regarding pipelines. If such pipelines are a part of G&G activities and those pipelines are on the bottom of the OCS or navigable state waters, those pipelines would constitute work in or affecting navigable waters and therefore require a Section 10 permit.

The draft PEIS specifically notes that anchoring (monitoring buoys and cables), pipeline installation, and structure placement (emplacement of wind turbines, buoys, other items) on the seafloor could be expected from G&G actions. There is also a discussion of, "...or placement of bottom-founded equipment or structure". Such activities, that is installations and other devices on the OCS seabed will require Section 10 permits.

We recommend that the CWA glossary statement include, "and Corps permits for the discharge of dredged or fill material."

We recommend that the glossary include the Rivers and Harbors Act (RHA), and this statement: An act that requires Corps permits for work or structures, including structures (installations and other devices) on the OCS seabed, in or affecting navigable waters. The Corps evaluates permits for OCS structures with respect to national security and navigational interests.

Page specific notes:

Page viii: Add note that Corps permits are also required for structures on the OCS. Also state that Nationwide Permits (NWP) can only be used for activities with minimal adverse environmental impacts, meet the terms and conditions of the NWP, and comply with any Corps District specific regional conditions.

Page 1-6: Add "including OCS seabed structures" for COE jurisdiction.

Page 1-15: Add "and OCS seabed structures" for COE approval.

On page 1-15 the draft PEIS discusses the NWP program, also called general permit. NWPs were reissued in 2012, as published in the Federal Register on February 21, 2012. Corps districts added regional conditions as may have been needed to insure that the activity authorized has only minimal

adverse environmental impacts. States also reviewed the NWPs and as appropriate provided Coastal Zone Management (CZM) and Section 401 CWA water quality certifications. Any applicant that intends to use a NWP should insure that their proposed activity meets the terms, conditions, and any regional conditions of the NWP, and any additional CZM or Section 401 water quality requirements. Projects that cannot use a general permit will require a standard permit.

On page 1-17 the draft PEIS appears to confuse Section 10 permit authority with Section 404 actions. There is a discussion regarding the discharge of excavated material that is more related to Section 404 than Section 10. The draft PEIS should simply note that NWP-5 for "Scientific Measurement Devices" and NWP-6 for "Survey Activities" are both appropriate for Section 10 and Section 404 actions. It would be good to add that Section 10 is applicable for structures, installations, and other devices on the OCS seabed. There is a statement regarding "avoid, minimize, or mitigate". In general those terms are only associated with CWA Section 404 discharges, and specifically the 404(b)(1) Guidelines. With regard to Section 10 permits, the Corps is the only agency that has the authority to make a decision to issue a Section 10 permit, based on an applicant's submission of a Corps permit application and Corps decision that the proposed activity is not contrary to the public interest.

On page 2-38 there is a statement that G&G surveys are permitted by NWP. That statement should be qualified that the activity is authorized only if it meets the terms, conditions, and any regional conditions of the NWP, and any additional CZM or Section 401 water quality requirements.

On page 3-13 there is a statement that surveys are permitted by NWP. That statement should be qualified that the activity is authorized only if it meets the terms, conditions, and any regional conditions of the NWP, and any additional CZM or Section 401 water quality requirements.

On page 3-22 there is a statement that the use of sand and gravel is permitted by NWP. That statement should be qualified that the activity is authorized only if it meets the terms, conditions, and any regional conditions of the NWP, and any additional CZM or Section 401 water quality requirements.

On page 3-41 (3.6.9) our ocean dredged material disposal areas are used only for dredged material disposal, not "mainly." On the top of page 3-42 in reference to sea turtles there are no documented cases of sea turtles being impacted by disposal operations and there are no effluent discharge criteria at ocean sites.

On page 4-70 restrictions on hopper dredges related to sea turtles occurs at the hopper dredge where the dredge head meets the sand surface not at or on the beach. Typically dredge material placement operations which occur on the beach are restricted from times of sea turtle nesting.

On page 4-74 there is reference to the threat to Kemp's ridley sea turtle threats from dredging in the same vein as commercial fishing. As a matter of reference NOAA Fisheries authorizes the legal take of over 10,000 seat turtles annually while the Corps is authorized the legal take of fewer than fifty and of those only a few are Kemp's.

On page 4-138 while referring to the threat of dredging to Atlantic Sturgeon we would point out that the primary dredging threat is inland of the coastline and not in ocean waters. Moreover, since coastal channels are frequently dredged they are no longer considered important habitat for Atlantic Sturgeon.

Joseph R. Wilson
U.S. Army Corps of Engineers
441 G Street NW, 3I64
Washington, DC 20314
202-761-7697

Classification: UNCLASSIFIED
Caveats: NONE

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
John R. Griffin, Secretary
Joseph P. Gill, Deputy Secretary

May 24, 2012

Mr. Gary D. Goeke, Chief, Regional Assessment Section
Office of Environment (MS5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCR Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

Dear Mr. Goeke:

Thank you for the opportunity to review the U.S. DOI Bureau of Ocean Energy Management's Draft Atlantic Geological and Geophysical (G&G) Activities Programmatic Environmental Impact Statement (PEIS). Please find attached Maryland's comments on the PEIS. As explained in more detail below and in the attached documents Maryland considers the No Action Alternative to be the preferred alternative.

The No Action Alternative is preferred for the following reasons:

- As noted in Governor O'Malley's May 27, 2010 letter to Secretary Salazar, Maryland remains opposed to oil and gas exploration and development activities in the Mid-Atlantic region (Maryland, Virginia and Delaware). Oil and gas exploration and development in our Mid-Atlantic waters could put our sensitive coastal and marine areas at risk and consequently jeopardize our recreational, tourist, and fishing industries.

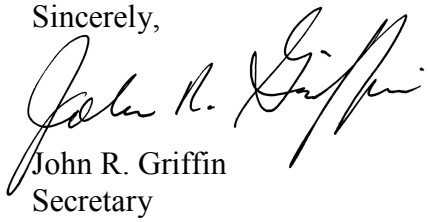
- There are significant data and information gaps regarding marine mammal, turtle and benthic habitat density and distribution in the Mid-Atlantic region. This lack of information precludes an accurate analysis of the potential impacts of the oil and gas related G&G activities. Marine mammals and turtles are particularly vulnerable to G & G activities, some of which are rare, threatened or endangered.

- The proposed oil and gas related G&G activities pose additional restrictions to an already busy Mid-Atlantic region and are likely not compatible with existing coastal uses. The proposed activities will only add to potential coastal use conflicts and potentially diminish the value of key regional assets, such as the Ports of Baltimore and Norfolk, the Naval Air Station Patuxent River, and the Wallops Flight Facility. Additional constraints due to G&G surveys drive up shipping times and costs thereby reducing commercial competitiveness and could cause safety concerns during military operations.

We encourage BOEM to adopt the No Action Alternative so that it can better address potential conflicting uses through the ocean planning process as called for in the President's National Ocean Policy Executive Order. The new ocean policy calls for a regional planning process designed to identify areas most suitable for various types or classes of activities in order to reduce conflicts among uses, reduce environmental impacts, facilitate compatible uses, and preserve critical ecosystem services to meet economic, environmental, security, and social objectives.

In closing, Maryland is most anxious to move forward expeditiously on the development of renewables like offshore wind. The Mid-Atlantic region holds great promise for this type of project. If you have any questions, please contact Joe Abe or me. He may be reached by calling 410-260-8740 or by email at jabe@dnr.state.md.us.

Sincerely,



John R. Griffin
Secretary

Attachment

cc: Malcolm Wolfe, Maryland Energy Administration
Robert Summers, Maryland Department of Environment
Frank Dawson, Maryland Department of Natural Resources

Maryland's Comments on the U.S. Department of Interior's Draft Programmatic Environmental Impact Statement (PEIS) on Geological and Geophysical (G&G) Surveys in the Atlantic Outer Continental Shelf (OCS)

The following comments and recommendations are Maryland's response to information provided in the PEIS. As noted in the cover letter, Maryland considers the No Action Alternative to be the preferred alternative.

General Comments and Recommendations:

Assessment of Impacts - Maryland believes that some of the projected levels of impact to natural resources as stated in the PEIS are under-estimated. Please see Section-by-Section Comments for additional information.

Insufficient Information on Habitats and Living Resources Limits Our Ability to Avoid or Minimize Impacts

Benthic Habitats - The PEIS recommends avoiding hard bottom habitats by staying clear of locations with unique benthic features, but this would only apply in areas where known locations exist. In general, locations of hard bottom, coral and other unique benthic ocean habitats in the Mid-Atlantic are largely unknown. Impacts to the seafloor off the coast of Maryland are hard to measure, as there is little to no documentation of the seafloor habitat. There is evidence of cold-water and deep-water corals, but no extensive mapping has been completed. This does not mean there will not be an impact, only that it cannot be measured. Recommendation: A comprehensive data set of known locations should be assembled and additional surveys should be conducted in order to accurately assess potential impacts.

Marine Mammals and Sea Turtles - Limited data exist in the Mid-Atlantic that describe marine mammal and sea turtle migration pathways and key habitat areas for these populations. Recommendation**:** New, baseline studies need to be conducted to help refine survey activity area and/or time of year restrictions.

Protection of Marine Mammals and Turtles Requires Appropriate Observers On Board Vessels - Trained objective observers on board the vessels will help ensure accurate and timely identification and response so that impacts to these communities will be minimized. The observers should be properly qualified (marine biologist trained to study marine mammals and/or sea turtles) and objective (they do not have a conflict of interest, i.e., not an employee or consultant to the oil and gas industry). Recommendation: Require properly trained objective observers to be on board vessels during G&G surveys to minimize impacts to marine mammals and turtles.

Protection of Marine Mammals and Turtles Requires Adequate Restrictions to Vessel and Survey Activity Based on Sufficient Advanced Warning, Sea Conditions, Geographically Accurate Information and Appropriate Technology. Throughout draft PEIS it is noted that vessel and survey activity will be interrupted or modified to minimize impacts when marine mammals are observed or suspected within certain distances from the ship.

Sufficient Advanced Warning – BOEM should ensure that adequate protocols are in place so that the crew has sufficient time to alter operations once a marine mammal or turtle is sensed or suspected near the vessel. Proper protocols will help avoid significant direct or indirect impacts (such as collision, hearing loss or any activity affecting migratory or foraging activity to the point where health is compromised or significantly degraded).

Sea Conditions - Sea conditions can affect the ability of even the best-qualified professional to locate and observe marine mammals or turtles. If visual observation is the primary means for identifying the presence of marine mammals and turtles, then vessel and survey activity should be limited to those times when sea conditions will allow ample time to locate their position and respond in a protective manner.

Geographically Accurate Information and Appropriate Technology

In addition to visual observations by trained, objective professionals, there are additional means for anticipating and sensing the potential presence of marine mammals and turtles. For example, maps depicting the migration corridors can help the ship crew avoid certain areas during certain times of the year. In addition, observations made to prevent impacts can also help augment the initial survey data. Geographic Information Systems on board the vessel can help integrate various information layers such as energy resources, marine life and navigational routes to help make optimal decisions. Technologies such as listening devices for hearing marine mammals, sonar used to locate fish or marine mammals or radio signals from tagged organisms or even drones flying or navigating ahead of a ship can be deployed to increase the ability to sense and respond to marine mammals and turtles.

Recommendation: The above factors should be integrated and applied strategically to enhance the ability of G & G survey companies to sense, anticipate and respond to potential encounters with marine mammals and turtles.

Include Commercial Navigation as Separate Subheading in Future NEPA Analysis - The draft PEIS addresses existing conditions and considers potential effects of G&G activities on commercial shipping primarily in sections 2.1.3.12, 2.2.3.12 and 2.3.3.12 (Impacts on Other Marine Uses) of the document. Recommendation: Given the significance of commercial navigation throughout the region, we strongly recommend that BOEM provide this information in a standalone impact subheading in future NEPA analysis and documentation.

Require Notification of Local Pilot Associations and Commercial Seaports in Addition to Local Harbormaster and Coast Guard - The section entitled "Impacts on Other Marine Uses" (section 2.1.3.12) indicates that the local harbormaster and US Coast Guard will be notified of proposed vessel exclusion areas. Recommendation: We recommend that the local pilot associations and commercial seaports also be notified of planned vessel exclusion zones.

Access to Port of Baltimore Includes Both Chesapeake Bay Entrance and Delaware Bay Via the Chesapeake and Delaware Canal - Sections 3.6.8 and 4.2.12.1.1 entitled "Shipping and Marine Transportation" correctly recognizes that the Port of Baltimore is accessed through the Chesapeake Bay entrance to the Atlantic Ocean. However, this section does not indicate that the

Port of Baltimore is also accessed from the Delaware Bay via the Chesapeake and Delaware Canal. Due to its location, the Port of Baltimore is therefore subject to impacts to navigation from both entrances. Recommendation: We recommend that BOEM revise these sections in the final PEIS to reflect both accesses to the Port of Baltimore.

Include Navigational Surveys in Future NEPA Studies - Recommendation: Surveys planned adjacent to traffic separation schemes, fairways, and other important navigation areas leading to Atlantic Coast seaports should be reviewed as part of future site-specific NEPA analysis and documentation for foreseeable impacts on commercial shipping.

Include Impacts of Northern Right Whale Restrictions - Recommendation: The impact on commercial shipping and marine transportation associated with an expansion of the Northern Right Whale seasonal speed restrictions should be considered as part of further NEPA documentation for site-specific activities.

Cumulative Effects of Proposed OCS Activities - The draft PEIS indicates that cumulative effects of the full spectrum of proposed OCS activities, including wind energy development and oil and gas activities, have been considered. Recommendation: Maryland encourages BOEM to continue to consider the cumulative effects of these activities as part of the NEPA process for future OCS decisions utilizing all available information including the US Coast Guard's Atlantic Coast Port Access Routing Study and Maryland's previous communications regarding offshore Wind Energy Areas and the Atlantic Wind Connection Project.

Section-by-Section Comments

1.6.5. Introduction. Coastal Zone Management Act, and Section 5.6. Consultation and Coordination. Coastal Zone Management Act. These Sections discuss the Federal Coastal Zone Management Act (CZMA) and, more specifically, the requirements of Section 307 that proposed federal activities be consistent to the maximum extent practicable with a State's federally-approved Coastal Zone Management Program. These discussions note that OCS plans and any federal permits, e.g. permit from BOEM for proposed survey activities, required for OCS activities are subject to the Section 307 Federal Consistency provisions. Based on these discussions, MDE presumes that it is BOEM's position that a Federal Consistency determination, pursuant to Section 307(c)(1) - Direct Federal Actions - is not required for the G&G survey activities evaluated in the PEIS. If so, this should be specifically/clearly stated in these Sections of the PEIS.

1.6.16. Introduction. State Permitting. This Section discusses State permitting requirements for the States within the AOI for any proposed G&G survey activities in a State's waters. The Section notes that all survey activities would require a license from the State of Georgia to use publicly owned lands beneath the mean high water mark. In addition, any "bottom-disturbing" activities would also require an authorization from Virginia, North Carolina, South Carolina, and Florida. It concludes with the statement, "For all other states within the AOI, no state permits other than the CZMA requirements would be required for G&G survey activities."

It is not clear why Maryland is not included on the list of states requiring authorization for bottom-disturbing activities. This Section should point out that a Tidal Wetlands License, pursuant to the

State's Tidal Wetlands Act, would likely be required for any survey activities involving disturbance to submerged lands within Maryland waters.

2.1.3.6

White Marlin are currently under review for consideration to be listed. Interactions are well documented off Maryland and along the Atlantic Coast. Atlantic Sturgeon have been listed, and a number of interactions have been documented off Maryland. Impacts to the habitat of these species should be documented.

Description of the Affected Resources and Impact Analysis
4.2.1.1.1

The description of the Mid-Atlantic Bight (MAB) benthic communities was largely based on a book published in 1979. Based on the changes in fisheries since that time, including expansion of ranges for many species, and rebounding of stocks, there are likely changes in the benthic community that are not documented. The description of the benthic community is likely outdated.

4.2.1.2.2 Evaluation
"The stress responses to marine invertebrates could potentially affect populations by reducing reproductive capacity and adult abundance." This section specifically mentions lobster, and studies that indicated sublethal effects that were sometimes observed weeks to months after exposure. The Southern New England stock of American Lobster are currently experiencing recruitment failure (ASMFC 2010). This stock occurs from Long Island Sound through the waters off North Carolina. American Lobster stocks in Southern New England can ill-afford additional impacts to their reproductive capacity.

Additionally, there is limited, dated information on the benthic community in the MAB. Based on these concerns, Maryland believes that that impacts to benthic communities from active acoustic sound sources have been under-estimated.

4.2.5.1.1 Description of the Affected Environment – Fish Resources

4.2.6 Threatened and Endangered Species
NOAA received a petition to list White Marlin as Endangered in February 2012, which is currently under review. The petition was based on the most recent stock assessment.

4.2.6.2.2
Atlantic Sturgeon also occurs with frequency off of Maryland. Interactions with the commercial fisheries in and around Maryland are well documented.

4.2.7 Commercial Fisheries
Table 4-28: Primary commercial species landed during 2006-2009 by state – these are not species that are not primary species landed from the AOI. For Maryland, Striped Bass, Clams, and Blue

Crabs are listed; while Striped Bass and Blue Crabs are landed within or near the AOI, they are primarily harvested within the Chesapeake Bay. This table does not accurately represent the commercial coastal fishery in Maryland. Of primary concern are likely to be fisheries for spiny dogfish, scallops, striped bass, flounder, horseshoe crabs, rays, and clams. Additional fisheries include tuna, swordfish, lobster, black sea bass, and tautog, among others. Please feel free to contact us if you would like additional information.

4.2.7.2.2 Evaluation
Active Acoustic Sound Sources
Although the PEIS determined that the affects to commercial fisheries would be "minor", the local impact could be significant, Figure 4-21 indicates that April through August would be peak times for the survey work. The commercial fleet that operates out of Ocean City, Maryland is relatively small, and any impacts to that fishery during that period would be felt significantly.

4.2.8.1.1 Recreational Fisheries – Description of the Affected Environment – Recreational Fishing Effort
A word of caution: these estimates of effort were based on the Random Digit Dial (RDD) telephone survey of coastal counties. The methodology for estimating effort has changed and is now based on the National Angler Registry (i.e., a phone book of all licensed coastal anglers that was implemented in 2010). Use of the Registry should result in better estimates, and is expected to result in higher estimates than previously calculated.

4.2.8.2.2
Evaluation

Active Acoustic Sound Sources
The PEIS does not adequately address the potential impacts on the recreational fishing community. Maryland disagrees that there would be a negligible effect on recreational fishing, especially at the local level. A lot of fishing is not about catching, but about the experience. People are not likely to want to go fishing if airguns are being deployed.

While there may not be evidence of fish mortality from some of these G&G activities, a disturbance caused by airguns may drive fish away resulting in poor fishing for an entire year. Artificial-reef associated fish may vacate the reef and once they have vacated, they may colonize another reef and not return to their reef of origin.

Lastly, in Ocean City, Maryland, there are several high dollar tournaments (e.g., White Marlin Open, and the Mid-Atlantic $500,000) that are important to the local economy. Should G&G activities occur during those times or before those tournaments impacting the availability of fish, it will have a major effect on the local economy and recreational fishing.

References

ASMFC 2010. Recruitment Failure in the Southern New England Lobster Stock. Atlantic States Marine Fish

City of Charleston
Joseph P. Riley, Jr.
Mayor

July 2, 2012

Mr. Gary D. Goeke
Chief, Regional Assessment Section
Office of Environment (MS 5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard,
New Orleans, Louisiana 70123–2394

Re: Comments on the Draft PEIS for Atlantic G&G Activities

Dear Mr. Goeke:

Thank you for this opportunity to comment on the Atlantic G&G activities PEIS. As a coastal constituent adjacent to the South Atlantic Planning Area, I encourage BOEM to adopt Alternative C—the no action alternative—in its programmatic environmental impact statement. Our concerns regarding the potential impacts oil and gas exploration and development could have on South Carolina's natural environment, tourism and fishing industries, and quality of life are outlined below.

South Carolina, including Charleston, enjoys a vibrant coastal tourism industry and thriving fisheries that contribute significantly to both our quality of life and economy. More than 6,000 people are employed in the fishing industry, and commercial and recreational fishing account for more than $500 million in sales per year. Our state's tourism and recreation industry generates $2.2 billion in revenue per year and employs over 55,000 South Carolinians.

Not only are our economies largely based on the vitality of our coastal resources, but culturally we identify with our coastal heritage and are proud of our region's natural beauty. Therefore, maintaining a healthy coast is of the utmost importance to the state of South Carolina. It is our goal to preserve the integrity of our beaches, marshes, and waterways for South Carolinians and the many tourists from all over the world who share our enjoyment of these special places.

CHARLESTON
All America City

P.O. Box 652, Charleston, South Carolina 29402
843-577-6970 Fax 843-720-3827

Offshore geological and geophysical (G & G) activities and eventual drilling can be harmful to the marine and coastal environment and thus would be inconsistent with our stated priority of maintaining our coastal resources. Acoustic pollution caused by oil and gas G & G activities such as the use of air guns, aeromagnetic surveys, and the drilling of test wells has proven associations with major impacts to marine mammals, turtles, and fish. Waterborne pollution such as drilling fluid and potential test well blowouts further compromise the health of our waters. The vitality of aquatic ecosystems and the beauty of our region is non-negotiable for our fishers, shrimpers, and crabbers, our tourists, and our coastal residents' way of life.

Furthermore, given that we would not support eventual commercial oil or gas drilling off our coast following the exploration process, surveying activities would be a wasteful investment of time, money, and energy. In the wake of the Gulf oil disaster, as well as the many other lesser-known blowouts that occur every year, we insist that the risk of blowouts alone is enough to outweigh the benefits of drilling. Clean renewable energy sources are becoming less expensive by the day and are a much smarter investment than risky offshore drilling.

Since offshore oil and gas prospecting and potential eventual drilling would be harmful and risky to our coastal economy, natural beauty, and way of life, I urge you to implement Alternative C and not allow G & G activities for oil and gas in the Mid- and South Atlantic Planning Areas.

With kindest regards, I remain

Most sincerely yours,

Joseph P. Riley, Jr.
Mayor, City of Charleston

JPR,jr/cw

Maryland Department of Planning

Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary
Matthew J. Power
Deputy Secretary

May 18, 2012

Mr. Gary D. Goeke
Chief, Regional Assessment Section, Bureau of Ocean Energy Management
U.S. Department of the Interior
1201 Elmwood Park Boulevard
Office of Environment (MS5410)
Gulf of Mexico OCR Region
New Orleans, LA 70123-2394

STATE CLEARINGHOUSE REVIEW – ADDITIONAL REVIEWER COMMENTS RECEIVED

State Application Identifier: MD20120406-0225
Project Description: Draft Programmatic EIS: Atlantic Outer COntinental Shelf Geological and Geophysical Activities: Mid-Atlantic and South-Atlantic Planning Areas: consider three (3) altenatives including "no action": public meetings 4/25/12 in Annapolis
Project Location: Counties of Somerset, Wicomico, and Worcester
Clearinghouse Contact: Bob Rosenbush

Dear Mr. Goeke:

We are forwarding these comments made by the Maryland Department of the Environment regarding the referenced project for your information.

1. Any solid waste including construction, demolition and land clearing debris, generated from the subject project, must be properly disposed of at a permitted solid waste acceptance facility, or recycled if possible. Contact the Solid Waste Program at (410) 537-3315 for additional information regarding solid waste activities and contact the Waste Diversion and Utilization Program at (410) 537-3314 for additional information regarding recycling activities.

2. Maryland recently issued the Greenhouse Gas Reduction Act on March 21, 2012. This Act indicates that Maryland is one of the states most vulnerable to climate change, and that the State is at risk from rising sea levels caused by increased global temperatures. Issuing permits for more oil and gas drilling that will lead to more greenhouse gases (GHG) emissions is counterproductive when Maryland is trying to control GHG emissions.

Should you have any questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at brosenbush@mdp.state.md.us. Your cooperation and attention to the review process is appreciated

Sincerely,

Linda C. Janey

Linda C. Janey, J.D., Assistant Secretary

LCJ:BR
cc: Joe Abe - DNR
Frank Dawson - DNR
Joane Mueller - MDE

12-0225_OLRR.OTH.doc

Maryland Department of Planning

Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary
Matthew J. Power
Deputy Secretary

April 6, 2012

Mr. Gary D. Goeke, Chief, Regional Assessment Section
U.S. Department of the Interior
1201 Elmwood Park Boulevard
Office of Environment (MS5410)
Gulf of Mexico OCR Region
New Orleans, LA 70123-2394

STATE CLEARINGHOUSE REVIEW PROCESS

State Application Identifier: MD20120406-0225
Reply Due Date: 05/16/2012
Project Description: Draft Programmatic EIS: Atlantic Outer Continental Shelf Geological and Geophysical Activities: Mid-Atlantic and South-Atlantic Planning Areas: consider three (3) alternatives including "no action": public meetings 4/25/12 in Annapolis
Project Location: Counties of Anne Arundel, Baltimore, Calvert, Caroline, Cecil, Charles, Dorchester, Harford, Kent, Prince George's, Queen Anne's, St. Mary's, Somerset, Talbot, Wicomico, and Worcester; Baltimore City
Clearinghouse Contact: Bob Rosenbush

Dear Mr. Goeke:

Thank you for submitting your project for intergovernmental review. Your participation in the Maryland Intergovernmental Review and Coordination (MIRC) process helps to ensure that your project will be consistent with the plans, programs, and objectives of State agencies and local governments.

We have forwarded your project to the following agencies and/or jurisdictions for their review and comments: the Maryland Department(s) of the Environment, Transportation, Business and Economic Development, Agriculture; the Maryland Energy Administration; the Counties of Anne Arundel, Baltimore, Calvert, Caroline, Cecil, Charles, Dorchester, Harford, Kent, Prince George's, Queen Anne's, St. Mary's, Somerset, Talbot, Wicomico, and Worcester; Baltimore City; and the Maryland Department of Planning; including the Maryland Historical Trust. A composite review and recommendation letter will be sent to you by the reply due date. Your project has been assigned a unique State Application Identifier that you should use on all documents and correspondence.

Please be assured that we will expeditiously process your project. The issues resolved through the MIRC process enhance the opportunities for project funding and minimize delays during project implementation.

If you need assistance or have questions, contact the State Clearinghouse staff noted above at 410-767-4490 or through e-mail at brosenbush@mdp.state.md.us. Thank you for your cooperation with the MIRC process.

Sincerely,

Linda C. Janey

Linda C. Janey, J.D., Assistant Secretary

LCJ:BR

cc: Joe Abe - DNR
Frank Dawson – DNR
Jenny King – MDP
12-0225_NRR.NEW.doc

Maryland Department of Planning

Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary
Matthew J. Power
Deputy Secretary

May 15, 2012

Mr. Gary D. Goeke
Chief, Regional Assessment Sec, Bureau of Ocean Energy Management
U.S. Department of the Interior
1201 Elmwood Park Boulevard
Office of Environment (MS5410)
Gulf of Mexico OCR Region
New Orleans, LA 70123-2394

STATE CLEARINGHOUSE RECOMMENDATION

State Application Identifier: MD20120406-0225
Applicant: U.S. Department of the Interior **and** Maryland Department of Natural Resources
Project Description: Draft Programmatic EIS: Atlantic Outer COntinental Shelf Geological and Geophysical Activities: Mid-Atlantic and South-Atlantic Planning Areas: consider three (3) altenatives including "no action": public meetings 4/25/12 in Annapolis
Project Location: Countyies of Somerset, Wicomico and Worcester
Approving Authority: U.S. Department of the Interior
Recommendation: **Consistent with Qualifying Comments and Contingent Upon Certain Actions**

Dear Mr. Goeke:

In accordance with Presidential Executive Order 12372 and Code of Maryland Regulation 34.02.01.04-.06, the State Clearinghouse has coordinated the intergovernmental review of the referenced project. This letter constitutes the State process review and recommendation based upon comments received to date. This recommendation is valid for a period of three years from the date of this letter.

Review comments were requested from the Maryland Departments of the Environment, Transportation, Business and Economic Development, Agriculture, the Maryland Energy Administration, the Counties of Charles, Dorchester, Harford, Kent, Cecil, Caroline, Baltimore, Calvert, Anne Arundel, Worcester, Wicomico, Prince George's, Queen Anne's, Somerset, St. Mary's, and Talbot, Baltimore City, and the Maryland Department of Planning, including the Maryland Historical Trust. As of this date, the Maryland Departments of the Environment, Transportation, Business and Economic Development, Agriculture, the Maryland Energy Administration, the Counties of Prince George's, Queen Anne's, St. Mary's, Talbot, Wicomico, Caroline, and Worcester have not submitted comments. **This recommendation is contingent upon the applicant considering and addressing any problems or conditions that may be identified by their review. Any comments received will be forwarded.** The Counties of Anne Arundel, Baltimore, Calvert, Dorchester, and Kent had no comment.

Baltimore City and the Maryland Department of Planning, including the Maryland Historical Trust found this project to be generally consistent with their plans, programs, and objectives, but included certain qualifying comments summarized below. Baltimore City commented that this project does not directly impact Baltimore City as it is dealing with open water issues of the Atlantic Ocean. This Department, including the Maryland Historical Trust stated that all proposed activities are within Federal Waters.

The Counties of Cecil, Charles, Harford, and Somerset County found this project to be consistent with their plans, programs, and objectives.

Any statement of consideration given to the comments should be submitted to the approving authority, with a copy to the State Clearinghouse. The State Application Identifier Number must be placed on any correspondence pertaining to this project. The State Clearinghouse must be kept informed if the approving authority cannot accommodate the recommendation.

Please remember, you must comply with all applicable state and local laws and regulations. If you need assistance or have questions, contact the State Clearinghouse staff person noted above at 410-767-4490 or through e-mail at brosenbush@mdp.state.md.us.

Thank you for your cooperation with the MIRC process.

Sincerely,

Linda C. Janey Mab

Linda C. Janey, J.D., Assistant Secretary

LCJ:BR

cc: Beth Cole - MHT
Joe Abe - DNR
Frank Dawson - DNR
Joane Mueller - MDE
Melinda Gretsinger - MDOT
Tammy Edwards - DBED
Gloria Chambers - MDA
Malcolm Woolf - MEA
Steven Ball - CHAS
Steven Dodd - DRCH
Denise Lynch - HRFD
Gail Webb-Owings - KENT
Eric Sennstrom - CECL
Katheleen Freeman - CRLN
Jessie Bialek - BLCO
Charles Johnston - CLVT
Debra Falconer - ANARP
Jaime Cramer - BCIT
Edward Tudor - WRCS
Keith Hall - WCMC
Beverly Warfield - PGEO
J. Steven Cohoon - QANN
Ralph Taylor - SMST
Phil Shire - STMA
Sandy Coyman - TLBT
Tracey Gordy - MDPLL

12-0225_CRR.CLS.doc

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
TDD (804) 698-4021
www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

May 25, 2012

Mr. Gary D. Goeke, Chief
Regional Assessment Section
Office of Environment (MS 5410)
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394

RE: Draft Programmatic Environmental Impact Statement for Geological and Geophysical Exploration on the Atlantic Outer Continental Shelf (DEQ 12-073F).

Dear Mr. Goeke:

The Commonwealth of Virginia has completed its review of the March 2012 Draft Programmatic Environmental Impact Statement (PEIS) (received March 30, 2012) for the above referenced project. The Department of Environmental Quality is responsible for coordinating Virginia's review of federal environmental documents submitted under the National Environmental Policy Act (NEPA) and responding to appropriate federal officials on behalf of the Commonwealth. DEQ is also responsible for coordinating Virginia's review of federal consistency documents submitted pursuant to the Coastal Zone Management Act (CZMA) and providing the state's response. The following agencies participated in the review of the PEIS:

Department of Environmental Quality
Department of Conservation and Recreation
Department of Game and Inland Fisheries
Department of Agriculture and Consumer Services
Marine Resources Commission
Department of Mines, Minerals and Energy
Department of Health
Department of Historic Resources
Hampton Roads Planning District Commission

In addition, the Virginia Institute of Marine Science, Virginia Coastal Energy Research Consortium and Accomack-Northampton Planning District Commission were invited to comment on the proposed activities.

PROJECT DESCRIPTION

The Department of Interior (DOI) Bureau of Ocean Energy Management (BOEM) has submitted a Draft Programmatic Environmental Impact Statement to evaluate potential environmental effects of multiple Geological and Geophysical (G&G) activities in the Mid- and South Atlantic Planning Areas of the Outer Continental Shelf (OCS). The PEIS examines G&G survey activities for three program areas (oil and gas, renewable energy, and marine minerals) during the 2012-2020 time period, evaluates impacts to Atlantic resources that could occur as a result of G&G activities, and identifies mitigation and monitoring measures to avoid, reduce, or minimize impacts.

The purpose of the proposed action is to gather state-of-the-practice data about the ocean bottom and subsurface. G&G surveys are conducted to:

1) obtain data for hydrocarbon exploration and production;
2) aid in siting renewable energy structures;
3) locate potential sand and gravel resources;
4) identify possible seafloor or shallow depth geologic hazards; and
5) locate potential archaeological resources and potential hard bottom habitats for avoidance.

The selection of a specific technique or suite of techniques is driven by data needs and the target of interest. The following types of G&G activities are included in the PEIS:

- various types of deep penetration seismic airgun surveys used almost exclusively for oil and gas exploration and development;
- other types of surveys and sampling activities used only in support of oil and gas exploration and development, including electromagnetic surveys, deep stratigraphic and shallow test drilling, and various remote sensing methods;
- high-resolution geophysical (HRG) surveys used in all three program areas to detect geohazards, archaeological resources, and certain types of benthic communities; and
- geological and geotechnical bottom sampling used in all three program areas to assess the suitability of seafloor sediments for supporting structures (e.g., platforms, pipelines, cables, wind turbines) or to evaluate the quantity and quality of sand for beach nourishment projects.

Deep penetration seismic airgun surveys, in which a survey vessel tows an array of airguns that emit acoustic energy pulses into the seafloor over long durations and over large areas, are the most extensive G&G activities that would be conducted and are the most important activities analyzed in the PEIS. These surveys would occur almost exclusively in support of oil and gas exploration and development and would be

conducted mainly within the Mid- and South Atlantic Planning Areas. G&G activities in support of renewable energy development would consist mainly of HRG and geotechnical surveys in both federal and state waters less than 328 feet deep. G&G activities in support of marine mineral uses (e.g., sand and gravel mining) would consist mainly of HRG and geotechnical surveys in both federal and state waters less than 98 feet deep.

The proposed action includes the following mitigation measures:

- a time-area closure for North Atlantic right whales;
- a seismic airgun survey protocol;
- an HRG survey protocol (for renewable energy and marine minerals sites);
- guidance for vessel strike avoidance;
- guidance for marine debris awareness;
- avoidance and reporting of historic and prehistoric sites;
- avoidance of sensitive benthic communities;
- guidance for activities in or near National Marine Sanctuaries (NMSs); and
- guidance for military and National Aeronautics and Space Administration (NASA)
- coordination.

Three alternatives are analyzed in the PEIS:

- **Alternative A** – The Proposed Action (described above);
- **Alternative B** – Additional Time-Area Closures and Separation of Simultaneous Seismic Airgun Surveys; and
- **Alternative C** – No Action for Oil and Gas, Status Quo for Renewable Energy and Marine Mineral G&G Activity.

CONCLUSION

The Commonwealth of Virginia supports oil and gas development off our coast. Section 67-300, *Offshore energy resources*, of the Code of Virginia states:

A. In recognition of the need for energy independence, it shall be the policy of the Commonwealth to support federal efforts to:

   1. Determine the extent of oil and natural gas resources 50 miles or more off the Atlantic shoreline, including appropriate federal funding for such an investigation; and
   2. Permit the production and development of oil and natural gas resources 50 miles or more off the Atlantic shoreline taking into account the impact on affected localities, the armed forces of the United States of America, and the mid-Atlantic regional spaceport.

B. The policy of the Commonwealth shall further support the inclusion of the Atlantic Planning Areas in the Minerals Management Service's draft

environmental impact statement with respect to oil and natural gas exploration, production, and development 50 miles or more off the Atlantic shoreline.

C. It shall be the policy of the Commonwealth to support federal efforts to examine the feasibility of offshore wind energy being utilized in an environmentally responsible fashion.

Further it is critical to national security, economic development and job creation to have significant domestic energy sources. We are actively engaged with DOI and other federal, state and local stakeholders in support of our offshore wind resources.

The Commonwealth supports alternative A and, provided G&G exploration activities are performed in accordance with the recommendations which follow in the Impacts and Mitigation section of this response, finds the activities are unlikely to have significant adverse effects on ambient air quality, water quality, and wetlands.

A summary of the Commonwealth's recommendations includes:

- Coordinate G&G exploration activities with the commercial and recreational fishing industries to include public outreach on any temporary area closures and other anticipated impacts to mitigate any unforeseen or unnecessary economic hardships to the fisheries industries.
- Consider time-of-year restrictions in near-shore waters for activities that would affect known spawning migrations of anadromous or catadromous fish species.
- Continue to research potential G&G exploration impacts on marine mammals, sea turtles and marine/coastal birds and avoid and minimize impacts to the extent practical.

ENVIRONMENTAL IMPACTS AND MITIGATION

1. Fisheries Resources and Essential Fish Habitat. According to the PEIS (page 4-118) impact producing factors (IPFs) related to fisheries resources and essential fish habitat (EFH) include (1) active acoustic sound sources (i.e., airguns, electromechanical sources [e.g., subbottom profilers, side-scan sonar, etc.]), (2) vessel and equipment noise, (3) seafloor disturbance; and (4) drilling discharges. IPFs are expected to have negligible to minor impacts on fisheries resources and EFH. Impacts from fuel spills are anticipated to be minor. Cumulative impacts are expected to range from negligible to minor.

1(a) Agency Jurisdiction.

(i) Department of Game and Inland Fisheries

The Department of Game and Inland Fisheries (DGIF), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state- or federally-listed

endangered or threatened species, but excluding listed insects (Virginia Code Title 29.1). DGIF is a consulting agency under the U.S. Fish and Wildlife Coordination Act (16 U.S.C. sections 661 *et seq.*) and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DGIF determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce or compensate for those impacts. For more information, see the DGIF website at *www.dgif.virginia.gov.*

(ii) Virginia Marine Resources Commission

The Virginia Marine Resources Commission (Virginia Code 28.2-200 to 28.2-713) and the Department of Game and Inland Fisheries (Virginia Code 29.1-100 to 29.1-570) have management authority for the conservation and enhancement of finfish and shellfish resources in the Commonwealth.

(iii) Virginia Department of Health

The Virginia Department of Health's (VDH) Division of Shellfish Sanitation (DSS) is responsible for protecting the health of the consumers of molluscan shellfish and crustacea by ensuring that shellfish growing waters are properly classified for harvesting, and that molluscan shellfish and crustacea processing facilities meet sanitation standards. The mission of this Division is to minimize the risk of disease from molluscan shellfish and crustacea products at the wholesale level by classifying shellfish waters for safe commercial and recreational harvest; by implementing a statewide regulatory inspection program for commercial processors and shippers; and by providing technical guidance and assistance to the shellfish and crustacea industries regarding technical and public health issues.

1(b) Agency Findings.

(i) Department of Game and Inland Fisheries

DGIF finds that the PEIS addresses the primary issues with respect to fisheries resources that the agency commented on during the PEIS scoping process in 2010 and presents a reasonable assessment of those concerns.

(ii) Virginia Marine Resources Commission

Sturgeon and Alosine Species

The use of seismic air guns could do unforeseen harm to a spawning run of adult female sturgeon, or any Alosine species (e.g. American shad, alewife and blueback herring), preparing to migrate into the Chesapeake Bay, and also to any young or mature adults returning to the ocean after their spawning migrations are complete. Male sturgeon migrate into freshwater during March and April, one month before females. They do not school together but meander singly. Females begin spawning as

soon as they reach freshwater spawning grounds. Females lay 1 million to 2-1/2 million eggs in flowing water up to 60 feet deep. Both males and females may remain in the river until late fall before migrating back to the Atlantic. After hatching, the young tend to remain in their natal areas up to five years before beginning their journey to the ocean. Immature Atlantic sturgeon may also wander in and out of the Atlantic coastline. Sturgeon use their snouts and barbels to root around in bottom sediments, vacuuming up organisms with their soft mouths. Their diet consists of worms, snails, shellfish, crustaceans, and small fish, as well as large amounts of mud and debris.

Atlantic sturgeon, currently listed as endangered under the Endangered Species Act, and candidate endangered species alewife, blueback herring, and American eel have incurred notable declines due to both overfishing and habitat degradations and loss. The National Marine Fisheries Service estimates that the adult population of Atlantic sturgeon in the Chesapeake Bay consists of only 329 adults and 987 sub-adults.

Blue Crabs

Biological impacts by seismic air-guns to burrowed overwintering blue crabs in the lower Chesapeake Bay, near the territorial sea, should be considered as this stock is still recovering from a near-collapse of the Chesapeake Bay stock in 2008.

(iii) Virginia Department of Health

The Virginia Department of Health has no comments

1(c) Agency Recommendations. VMRC recommends that G&G activities consider time-of-year restrictions in near-shore waters during known spawning migrations of any anadromous or catadromous species.

For additional information, contact DGIF, Ernie Aschenbach at (804) 367-2211; VRMC, Rob O'Reilly at (757) 247-2236; and/or VDH-DSS, Robert Croonenberghs at (804) 864-7480.

2. Commercial and Recreational Fisheries. According to the PEIS (pages 4-145 and 4-154), IFPs that may affect commercial and recreational fisheries include (1) active acoustic sound sources (e.g., airguns, bottom profilers, depth sounders, side-scan sonar), (2) vessel traffic, (3) vessel exclusion zones, and (4) seafloor disturbance. The impacts of the proposed activities on commercial and recreational fisheries are determined in the PEIS to be negligible to minor.

2(a) Agency Findings.

Economic Impact

According to VMRC, the proposed G&G activities could have potential impacts to the recreational and commercial fisheries operating within the state's territorial sea and the

federal Exclusive Economic Zone offshore Virginia. Those potential impacts could be social, economic, and/or biological. In 2010, the commercial fishery landings from Virginia's lower-Chesapeake Bay/Hampton Roads region were the third highest, by value at $75.4 million, in the lower 48-States, and seventh highest in value when compared to all 50 States (including Alaska and Hawaii). For Virginia's recreational fishing industry, the National Marine Fisheries Service estimated there were 559,000 Virginia resident and 279,000 non-Virginia resident, saltwater recreational anglers in the Commonwealth in 2010.

Alosine Species

VMRC notes that the alosine species consisting of American shad, alewife, and blueback herring are currently under harvest moratoriums due to population declines. Commercial and recreational harvest moratoria on American shad have been in effect since 1994 in the Chesapeake Bay and since 2005 in Virginia's territorial sea. A commercial and recreational harvest moratorium on river herring (alewife and blueback herring) has been in effect since January 1, 2012. Alosines congregate in the offshore waters of Virginia prior to their spawning runs, which can span a time period extending from February 15 through June 30.

Blue Crabs

VMRC finds that the biological impacts by seismic air-guns to burrowed overwintering blue crabs in the lower Chesapeake Bay, near the territorial sea, should be considered as this stock is still recovering from a near-collapse of the Chesapeake Bay stock in 2008. Blue crabs are an economically significant fishery for both Virginia and Maryland. Annual dockside value of the bay-wide harvest in recent years has ranged from $70-$110 million. Overwintering female hard crabs represent the harvest potential for the upcoming year's fishery, and the future potential for the bay-wide population, as the crabs congregate in the lower Chesapeake Bay and offshore waters of the territorial sea to release their eggs during the spring. The most recent scientific winter dredge survey, released in April 2012, noted that the number of spawning age females recorded by the survey dropped by roughly 50 percent from 2011 levels, down to 97 million. Although that level is above the healthy-species threshold, the recorded number of spawning age females is a warning signal that requires a prudent management strategy to avert another stock decline. Crab abundance had declined by 70 percent before the bay-wide stock rebuilding program began in 2008.

2(b) Agency Recommendations. VMRC offers the following recommendations to mitigate the impact of G&G activities on commercial and recreational fisheries:

- Coordinate with the commercial fishing industry to directly notify harvesters of temporary area closures to prevent fixed gear conflicts and damage.
- Conduct public outreach to the recreational fishing and diving industries to provide information when G&G activities will occur and the expected impacts.
- Coordinate activities with commercial and recreational fisheries at specific times

of the year in the state's territorial sea to mitigate any unforeseen or unnecessary economic hardships to the fisheries industries.

For additional information, contact DGIF, Ernie Aschenbach at (804) 367-2211 and VRMC, Rob O'Reilly at (757) 247-2236.

3. Marine Mammals. The PEIS (page 4-25) states that seven marine mammal species that occur in the Area of Interest (AOI) are federally listed as endangered species. These include five baleen whales (North Atlantic right whale, blue whale, fin whale, sei whale, and humpback whale), one toothed whale (sperm whale), and the Florida subspecies of the West Indian manatee. Underwater noise sources in the proposed action include active acoustic sound sources such as airguns and electromechanical sources, as well as continuous (non-pulsed) vessel and equipment noise. Past studies on the reactions of animals to noise have shown widely varied responses, depending on the individual, age, gender, and the activity in which the animals were engaged. The impacts of the proposed activities on marine mammals are determined in the PEIS to be moderate to negligible, with seismic airgun survey noise having a moderate impact.

3(a) Agency Jurisdiction. The mission of the Virginia Department of Conservation and Recreation (DCR) is to conserve Virginia's natural and recreational resources. The DCR-Natural Heritage Program's (DCR-DNH) mission is conserving Virginia's biodiversity through inventory, protection, and stewardship. The *Virginia Natural Area Preserves Act*, 10.1-209 through 217 of the *Code of Virginia*, was passed in 1989 and codified DCR's powers and duties related to statewide biological inventory: maintaining a statewide database for conservation planning and project review, land protection for the conservation of biodiversity, and the protection and ecological management of natural heritage resources (the habitats of rare, threatened, and endangered species, significant natural communities, geologic sites, and other natural features).

3(b) Agency Findings.

(i) Department of Conservation and Recreation

DCR-DNH finds that several state and federal-listed species including whales and other marine mammals have been documented in the planning area.

(ii) Department of Game and Inland Fisheries

DGIF finds that the PEIS addresses the primary issues with respect to marine mammals that the agency commented on during the PEIS scoping process in 2010 and presents a reasonable assessment of those concerns.

3(c) Recommendation. DCR-DNH makes the following recommendation:

- Continue to monitor potential G&G impacts on marine mammals and avoid and minimize those impacts to the extent practical.

Contact DCR-DNH, Rene Hypes at (804) 371-2807, for additional information and for updates on natural heritage information since new and updated information is continually added to the DCR Biotics Data System. In addition, contact DGIF, Ernie Aschenbach at (804) 367-2211 for further information on agency comments.

4. Sea Turtles. According to the PEIS (page 4-65), five sea turtle species occur in the AOI including the loggerhead turtle (*Caretta caretta*), green turtle (*Chelonia mydas*), hawksbill turtle (*Eretmochelys imbricata*), Kemp's ridley turtle (*Lepidochelyskempii*), and leatherback turtle (*Dermochelys coriacea*). The impacts of the proposed activities on sea turtles are determined in the PEIS to be negligible to minor.

4(a) Agency Findings.

(i) Department of Conservation and Recreation

DCR-DNH confirms that several state and federal-listed sea turtle species have been documented in the planning area.

(ii) Department of Game and Inland Fisheries

DGIF finds that the PEIS addresses the primary issues with respect to sea turtles that the agency commented on during the PEIS scoping process in 2010 and presents a reasonable assessment of those concerns.

4(b) Recommendation. DCR-DNH recommends the following:

- Continue to monitor potential G&G impacts on sea turtles and avoid and minimize those impacts to the extent practical.

Contact DCR-DNH, Rene Hypes at (804) 371-2807, for additional information and for updates on natural heritage information since new and updated information is continually added to the DCR Biotics Data System. In addition, contact DGIF, Ernie Aschenbach at (804) 367-2211 for further information on agency comments.

5. Marine and Coastal Birds. According to the PEIS (page 4-88), the Atlantic coast supports a diverse avifauna and includes a variety of coastal habitats that are important to the ecology of coastal and marine bird species. Seabirds within the AOI include members from five taxonomic orders: Charadriiformes (skuas, jaegers, gulls, terns, skimmers, alcids); Gaviiformes (loons); Pelicaniformes (pelicans, frigatebirds, gannets, boobies, tropicbirds, cormorants); Podicepiformes (grebes); and Procellariiformes (albatrosses, petrels, storm-petrels, fulmars, shearwaters). Waterfowl includes sea ducks and shorebirds consist of four families that include sandpipers, plovers, and stilts. The impacts of the proposed activities on marine and coastal birds are determined in the PEIS to be negligible to minor.

5(a) Agency Findings.

(i) Department of Conservation and Recreation

DCR-DNH notes that several state and federal-listed species of marine and coastal birds have been documented in the planning area.

(ii) Department of Game and Inland Fisheries

DGIF finds that the PEIS addresses the primary issues with respect to marine and costal birds that the agency commented on during the PEIS scoping process in 2010 and presents a reasonable assessment of those concerns.

5(b) Recommendation. DCR-DNH offers the following recommendation:

- Continue to monitor potential G&G impacts on marine and coastal birds and avoid and minimize those impacts to the extent practical.

Contact DCR-DNH, Rene Hypes at (804) 371-2807, for additional information and for updates on natural heritage information since new and updated information is continually added to the DCR Biotics Data System. In addition, contact DGIF, Ernie Aschenbach at (804) 367-2211 for further information on agency comments.

6. Marine Protected Areas. According to the PEIS (page 4-172), a Marine Protected Area (MPA) is defined by EO 13158 as "any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein." A National System of Marine Protected Areas was established in 2009 as a nationwide program for the effective stewardship, conservation, restoration, sustainable use, understanding, and appreciation of marine resources. The impacts of the proposed activities on marine protected areas are deemed in the PEIS to be negligible to moderate, with potential moderate impacts as a result of seismic airgun survey effects on nesting shorebirds and turtles.

6(a) Findings. DGIF finds that the PEIS addresses the primary issues with respect to marine protected areas that the agency commented on during the PEIS scoping process in 2010 and presents a reasonable assessment of those concerns.

7. Protected Plant and Insect Species. The PEIS does not discuss the potential impact of G&G activities on protected plant and insect species.

7(a) Agency Jurisdiction.

(i) Virginia Department of Agriculture and Consumer Services

The *Endangered Plant and Insect Species Act* of 1979, Chapter 39 §3.1-1020 through

1030 of the *Code of Virginia*, as amended, authorizes the Virginia Department of Agriculture and Consumer Services (VDACS) to conserve, protect, and manage endangered and threatened species of plants and insects. The VDACS Virginia Endangered Plant and Insect Species Program personnel cooperates with the U.S. Fish and Wildlife Service (USFWS), DCR-DNH and other agencies and organizations on the recovery, protection or conservation of listed threatened or endangered species and designated plant and insect species that are rare throughout their worldwide ranges. In those instances where recovery plans, developed by USFWS, are available, adherence to the order and tasks outlined in the plans are followed to the extent possible.

(ii) Department of Conservation and Recreation

Under a Memorandum of Agreement established between VDACS and DCR, DCR has the authority to report for VDACS on state-listed plant and insect species.

7(b) Agency Findings.

(i) Virginia Department of Agriculture and Consumer Services

VDACS reviewed and compared statements in the PEIS concerning endangered species with available information. VDACS finds that no additional comments are necessary in reference to endangered plant and insect species with regard to G&G activities.

(ii) Department of Conservation and Recreation

DCR finds that the current activity will not affect any documented state-listed plants or insects.

For additional information, contact VDACS, Keith Tignor at (804) 786-3515 and/or DCR, Rene Hypes at (804) 371-2807.

8. Water Quality and Wetlands. According to the PEIS (page 4-4), several resource areas were identified as having no expected impacts from G&G activities, including water quality. The document states that survey vessels would discharge treated sanitary and domestic wastes from U.S. Coast Guard-approved marine sanitation units. The PEIS concludes that potential impacts from discharges on water quality are expected to be negligible. The document does not address wetlands.

8(a) Agency Jurisdiction.

(i) Department of Environmental Quality

The State Water Control Board (SWCB) promulgates Virginia's water regulations, covering a variety of permits to include Virginia Pollutant Discharge Elimination System Permit, Virginia Pollution Abatement Permit, Surface and Groundwater Withdrawal

Permit, and the Virginia Water Protection Permit (VWPP). The VWPP is a state permit which governs wetlands, surface water, and surface water withdrawals/impoundments. It also serves as § 401 certification of the federal *Clean Water Act* § 404 permits for dredge and fill activities in waters of the U.S. The VWPP Program is under the Office of Wetlands and Water Protection/Compliance, within the DEQ Division of Water Quality Programs. In addition to central office staff that review and issue VWP permits for transportation and water withdrawal projects, the six DEQ regional offices perform permit application reviews and issue permits for the covered activities.

(ii) Virginia Marine Resources Commission

Activities impacting tidal wetlands in Virginia are administered by the Virginia Marine Resources Commission under the authority of Virginia Code§ 28.2-1301 through§ 28.2-1320.

VMRC serves as the clearinghouse for the Joint Permit Application (JPA) used by:

- VMRC for encroachments on or over state-owned subaqueous beds as well as tidal wetlands;
- U.S. Army Corps of Engineers (Corps) for issuing permits pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act;
- DEQ for issuance of a Virginia Water Protection Permit; and
- local wetlands board for impacts to wetlands.

8(b) Agency Findings.

(i) Department of Environmental Quality

DEQ notes that the PEIS acknowledges that state-issued permitting may be required for G&G activities in state waters depending on location.

(ii) Virginia Marine Resources Commission

According to the VMRC, should any onshore infrastructure related to any lease activity result in the use or development of tidal wetlands, permits will be required pursuant to Virginia Code§ 28.2-1301 through§ 28.2-1320.

8(c) Conclusion. Provided any necessary State VWPP permits are obtained and complied with for excavation, dredging, fill, or other regulated activities in state waters, the proposed activities should be consistent with VWPP regulations.

For additional information, contact DEQ-TRO, Bert Parolari at (757) 518-2105 or VMRC, Tony Watkinson at (757) 247-2250.

9. Subaqueous Lands. According to the PEIS (page 3-32), sources of seafloor disturbance in the proposed action include bottom sampling activities in all three

program areas; placement of anchors, nodes, cables, sensors, or other equipment on or in the seafloor for various activities in the oil and gas program; Continental Offshore Stratigraphic Test (COST) well and shallow test drilling in the oil and gas program; and placement of bottom-founded monitoring buoys in the renewable energy program.

9(a) Agency Jurisdiction. The Virginia Marine Resources Commission, pursuant to Section 28.2-1200 *et seq.* of the *Code of Virginia*, has jurisdiction over any encroachments in, on, or over any state-owned rivers, streams, or creeks in the Commonwealth.

9(b) Agency Findings. According to the VMRC, encroachments in, on or over state-owned submerged land within Virginia's territorial sea associated with any infrastructure, such as pipelines, for projects on the OCS will require permits from the Virginia Marine Resources Commission (VMRC) pursuant to Chapter 12 of Title 28.2 of the *Code of Virginia*. The Subaqueous Minerals Management Plan (SSMMP), which is a part of the State Minerals Management Plan (SMMP), would apply to G&G activities occurring in state-owned submerged lands. The VMRC authorizes and oversees mining, leasing, and extraction of minerals on state-owned submerged lands and grants permits for the use of such land use.

9(c) Agency Requirements. Applications for mineral survey or exploration permits or permits to remove landfill material, sand or gravel must be made to the VMRC under Virginia Code §28.2-1207. A lease or easement may be granted in accordance with §28.2-1208 and the State Minerals Management Plan. An easement or lease under §28.2-1208 is needed to obtain oil, gas (except if covered under a Virginia Gas and Oil Board pooling order), minerals or other substances in the beds of the waters outside the Baylor Survey. However, to remove and sell landfill material, sand or gravel, a permit under §28.2-1205 is required.

Applications to conduct mineral surveys or explorations affecting state waters or state-owned subaqueous land must be submitted to VMRC, Habitat Management Division, through the Joint Permit Application process (§28.2-1205 through 1207 Code of Virginia).

Detailed information provided by VMRC describing agency permit program requirements and the JPA review process for activities on state subaqueous lands is attached. For additional information, contact VMRC, Tony Watkinson at (757) 247-2250.

10. Air Emissions. According to the PEIS (page 4-4), several resource areas were identified as having no expected impacts from G&G activities, including air quality. The document states that survey vessels and aircraft involved in G&G activities would emit a variety of air pollutants including nitrogen oxides (NOx), sulphur oxides (SOx), particulate matter, volatile organic compounds (VOCs), carbon monoxide (CO), and greenhouse gas emissions (e.g., CO_2). The PEIS concludes that potential impacts from emissions on air quality are expected to be negligible.

10(a) Agency Jurisdiction. DEQ, on behalf of the State Air Pollution Control Board, is responsible to develop regulations that become *Virginia's Air Pollution Control Law*. DEQ is charged to carry out mandates of the state law and related regulations as well as Virginia's federal obligations under the *Clean Air Act* as amended in 1990. The objective is to protect and enhance public health and quality of life through control and mitigation of air pollution. The division ensures the safety and quality of air in Virginia by monitoring and analyzing air quality data, regulating sources of air pollution, and working with local, state and federal agencies to plan and implement strategies to protect Virginia's air quality. The appropriate regional office is directly responsible for the issue of necessary permits to construct and operate all stationary sources in the region as well as to monitor emissions from these sources for compliance. As a part of this mandate, the environmental documents of new projects to be undertaken in the state are also reviewed. In the case of certain projects, additional evaluation and demonstration must be made under the general conformity provisions of state and federal law.

10(b) Agency Findings. DEQ did not indicate that G&G activities would have a significant impact on air quality programs under its jurisdiction.

For additional information regarding air comments, contact the DEQ Air Division, Kotur Narasimhan at (804) 698-4415.

11. Solid and Hazardous Wastes and Hazardous Materials. According to the PEIS (page 3-31), operational waste generated from all vessels associated with the proposed action includes bilge and ballast waters, trash and debris, and sanitary and domestic wastes. Survey operations generate trash made of paper, plastic, wood, glass, and metal. Most of this trash is associated with galley and offshore food service operations. Under the proposed action, all authorizations for shipboard surveys would include guidance for marine debris awareness.

11(a) Agency Jurisdiction. Solid and hazardous wastes in Virginia are regulated by the Virginia Department of Environmental Quality, the Virginia Waste Management Board (VWMB) and the U.S. Environmental Protection Agency. They administer programs created by the federal *Resource Conservation and Recovery Act*, *Comprehensive Environmental Response Compensation and Liability Act*, commonly called Superfund, and the *Virginia Waste Management Act*. DEQ administers regulations established by the VWMB and reviews permit applications for completeness and conformance with facility standards and financial assurance requirements. All Virginia localities are required, under the Solid Waste Management Planning Regulations, to identify the strategies they will follow on the management of their solid wastes to include items such as facility siting, long-term (20-year) use, and alternative programs such as materials recycling and composting.

11(b) Agency Findings. DEQ finds that solid and hazardous waste issues were generally addressed in the PEIS. Specifically the report identifies vessel wastes, which

would include trash and debris, and sanitary and domestic wastes.

11(c) Recommendation. DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

11(d) Requirements. Any soil or sediment that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9 VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9 VAC 20-81); Virginia Regulations for the Transportation of Hazardous Materials (9 VAC 20-110). Some of the applicable federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

Questions or requests for further information may be directed to DEQ-LPRD, Steve Coe at (804) 698-4029.

12. Historic Structures and Archaeological Resources. According to the PEIS (page 4-165), submerged cultural resources within the AOI include shipwrecks that date from early exploration and settlement of North America by Europeans as early as the 16th and 17th centuries. Submerged prehistoric sites dating between 30,000 and 3,000 Before Present (B.P.) may also be present within the AOI, depending on regional landform variation. The PEIS concludes that potential impacts to cultural resources are expected to be negligible.

12(a) Agency Jurisdiction. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources under its jurisdiction. DHR, as the designated State's Historic Preservation Office, ensures that federal actions comply with Section 106 of the *National Historic Preservation Act of 1962* (NHPA), as amended, and its implementing regulation at 36 CFR Part 800. The NHPA requires federal agencies to consider the effects of federal projects on properties that are listed or eligible for listing on the National Register of Historic Places. Section 106 also applies if there are any federal involvements, such as licenses, permits, approvals or funding.

12(b) Agency Findings. According to DHR, BOEM must consult directly with the agency with regard to potential impacts to historic properties pursuant to Section 106 of the *National Historic Preservation Act* and its implementing regulation at 36 CFR Part 800.

For additional information and coordination, contact DHR, Roger Kirchen at (804) 482-6091.

13. Regional Planning Districts.

13(a) Agency Jurisdiction. In accordance with the Code of Virginia, Section 15.2-4207, planning district commissions encourage and facilitate local government cooperation and state-local cooperation in addressing, on a regional basis, problems of greater than local significance. The cooperation resulting from this is intended to facilitate the recognition and analysis of regional opportunities and take account of regional influences in planning and implementing public policies and services. Planning district commissions promote the orderly and efficient development of the physical, social and economic elements of the districts by planning, and encouraging and assisting localities to plan, for the future.

13(b) Agency Comments. The Hampton Roads Planning District Commission (HRPDC) staff reviewed the PEIS for G&G activities on the OCS and finds that the proposed activities appear to be consistent with local and regional plans and policies.

For additional information, contact HRPDC, John Carlock at (757) 420-8300.

ADDITIONAL INFORMATION

(i) Department of Mines, Minerals and Energy

Analysis of existing offshore geological and geophysical data by the federal Department of the Interior and Virginia's Department of Mines, Minerals and Energy indicated that the Atlantic Outer Continental Shelf had experienced geologic conditions conducive to the generation and entrapment of oil and natural gas. Geochemical analysis of samples from a well drilled just north of Virginia's Offshore Administrative Boundary indicated that source rocks in the area are more prone to the generation of natural gas than oil.

Although no wells had ever been drilled within Virginia's offshore administrative boundary, the then-Minerals Management Service (MMS) produced a resource estimate based on other wells drilled in the Atlantic and seismic data collected in the 1970s and 1980s. The resource estimate was published by the MMS in their 2006 National Assessment of Undiscovered Technically Recoverable Oil and Gas Resources on the Outer Continental Shelf. For the entire Atlantic OCS, the mean estimate of undiscovered technically recoverable resources (UTRR) was 3.82 billion barrels of oil and 37 trillion cubic feet of natural gas. The portion of the UTRR that may be attributable to Virginia's portion of the OCS was estimated to be 0.13 billion barrels of oil and 1.14 trillion cubic feet of natural gas.

The recently-released 2011 Assessment by the Bureau of Ocean Energy Management (BOEM) yielded a UTRR for the entire Atlantic of 3.30 billion barrels of oil and 31.28

trillion cubic feet of natural gas, a decrease of about 15% compared to the 2006 Assessment. The decrease is attributed to advances in processing existing geophysics (seismic, gravity, and magnetic data) and incorporation of information from new analogs in the Canadian Atlantic. The proposed G&G permitting in the Atlantic OCS would enable the area to be examined utilizing modern acquisition and processing techniques. BOEM reports that several companies have already submitted applications for new seismic acquisition. Issuance of these permits would represent a major step forward in understanding the hydrocarbon resource potential of Virginia's Outer Continental Shelf.

(ii) Virginia Coastal Energy Research Consortium

The Virginia Coastal Energy Research Consortium (VCERC) was established by the Virginia Energy Plan to "serve as an interdisciplinary study, research, and information resource for the Commonwealth on coastal energy issues" with an initial focus on offshore winds, waves, and marine biomass. The mission of VCERC is to identify and develop new coastal energy resources through multidisciplinary research collaborations and environmentally responsible strategies. VCERC is charged with the following responsibilities:

- consult with the General Assembly, federal, state, and local agencies, nonprofit organizations, private industry and other potential users of coastal energy research;
- establish and administer agreements with other universities of the Commonwealth to carry out research projects relating to the feasibility of recovering fuel gases from methane hydrates and increasing the Commonwealth's reliance on other forms of coastal energy;
- disseminate new information and research results;
- apply for grants made available pursuant to federal legislation, including but not limited to research and development calls from the federal government and from other sources; and
- facilitate the application and transfer of new coastal energy technologies.

VCERC is governed by a board which consists of fourteen members, with representatives from eight partner universities and six government and industry partners and is located at Old Dominion University in Norfolk, Virginia. For more information, contact George Hagerman at telephone (703) 387-6030 or email ghagerman@vt.edu

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities affecting Virginia's coastal resources or coastal uses (e.g., OCS lease sales, renewable energy competitive lease sales, and marine minerals negotiated competitive agreements) must be consistent, to the maximum extent practicable, with the Virginia Coastal Zone Management Program (VCP) (see section 307(c)(1) of the Act and *Federal Consistency Regulations*, 15 CFR Part 930, Subpart C, section 930.32).

Federally licensed or permitted OCS activities (e.g., G&G permits, renewable energy non-competitive permitted activities, and negotiated non-competitive marine minerals agreements) must be consistent with the affected state's federally approved coastal zone management plan (Subpart E, sections 930.70 *et seq.*). These activities offshore of Virginia require the submission of a federal consistency document (i.e. consistency determination or consistency certification) that includes an analysis of the activities in light of Virginia's coastal zone management program (CZMP), and a commitment to comply with the CZMP. For consistency reviews in Virginia, we invite your attention to the *Federal Consistency Regulations* cited above, and to Virginia's *Federal Consistency Information Package*, which gives content requirements for federal consistency determinations and certifications. The *Federal Consistency Information Package* may be found at DEQ's web site at http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview/FederalConsistencyReviews.aspx.

Questions regarding the federal consistency review process may be directed to DEQ, Ellie Irons at (804) 698-4325 or John Fisher at (804) 698-4339.

Thank you for the opportunity to review the Draft Programmatic Environmental Impact Statement for geological and geophysical exploration activities on the Atlantic Outer Continental Shelf. Please contact Ellie Irons at (804) 698-4325 or John Fisher at (804) 698-4339 for clarification of these comments.

Sincerely,

Richard F. Weeks, Jr.
Chief Deputy

Ec: Cindy Keltner, DEQ-TRO
Steve Coe, DEQ-DLPR
Kotur Narasimhan, DEQ-Air
Laura McKay, DEQ-VCP
Ernie Aschenbach, DGIF
Robbie Rhur, DCR
Barry Matthews, VDH
Keith R. Tignor, VDACS
Tony Watkinson, VMRC
David Spears, DMME
Pam Mason, VIMS
Roger Kirchen, DHR
John Carlock, HRPDC
Elaine Meil, A-NPDC
George Hagerman, VCERC

11

SA

REMARKS BY ROBERT MATTHIAS
ON BEHALF OF THE CITY OF VIRGINIA BEACH
AT THE BUREAU OF OCEAN AND ENERGY MANAGEMENT (BOEM) MEETING
IN REFERENCE TO THE
PROPOSED DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT
FOR PROPOSED GEOLOGICAL AND GEOPHYSICAL (G&G) ACTIVITIES IN THE
MID-ATLANTIC OUTER CONTINENTAL SHELF (OCS) PLANNING AREAS
TUESDAY, APRIL 24, 2012 – 1:00 PM
HILTON NORFOLK AIRPORT, NORFOLK, VA

Ladies and gentleman, thank you for allowing me to speak today. The City of Virginia Beach is committed to energy development off the coast of Virginia. We, therefore, are completely in support of the proposed geological and geophysical studies that are needed before either offshore wind energy can take place or offshore oil and gas development can move forward.

The City has been a leader in the development of wind energy off the coast of Virginia. In 2009, Mayor Will Sessoms started an Alternative Energy Task Force (AETF), which provided a report to Council last year. Although it addresses several issues, the report as adopted by Council strongly supports the development of offshore wind energy and offshore oil and gas development.

Several examples exist of the City's leadership in developing offshore wind energy. The City is a founder of the Virginia Offshore Wind Coalition, or VOW. We have a City staffer who is a gubernatorial appointee to the Virginia Offshore Wind Development Authority (VOWDA). The City provided $50,000 for an engineering study to analyze the sensibility of constructing a meteorological tower on the Chesapeake Light Tower to investigate the feasibility of that location providing market quality studies on wind availability off the coast of Virginia Beach.

We believe that large scale wind development can happen off the coast of Virginia Beach with little to no environmental impact. In fact, when visiting the Chesapeake Light Tower multiple times as we pursued that site as a meteorological tower, we noticed a complete absence of any evidence of large scale bird activity. As for offshore oil and gas

development, although it will take place no closer than 50 miles off the coast of Virginia Beach, the Council when adopting the Alternative Energy Task Force (AETF) Report, added a caveat that it should be done to the safest extent possible and have no detrimental effect on the operations of the United States Department of Defense (DOD), National Aeronautics and Space Administration (NASA), or Wallops Island, which hopes to develop a growing space exploration and launch site.

Again, thank you for the opportunity to testify today. I will provide you a copy of the resolution adopted by Council supporting Mayor Sessoms' Alternative Energy Task Force (AETF) Report.

ALTERNATIVE VERSION

A RESOLUTION ADOPTING THE 2010 VIRGINIA BEACH ALTERNATIVE ENERGY TASK FORCE REPORT

WHEREAS, on April 28, 2009, Mayor William Sessoms created the Mayor's Alternative Energy Task Force and directed the Task Force to:

1) Analyze the current reality of energy demand in Virginia Beach and explore potential sources of supply to satisfy that demand;

2) Consider how those possible supply sources might impact our community both economically and environmentally;

3) Look forward in time to identify areas where supply may not keep pace with demand;

4) Develop potential options to close that gap as well as to reduce our dependence on foreign sources through identifying future sources which must be environmentally sustainable and independent of foreign sources; and

5) Ideally and proactively position Virginia Beach to be an active leader in the essential movement toward a more sustainable and intelligent energy future for our nation, Commonwealth and community; and

WHEREAS, the Task Force conducted a total of nine meetings in pursuit of this goal; and

WHEREAS, the Task Force has compiled its findings in a report to the City Council, detailing a recommended City energy policy approach, and a supporting series of goals, recommendations and actions to help accomplish this policy.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF VIRGINIA BEACH, VIRGINIA:

That the City Council herby adopts the 2010 Virginia Beach Alternative Energy Task Force Report, which is attached hereto as Exhibit A and is hereby incorporated by reference.

BE IT FURTHER RESOLVED BY THE COUNCIL OF THE CITY OF VIRGINIA BEACH, VIRGINIA:

That the City Manager is hereby directed to undertake those actions that would carry out the goals, recommendations and actions set forth in the Task Force Report.

BE IT FURTHER RESOLVED BY THE COUNCIL OF THE CITY OF VIRGINIA BEACH, VIRGINIA:

That actions on the procedural recommendations contained within the Task Force Report, including the appointment of a City Energy Advisory Committee, pursuing partnerships to accomplish implementing the recommendations in the Report, and policy recommendations related to uranium mining, offshore oil and natural gas drilling, the proposed Dendron Coal Plant in Surry County, Virginia, and light rail shall be pursued as deemed appropriate on a case-by-case basis by the Council.

Adopted by the Council of the City of Virginia Beach, Virginia, on the 25th day of January, 2011.

APPROVED AS TO LEGAL SUFFICIENCY:

Roderich S

City Attorney's Office

CA11764
ALT-1
January 24, 2011

Item V-K.6.

ORDINANCES/RESOLUTIONS ***ITEM # 60606 (Continued)***

Voting: *11-0* ***(By Consent)***

Council Members Voting Aye:

Rita Sweet Bellitto, Glenn R. Davis, William R. "Bill" DeSteph, Harry E. Diezel, Robert M. Dyer, Barbara M. Henley, Vice Mayor Louis R. Jones, Mayor William D. Sessoms, Jr., John E. Uhrin, Rosemary Wilson and James L. Wood

Council Members Voting Nay:

None

Council Members Absent:

None

Item V-K.6.

ORDINANCES/RESOLUTIONS ITEM # 60606

Attorney Steve Romine, 999 Waterside Drive, Norfolk, Virginia, 23452, Phone: 376-9468, represented Old Dominion Electric Cooperative. Although disappointed with procedural recommendations in the report encouraging Virginia Beach to take a position in opposition to the Power Plant, ODEC appreciates the enabling Resolution which confirms the City is not taking a position in opposition to Cyprus Creek. The permitting re Cyprus Creek has been DEFERRED for eighteen (18) to twenty-four (24) months. ODEC does support the report. C. David Hudgins, representing ODEC, accompanied Steve Romine, 4201 Dominion Boulevard, Glen Allen, Virginia, (804) 968-4068/ (804) 314-6863.

Robert G. Burnley, represented Wise Energy for Virginia and expressed appreciation to the Mayor and City Council for their leadership on this complicated energy plan. Mr. Burnley believes ***the ADOPTED*** *Alternative Energy Plan will go a long way to protect the environment and economy.*

Attorney Cale Jaffe, Southern Environmental Law Center, and applaud the Mayor and City Council for ADOPTING the ***Mayor's 2010 Virginia Beach Alternative Energy Task Force Report.***

Dorothy Holtz, 1304 Downs Lane, Phone: 460-2440, Member of the Sierra Club, spoke in ***SUPPORT*** *of the* ***Mayor's 2010 Virginia Beach Alternative Energy Task Force Report.***

Ann Williams 408 Lynn Shores Drive, Phone: 589-8736, stated implementation of this Coal Plant would be detrimental to the quality of life, health and the economy of the Region.

Kristina Salzman, 608 Balfor Court, Phone: 385-4076, chose to move to Virginia Beach for the clean beaches, beautiful landscaping, wonderful neighborhoods and great schools. Ms. Salzman applauded the hard work and hopes the Alternative Energy Task Force Report would be voted upon in its entirety

Upon motion by Vice Mayor Jones, seconded by Councilman Dyer, City Council ***ADOPTED AS REVISED TO INCLUDE LIGHT RAIL, BY CONSENT :***

Resolution re the ***2010 Virginia Beach Alternative Energy Task Force Report*** *and* ***DIRECTING*** *the City Manager to take the necessary action re the goals and recommendations of the Task Force report*

COMMONWEALTH OF VIRGINIA
HOUSE OF DELEGATES
RICHMOND

RONALD JOHN A. "RON" VILLANUEVA
POST OFFICE BOX 61005
VIRGINIA BEACH, VIRGINIA 23466

TWENTY-FIRST DISTRICT

COMMITTEE ASSIGNMENTS:
COURTS OF JUSTICE
TRANSPORATION
FINANCE

PUBLIC STATEMENT

Draft Programmatic Environmental Impact Statement (PEIS) for Geological and Geophysical (Seismic) studies in the Mid- and South Atlantic OCS areas

Good afternoon. My name is Ron Villanueva and I'm a member of the Virginia House of Delegates representing the 21st House District, which includes portions of Virginia Beach and Chesapeake. Although I am not able to be present today, I would like to thank you for the opportunity to have my statement heard about this PEIS, which will support geological and geophysical study activities off the coast of Virginia and other regions of the Atlantic Outer Continental Shelf (OCS).

We know there is oil and natural gas in the Atlantic OCS, but we don't know how much. The program being considered by your agency through this hearing today, and others along the east coast can provide our nation with important information. Information that may help guide us towards future energy supplies and growth and help insure energy security in the years to come. For now, United States energy producers must rely on 25-year-old data to tell them about potential reserves. The key to making the Atlantic OCS available for leasing in the future is gathering new data using vastly improved technology from that which was used more than 25 years ago. New seismic survey techniques – that allow deep-sea energy reserves to be accurately assessed using dependable, sonar-like technologies – can give producers a more clear, detailed accounting of OCS resources. The knowledge gained would help support leasing, drilling and development that could mean hundreds of thousands of new U.S. jobs and dramatic increases in domestically produced fuel for American families and businesses. Certainly, Virginia, and particularly the Hampton Roads area and the district I represent, could see a related and significant growth in jobs and revenue. This region is ideally located and has existing infrastructure to support such development.

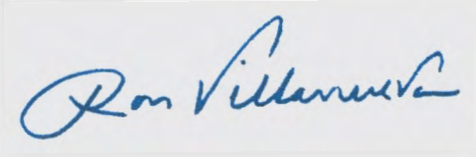
As for the seismic surveys that are the focus of the hearing today, the protection of marine life off Virginia's coastline is very important and marine wildlife will be safeguarded through the survey process. State-of-the-art seismic survey techniques are carefully regulated and reliable. The permits you may issue to conduct such work will demand environmental protection. Compressed air, released into the water, creates sound waves that computers can analyze to pinpoint energy reserves. The welfare of marine mammals is carefully monitored at all times to provide for the protection of the animals.

DISTRICT: (757) 216-3883 • RICHMOND: (804) 698-1021 • FAX: (804) 698-6721

We need as much information as possible about Atlantic OCS energy reserves so we can make intelligent decisions about our nation's energy future. New seismic surveys are a key to those decisions and I urge you to move forward in that process. At the same time, the collection of seismic data alone will not be enough to tell us what resources may lie off the Virginia coast. Plans for a Virginia lease sale have been rejected, and there is no plan to reconsider that until 2017 at the earliest. Without a lease sale, seismic companies have little incentive to gather new data since there are no potential customers for that information.

In conclusion, I urge you to move the seismic permit program forward but also to supplement that effort and make it worthwhile by scheduling a new lease sale for Virginia and the Mid-Atlantic waters as soon as possible. Thank you.

With pride in our Commonwealth,



Ron Villanueva
Member, Virginia House of Delegates
21st District

United States Department of the Interior
Fish and Wildlife Service
105 West Park Drive, Suite D
Athens, Georgia 30606
Phone: (706) 613-9493
Fax: (706) 613-6059

West Georgia Sub Office
P.O. Box 52560
Ft. Benning, Georgia 31995-2560
Phone: (706) 544-6428
Fax: (706) 544-6419

Coastal Sub Office
4980 Wildlife Drive
Townsend, Georgia 31331
Phone: (912) 832-8739
Fax: (912) 832-8744

May 29, 2012

Memorandum

To: Gary D. Goeke, Chief, Regional Assessment Section, Office of Environment (MS 5410), Bureau of Ocean Energy Management, Gulf of Mexico Region

From: Sandra Tucker, Field Supervisor, Fish and Wildlife Service, Georgia Ecological Services, Athens

Subject: Comments on Draft Programmatic Environmental Impact Statement for Proposed Geological and Geophysical Survey Activities in the Mid- and South Atlantic Planning Areas

The Fish and Wildlife Service (Service) has reviewed the Bureau of Ocean Energy Management's (BOEM) programmatic environmental impact statement (PEIS) that analyzes the potential environmental impacts of geological and geophysical (G&G) survey activities in Federal waters of the Mid- and South Atlantic Outer Continental Shelf (OCS) and adjacent State waters. The following comments are submitted in accordance with the provisions of the Fish and Wildlife Coordination Act, as amended (16 U.S.C. §§ 661-667e); the Endangered Species Act (ESA), as amended (16 U.S.C. § 1531, et seq.); the Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 1536, 1538); and the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 et seq.).

The PEIS would cover activities for three program areas (oil and gas, renewable energy, and marine minerals) during the 2012-2020 time period. The PEIS evaluates impacts to resources that could occur as a result of G&G survey activities, and identifies measures to avoid, reduce, or minimize impacts. The area of interest is located in U.S. Atlantic waters, from the shoreline (excluding estuaries) to 350 nautical miles from shore.

The Service recommends that BOEM:

- Utilizes the Memorandum of Understanding (MOU) that they and the FWS entered into on June 4, 2009. The MOU addresses the effects of agency actions on migratory birds, and outlines appropriate MBTA standards and permit requirements to address in NEPA-mandated environmental reviews. We expect this MOU will prompt any site-specific

coordination necessary if you anticipate adverse impacts on migratory birds as a result of the proposed activities.

- Creates an inventory of all migratory birds within the area of interest. This would serve as an important resource for assessing impacts if the need arises. The inventory could include migratory birds found on coastal beaches and marshes that could be affected by oil and gas mapping, exploration, and development.
- Coordinates with the National Wildlife Refuges within the area of interest as survey activities are further refined. Knowledge of the G&G survey activities within Refuge boundaries should help with coordination between the Service and BOEM. Depending on the activity, special use permits or other authorizations may be needed when a Refuge may be affected.
- Coordinates with the National Marine Fisheries Service (NMFS) regarding offshore impacts related to marine species.

We appreciate the opportunity to provide comments on this PEIS. We look forward to coordinating with you in the future. If you have specific questions concerning these comments, please contact Sandra Tucker at (706) 613-9493 ext. 230 or sandy_tucker@fws.gov.

Sincerely,

Sandra S. Tucker
Field Supervisor

MARINE MAMMAL COMMISSION

2 July 2012

Mr. Gary D. Goecke
Chief, Regional Assessment Section
Office of the Environment
Gulf of Mexico Outer Continental Shelf Region
Bureau of Ocean Energy Management
1201 Elmwood Park Boulevard, MS-5410
New Orleans, LA 70123-2394

Dear Mr. Goecke:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed (1) the Bureau of Ocean Energy Management's Draft Programmatic Environmental Impact Statement on Geological and Geophysical Exploration of the Atlantic Outer Continental Shelf and (2) the associated 30 March 2012 notice (77 Fed. Reg. 19321) seeking comments. The Commission provides the following recommendations and rationale.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the Bureau of Ocean Energy Management—

- select alternative B as its preferred alternative;
- amend alternative B to 1) expand the geographic boundary of the time-area restriction on airgun seismic surveys to all coastal waters out to 55 km from shore and 2) require passive acoustic monitoring to detect nearby vocalizing marine mammals for all active acoustic surveys that have the potential to take marine mammals by harassment, including high resolution geophysical surveys;
- add an analysis of the direct and indirect economic costs of implementing each alternative, describe the criteria the Bureau will use to select a preferred alternative, and add an additional comment period so that the public is able to review and judge that material and comment on it;
- increase its efforts to maximize the utility of seismic data while minimizing the number and impacts of new seismic studies, using suggested strategies described below;
- include in its final environmental impact statement an alternative that, as part of the permitting process, would promote the further development, testing, and use of alternative, less harmful technologies to collect the required geophysical information;
- work with other agencies with related responsibilities, the oil and gas industry, scientists, conservation organizations, and other stakeholders to develop standards for baseline data collection and ensure the availability of adequate baseline information before moving forward with the proposed geological and geophysical surveys;
- provide confidence limits and sources of potential bias associated with the density and take estimates that were calculated for each species;

- use the 120-dB re 1 μPa threshold to recalculate the Level B harassment zone and associate takes for the use of shallow-penetration sub-bottom profilers and other non-impulsive sound sources;
- include in its calculation of estimated takes an assessment of all potential sound sources associated with geological and geophysical surveys, including exploratory drilling and vessel sounds;
- require, as a term and condition for issuing a geological and geophysical permit, that applicants obtain authorization under section 101(a)(5)(A) or (D) of the Marine Mammal Protection Act to take small numbers of marine mammals incidental to those activities; such approval should also stipulate minimum requirements for mitigation, monitoring, and reporting, as outlined in Appendix C of the draft document;
- use the mitigation measures proposed for seismic airgun surveys (i.e., the seismic airgun survey protocol) as minimal mitigation measures for all high-resolution geophysical surveys and other sounds that have the potential to take marine mammals by Level A or Level B harassment;
- develop comprehensive, standardized monitoring protocols for assessing the effects of geological and geophysical surveys and associated activities on marine mammals;
- prepare annual summaries of marine mammal observer reports, including an analysis of the frequency and outcome of all marine mammal-vessel interactions;
- require that all operators report immediately to the National Marine Fisheries Service and the local marine mammal stranding network all injured and dead marine mammals in the vicinity of the proposed surveys, and suspend those activities if a marine mammal is seriously injured or killed and the injury or death could have been caused by those activities (e.g., a fresh dead carcass is found); and
- revise its cumulative effects analysis to provide a more rigorous and comprehensive assessment of the full impacts of sound and other human-caused and natural activities that affect marine resources in the proposed action area.

Analysis of alternatives

The draft programmatic environmental impact statement evaluates the potential environmental impacts of geological and geophysical surveys in state and federal waters of the South and Mid-Atlantic planning areas of the outer continental shelf and adjacent high seas out to 350 nmi (648 km). The surveys would support oil and gas, renewable energy, and marine minerals exploration and development from 2012 to 2020.

The statement evaluates two action alternatives. Both include mitigation and monitoring measures to avoid, reduce, or minimize impacts on protected species, including marine mammals. They include—

1) time-area restrictions on airgun surveys within the Mid-Atlantic and Southeast Seasonal Management Areas designated under 50 CFR 224.105 when vessel speeds are restricted
2) (1 November to 1 April for the mid-Atlantic and 15 November to 15 April for the southeast);
3) ramp-up, start-up, and shut-down procedures for seismic airgun surveys and at least two protected species observers on duty at all times to monitor the exclusion zone, the radius of which would be determined on a survey-specific basis but in any case would not be less than 500 m;
4) no initiation of ramp-up at night or in poor visibility conditions if the minimum source level drops below 160 dB re 1 µPa-m (rms); maintaining a minimum source level of 160 dB re 1 µPa-m (rms) to avoid visual clearance of the exclusion zone prior to ramp-up would only be authorized under certain situations (e.g., turning, airgun maintenance);
5) start-up and shut-down procedures for acoustic sources used in high resolution geophysical surveys operating at a frequency less than 200 kHz and the use of at least one protected species observer on duty at all times to monitor a minimum 200-m exclusion zone (larger exclusion zones may be established where necessary);
6) the optional use of passive acoustic monitoring to detect vocalizing marine mammals;
7) training of observers in statutory and regulatory requirements, protected species identification, data collection, and reporting of marine mammals in the exclusion zone;
8) guidance to vessel operators on vessel strike avoidance, marine debris awareness, and prevention of discharges into the marine environment;
9) reporting and protection of suspected historic and prehistoric archaeological resources;
10) avoidance of sensitive benthic communities;
11) minimizing impacts on National Marine Sanctuary resources and users; and
12) coordination of all permitted activities with activities of the military and the National Aeronautics and Space Administration.

Alternative B

Alternative B would provide more protection for marine mammals. In addition to the above, alternative B would (1) expand the time-area restrictions for airgun surveys to include all coastal waters from Cape Canaveral to Delaware Bay out to 20 nmi offshore, (2) add a sea turtle time-area restriction for airgun surveys in waters offshore Brevard County, Florida, during the nesting season, (3) require seismic operators to use passive acoustic monitoring for all seismic airgun surveys, and (4) maintain a minimum of 40-km between vessels that are conducting simultaneous deep penetration seismic surveys.

The continuous time-area restrictions along the east coast would protect breeding and migrating right whales as well as other cetaceans in near-coastal waters (e.g., bottlenose dolphins, common dolphins, white-sided dolphins, spotted dolphins, harbor porpoise, and humpback whales). However, the Commission believes that the proposed corridor is too narrow and should be expanded from 37 km (20 nmi) to 55 km (30 nmi) offshore. Prior to issuing its 2008 regulations to reduce whale-vessel collisions (73 Fed. Reg. 60173), the National Marine Fisheries Service had proposed a protective corridor out to 55.6 km (71 Fed. Reg. 36299). The width of the area was reduced based on potential economic impacts on shipping, even though it reduced protection for

right whales. Since then, Schick et al. (2009) have confirmed that migrating right whales occur at least 55 km and as far as 200 km offshore in the mid-Atlantic. Hence, in the Commission's view, the area that would be restricted under alternative B likely would not provide adequate protection for migrating whales.

The 40-km spacing requirement for vessels conducting simultaneous deep penetration airgun surveys is intended to prevent the merger of two ensonified areas to create a single, much larger obstacle to migration. The use of passive acoustic monitoring would provide additional assurance that marine mammals in the area would be detected and shut-down procedures implemented as appropriate. It also would provide a more accurate estimate of the number of animals exposed to airgun noise. This technology already is required for certain seismic surveys in the Gulf of Mexico and the Arctic, and recent advances have improved its use for detecting, classifying, and localizing marine mammals using open-source software (e.g., PAMGUARD). The Commission has commented often on the limited effectiveness of visual observations and believes that passive acoustic monitoring should be used during all surveys with active sound sources that may take marine mammals, including high resolution geophysical surveys.

Because it provides greater protection for marine mammals, including the highly endangered North Atlantic right whale, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management select alternative B as its preferred alternative. The Commission further recommends that the Bureau amend alternative B to 1) expand the geographic boundary of the time-area restriction on airgun seismic surveys to all coastal waters out to 55 km from shore and 2) require passive acoustic monitoring to detect nearby vocalizing marine mammals for all active acoustic surveys that have the potential to take marine mammals by harassment, including high resolution geophysical surveys.

The Bureau has stated that the additional mitigation measures proposed under alternative B would add direct and indirect economic costs to the industry, and that the Bureau wishes to review the totality of the record generated by the programmatic environmental impact statement in the public review period to assist in identifying its preferred alternative. However, the information the Bureau is reviewing is not clear because it did not describe the direct and indirect economic costs associated with each alternative. The omission of economic information is inconsistent with the Bureau's regulations implementing the National Environmental Policy Act, which state that the preferred alternative is the alternative the Bureau believes would "best accomplish the purpose and need of the proposed action while fulfilling its statutory mission and responsibilities, giving consideration to *economic*, environmental, technical, and other factors" (emphasis added) (43 CFR § 46.420). The Marine Mammal Commission therefore recommends that the Bureau of Ocean Energy Management add an analysis of the direct and indirect economic costs of implementing each alternative, describe the criteria the Bureau will use to select a preferred alternative, and add an additional comment period so that the public is able to review and judge that material and comment on it.

Reducing the potential for redundant seismic surveys

At least 38 marine mammal species occur in the North Atlantic during all or part of the year (Waring et al. 2011). The area of interest for the proposed surveys includes a wide range of marine mammal habitats. The surveys would involve the use of seismic airguns that emit high energy, low frequency acoustic pulses that travel long distances and may disrupt important marine mammal behaviors (i.e., feeding, resting, migrating, breeding, calving) and—at close range—can cause physical or physiological injury (Gordon et al. 2004). The noise also can mask biologically important sounds, such as communication calls between conspecifics (Richardson et al. 1995). Baleen whales (right, humpback, fin, blue, and minke whales) are the most likely to be affected by the proposed activities because of their sensitivity to low frequency sounds, whereas other cetaceans could be adversely affected if close enough to the sound source.

The Bureau has received nine applications for geological and geophysical activities in the Atlantic. Eight of those have proposed two-dimensional seismic surveys in some or all of the area of interest to identify potential oil and gas reserves. The projected two-dimensional seismic activity in the south and mid-Atlantic for 2012 to 2020 exceeds the total level of seismic survey activity documented for the entire Atlantic from 1968 to 2005 (Minerals Management Service 2007). If seismic activities proceed as projected, the potential for multiple surveys of the same areas by different applicants is considerable (Figure E-19, page E-59)—especially during 2013 and 2014, the two years of highest projected seismic survey activity.

Conducting multiple seismic surveys of the same area will increase risks to marine mammals and marine ecosystems unnecessarily with no meaningful gain in information. Permitting unnecessarily duplicative surveys is contrary to the charge of balancing orderly resource development with protection of the human, marine, and coastal environments, as directed by the Outer Continental Shelf Lands Act of 1953 (43 U.S.C. 1331 et seq.), as amended. The Bureau stated that they considered coordinating and consolidating seismic surveys to eliminate duplication of survey effort but rejected this approach because the vessel spacing requirements of alternative B would limit concurrent surveys. The Commission agrees that alternative B would prohibit concurrent overlapping or immediately adjacent surveys, but it would not prevent two or more operators from conducting multiple, unnecessarily redundant seismic surveys of the same area at a different time of year or in subsequent years.

As the permitting authority for companies that conduct geological or geophysical exploration of the Outer Continental Shelf, the Bureau is responsible under the National Environmental Policy Act to identify and evaluate alternatives that avoid unnecessary adverse impacts on the environment. The Bureau also must ensure that permitted activities are compliant with the provisions of other federal laws, including the requirement under the Marine Mammal Protection Act that any permitted taking of marine mammals have a negligible and least practicable impact on the affected marine mammal species or stocks.

The Bureau's analysis of existing seismic survey data provides a comprehensive assessment of undiscovered technically recoverable oil and gas resources in the Atlantic (Post et al. 2012).

Rather than re-survey large areas of the Atlantic for which two-dimensional seismic surveys already exist, or conduct multiple overlapping surveys of the same areas, the Bureau should require the oil and gas industry to make the most use of existing, publicly available seismic data. The Bureau also should provide broader access to seismic data that has been collected but that may not yet be in the public domain. This could help to focus and restrict the scope of future surveys to areas that show the most promise for oil and gas development, especially considering that oil and gas resources in the south and mid-Atlantic are expected to be relatively small (Bureau of Ocean Energy Management 2011, Post et al. 2012). The Bureau also should encourage companies that are engaged in or interested in acquiring seismic data in the same areas to collaborate on data collection to limit the number of surveys that are required.

The Commission has emphasized the need to minimize redundant seismic surveys in the Gulf of Mexico and the Arctic. The Bureau has considered methods to achieve that objective under the current regulatory framework, but the Commission believes more could be done. To that end, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management increase its efforts to maximize the utility of seismic data while minimizing the number and impacts of new seismic studies. Steps that could be taken include—

- analyzing fully all existing, publicly available seismic data;
- encouraging industry to release seismic data that is not yet in the public domain;
- collaborating on seismic surveys in areas of common interest;
- limiting the geographic scope, frequency, sound output, and/or duration of surveys that occur in any given year, especially in preferred marine mammal habitat areas;
- having the Bureau conduct seismic surveys and making them available to the industry for a fee;
- auctioning the right to conduct seismic surveys in certain planning areas or blocks; and
- providing tax or other incentives to companies that use alternative, less harmful technologies for the collection of seismic data.

Clearly, the Bureau will need to engage the industry in identifying the best ways to move forward, but the Bureau will have to provide the leadership and retain decision-making authority to ensure the necessary progress.

Alternatives to airguns

As noted previously, sound from seismic airguns poses a number of risks to marine mammals. In its draft environmental impact statement the Bureau discussed several alternative (i.e., non-airgun) technologies including the use of marine vibrators (vibroseis), low-frequency acoustic sources, deep-towed acoustics/geophysics systems, low-frequency passive acoustic systems, and controlled source electromagnetic systems. Some may have the potential to replace airguns, but all are still in various stages of development and not yet commercially available for use on the scale considered in the proposed action. For that reason, the Bureau rejected an alternative that would have prohibited the use of seismic airguns.

Rather than immediately prohibiting airguns, the Bureau should seek an orderly transition by industry from airguns to alternative technologies. In addition to time, such a transition undoubtedly will require permitting incentives and additional research investments. But unless the Bureau steps forward and facilitates a transition to new, less harmful technologies, the development and use of those technologies will be stalled.

Marine vibroseis is a particularly promising and potentially less harmful alternative to airguns for collecting subsurface geophysical data (Weilgart 2010). The draft environmental impact statement indicates that it could be commercially viable within two to four years with additional investment in design and testing. This is well within the nine-year timeframe considered for the proposed action. Controlled source electromagnetic technology also provides an alternative to seismic airguns for characterizing oil and gas resources identified using traditional airgun surveys. That technology already has been used in Norway to direct three-dimensional surveys toward the most prospective oil and gas areas prior to drilling (pers. comm. D. Ridyard, EMGS).

Given the need for and potential of alternative technologies to replace or minimize the use of airguns, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management include in its final environmental impact statement an alternative that, as part of the permitting process, would promote the further development, testing, and use of alternative, less harmful technologies to collect the required geophysical information.

Baseline information

A thorough evaluation of the potential impacts of geophysical surveys and related vessel activities on marine mammals and their habitats depends on the availability of good baseline information. That information is essential to inform efforts to identify and avoid potential harmful interactions with sensitive populations (e.g., those listed as threatened or endangered under the Endangered Species Act or depleted under the Marine Mammal Protection Act) and to minimize impacts on particularly sensitive areas (e.g., marine protected areas, national monuments, essential fish habitats, designated critical habitats, and biological hotspots or areas of particular biological richness). It also should be collected at temporal and spatial scales necessary to characterize the variability inherent in the affected ecosystem. For potentially affected marine mammals, the necessary information includes their stock structure, population status, abundance and trends, distribution and seasonal movements, habitat use patterns, and trophic relationships. For example, additional baseline data regarding migrating North Atlantic right whales could be collected using tagging or aerial surveys to assess their movement patterns (e.g., their distance from shore at different times of the year).

The Bureau has acknowledged that baseline information is lacking for many marine mammals in the area of interest. However, the Bureau has concluded that the cost of acquiring such information would be exorbitant and such information could not be collected in time to evaluate the impacts of the proposed action. The Commission agrees that the collection of comprehensive baseline information requires a long-term and consistent commitment of effort and resources, and

that federal funding for such studies has been limited. Nevertheless, such information is needed to inform decision-makers regarding whether, where, and under what conditions to conduct activities that could have acute or long-term adverse effects on marine mammals and other marine species. In addition, the Commission does not consider the cost of collecting such information to be exorbitant, particularly when viewed in the context of the billions of dollars involved in oil and gas development. In any given year, the total funding for marine mammal research and conservation is on the order of 200 million dollars or less. At the same time, the annual profits of some individual oil companies are in the tens of billions of dollars. Furthermore, the failure to invest in the necessary studies undermines our professed intent to manage our marine resources on the basis of sound science.

The Commission has long argued that the industry and regulatory agencies have a responsibility to ensure that the research needed to manage resource use is conducted in a timely and comprehensive manner. The Bureau's Environmental Studies Program, in collaboration with other federal agencies, has committed to providing multi-year funding to the National Marine Fisheries Service for the Atlantic Marine Assessment Program for Protected Species. That program is supporting a broad-scale, multi-year data collection of abundance and seasonal distribution data for marine mammals and other wildlife in the area of interest for geological and geophysical surveys. The Commission commends that joint effort as it will improve the quality of baseline information needed for assessments of marine mammal stocks. For that reason, it should continue to be a high priority for the Bureau. However, as noted by the Bureau, the resources provided still fall short of what is needed. The Commission believes that the Bureau and the industry need to find additional means of supporting essential research. The industry, in particular, should provide multi-year financial support for stock assessment surveys and stock structure research in areas where seismic surveys are proposed because the risks to marine mammals stem from their activities. The industry should consider efforts to address and manage these risks responsibly as a cost of doing business.

The development of a rigorous program to collect baseline information in the Atlantic, especially in advance of any future leasing activities, is well within existing scientific capacity and would require only a very small fraction of the total cost of developing energy resources in this region. A long-term and consistent investment in baseline data collection would ensure that the decisions regarding proposed survey activities are guided by the best available scientific information. For those reasons, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management work with other agencies with related responsibilities, the oil and gas industry, scientists, conservation organizations, and other stakeholders to develop standards for baseline data collection and to ensure the availability of adequate baseline information before moving forward with the proposed geological and geophysical surveys.

Estimating takes

The data used to estimate takes of marine mammals in the area of interest is based on incomplete or outdated stock assessment surveys. The Bureau used density estimates derived from limited shipboard surveys conducted between 1994 and 2006 by the National Marine Fisheries Service. The density estimates were then extrapolated to other areas for which density estimates

were not available, including areas beyond the exclusive economic zone. As a result, the reliability of the density estimates is uncertain, as are the resulting take estimates. In addition, the uncertainty has not been quantified and hence is not available and apparent to decision-makers. To better convey the uncertainty or reliability of the density and take estimates used in the draft environmental impact statement, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management provide confidence limits and sources of potential bias associated with the density and take estimates that were calculated for each species.

The Bureau used 160 dB re 1 μPa (rms) as the behavioral disturbance criteria for the calculation of Level B incidental takes from all sound sources, pulse and non-pulse. Although 160 dB re 1 μPa (rms) is appropriate for pulse signals, such as airguns, it is not appropriate for non-impulsive sound sources, such as chirp (shallow penetration) sub-bottom profilers. The National Marine Fisheries Service recently clarified that for non-impulsive sound sources, whether continuous or intermittent, Level B harassment is presumed to begin at received levels of 120 dB re 1 μPa (76 Fed. Reg. 43639). Consistent with that guidance, the Level B harassment zone should be calculated based on that threshold rather than 160 dB re 1 μPa. To address this concern, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management use the 120-dB re 1 μPa threshold to recalculate the Level B harassment zone and associate takes for the use of shallow-penetration sub-bottom profilers and other non-impulsive sound sources.

The Bureau also noted that certain activities (e.g., drilling of deep stratigraphic or shallow test wells, geotechnical bottom sampling for renewable energy site characterization) would generate continuous sounds associated with the drilling rig or the support vessel's dynamic positioning thrusters. However, the Bureau did not include those sound sources in its modeling or calculation of take estimates. To address this shortcoming, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management include in its calculation of estimated takes an assessment of all potential sound sources associated with geological and geophysical surveys, including exploratory drilling and vessel sounds.

Mitigation, monitoring, and reporting measures

Seismic airgun and high resolution geophysical surveys both use active sound sources that have the potential to take marine mammals by Level A or Level B harassment, as defined under the Marine Mammal Protection Act. Operators conducting those surveys are required to seek authorization under section 101(a)(5)(A) or (D) of the Marine Mammal Protection Act to take small numbers of marine mammals incidental to those activities. In the case of cetaceans and pinnipeds, authorization is to be sought from the National Marine Fisheries Service and, in the case of manatees, from the Fish and Wildlife Service. The Bureau has not been consistent in its guidance to applicants regarding compliance with the Marine Mammal Protection Act, and this has led to confusion and litigation. To avoid confusion for applicants seeking permits to conduct geological and geophysical surveys in the south and mid-Atlantic, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management require, as a term and condition for issuing a geological and geophysical permit, that applicants obtain authorization under section 101(a)(5)(A) or (D) of the Marine Mammal Protection Act to take small numbers of marine

mammals incidental to those activities; such approval should also stipulate minimum requirements for mitigation, monitoring, and reporting, as outlined in Appendix C of the draft document.

The Bureau has proposed that the exclusion zone for each survey would be determined on a survey-specific basis, but in any case would not be less than 500 m for airgun seismic surveys and 200 m for high-resolution geophysical surveys. The Commission has previously commented on the need to obtain in-situ sound propagation measurements to calculate survey-specific exclusion zones, and commends the Bureau for including that provision in its proposed mitigation measures for both airgun surveys and high-resolution geophysical surveys.

As seismic airgun and high-resolution geophysical surveys both use active sound sources that have the potential to take marine mammals by Level A or Level B harassment, it is unclear why the Bureau has proposed different mitigation measures for the two types of surveys. The survey protocols proposed for high resolution geophysical surveys are inconsistent with those proposed by Cape Wind Associates for geophysical surveys, which included the use of ramp-up procedures, multiple observers, and a minimum 500-m exclusion zone. The Commission believes that the mitigation measures proposed for airgun surveys, including the use of passive acoustic monitoring as identified under alternative B and expanded to include also monitoring of high-resolution geophysical surveys, are minimal requirements for all surveys involving active sound sources. Therefore, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management use the mitigation measures proposed for seismic airgun surveys (i.e., the seismic airgun survey protocol) as minimal mitigation measures for all high-resolution geophysical surveys and other sounds that have the potential to take marine mammals by Level A or Level B harassment.

Rigorous monitoring is needed to assess the effectiveness of mitigation measures and to determine the effects of survey activities on marine mammals at different times and in different locations. Such effects often are assessed by measuring changes from baseline conditions. The monitoring program should follow hypothesis-driven, standardized protocols for data collection to facilitate consistency in data collection and analysis, whether by industry, government, or contracted researchers. Monitoring protocols should be rigorous enough to detect effects caused by specific survey activities or other key anthropogenic or natural events that may be occurring at the same time in the project area. Figure 1 represents a conceptual framework that could be used to guide the development of monitoring protocols (adapted from MMC 2011). For that purpose, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management develop comprehensive, standardized monitoring protocols for assessing the effects of geological and geophysical surveys and associated activities on marine mammals.

The Bureau's recently published summary of seismic survey mitigation measures and marine mammal observer reports indicated that the presence of marine mammals and the resulting ramp-up and shut-down procedures do not cause frequent delays during surveys (Barkaszi et al. 2012). The summary also indicated that shut-down procedures in response to sightings of small cetaceans also would not cause significant delays. The Commission has commented on several occasions that

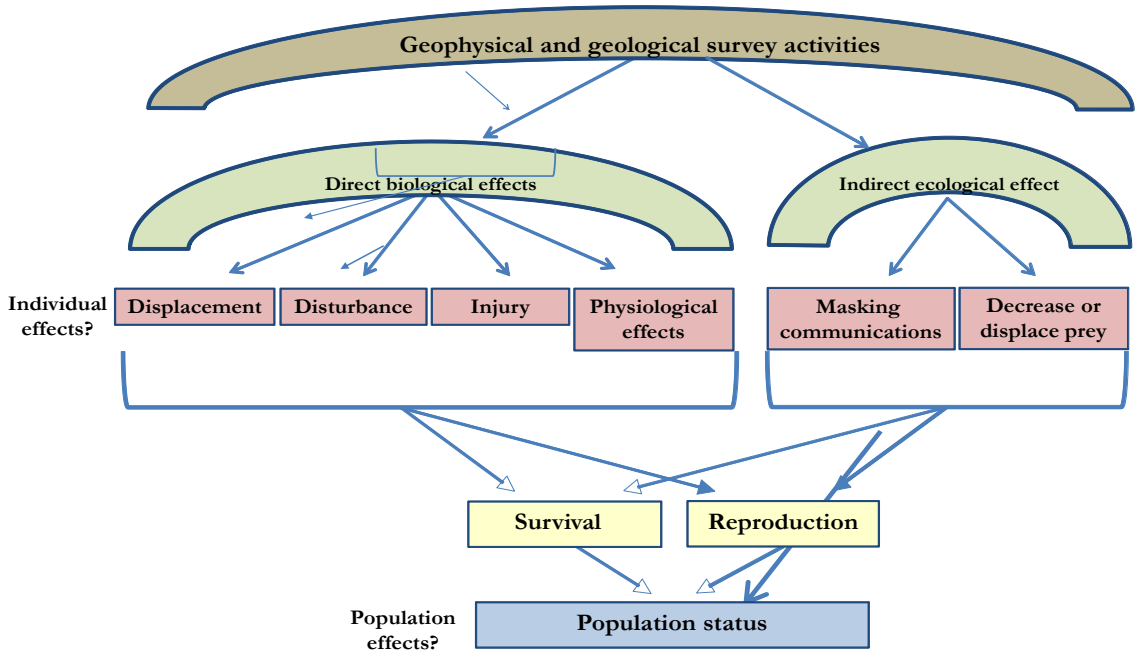


Figure 1. Conceptual framework for assessing the effects of geophysical and geological survey and associated activities on marine mammals.

shut-down procedures should be used to protect all marine mammals, not just whales, and the analysis in the summary report suggests that implementing this recommendation would not create significant economic concerns. Indeed, the Bureau proposes to require that ramp-up and shut-down procedures be used to protect all marine mammals. The one situation where this may not be feasible is when dolphins approach a vessel or towed equipment to bow-ride or draft off the equipment. The frequency of such interactions and the best ways to manage them are not clear. To provide that information, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management prepare annual summaries of marine mammal observer reports, including an analysis of the frequency and outcome of all marine mammal-vessel interactions.

Incidental harassment authorizations issued under sections 101(a)(5)(A) and 101(a)(5)(D) generally require reporting of all injured or dead marine mammals. The Bureau's proposed activities have the potential to harass marine mammals. Therefore, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management require that all operators report immediately to the National Marine Fisheries Service and the local marine mammal stranding network all injured and dead marine mammals in the vicinity of the proposed surveys, and suspend those activities if a marine mammal is seriously injured or killed and the injury or death could have been caused by those activities (e.g., a fresh dead carcass is found).

Cumulative effects

The Bureau's analysis of cumulative effects evaluated the incremental increase of certain aspects of the proposed action when added to other impacts of a similar nature (for example, the incremental increase in sound from the proposed active acoustic surveys when added to other sources of underwater noise). However, the analysis falls short in evaluating the combined effect of all impacts resulting from the proposed action when compared to all existing and reasonably foreseeable future actions. The Commission recognizes the difficulty in monitoring and evaluating the individual effects of specific activities on marine mammals, let alone the combined effects of multiple activities in a constantly changing environment. This is especially true considering that effects resulting from the proposed action likely will involve behavioral changes in the affected marine mammals and/or indirect effects on prey species, the long-term biological significance of which are harder to assess than the significance of acute effects such as injuries or mortalities.

Nevertheless, numerous guidelines are available for developing a conceptual framework to analyze the cumulative effects of sound and other stressors on marine mammals and the marine environment (Council on Environmental Quality 1997, National Research Council 2005, Moore et al. 2012). A comprehensive analytical framework is necessary to determine if, when, and where marine resources, including marine mammals, are being exposed to cumulative effects that reduce their status or hinder their potential to grow and recover. Therefore, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management revise its cumulative effects analysis to provide a more rigorous and comprehensive assessment of the full impacts of sound and other human-caused and natural activities that affect marine resources in the proposed action area.

Please contact me if you have questions about the Commission's recommendations or comments.

Sincerely,

Timothy J. Ragen

Timothy J. Ragen, Ph.D.
Executive Director

cc: Michael Payne, National Marine Fisheries Service

References

Barkaszi, M.J., M. Butler, R. Compton, A. Unietis, and B. Bennet. 2012. Seismic survey mitigation measures and marine mammal observer reports. U.S. Department of the Interior, Bureau of Ocean Energy Management, Gulf of Mexico Outer Continental Shelf Region, New Orleans, Louisiana. OCS Study BOEM 2012-015, 28 pages + appendices.

Bureau of Ocean Energy Management. 2011. Assessment of undiscovered technically recoverable oil and gas resources of the nation's Outer Continental Shelf, 2011. BOEM Fact Sheet RED-2011-01a, 7 pages.

Council on Environmental Quality. 1997. Considering cumulative effects under the National Environmental Policy Act. (Available at: http://ceq.hss.doe.gov/nepa/ccenepa/ccenepa.htm)

Garrison, L.P., S.L. Swartz, A. Martinez, C. Burks, and J. Stamates. 2003. A marine mammal assessment survey of the southeast U.S. continental shelf: February – April 2002. NOAA Technical Memorandum NOAA Fisheries-SEFSC-492, 50 pages.

Gordon, J., D. Gillespie, J. Potter, A. Frantzis, M.P. Simmonds, R. Swift, D. Thompson. 2004. A review of the effects of seismic surveys on marine mammals. Marine Technology Society Journal 37(4):16-34.

Hamazaki, T. 2002. Spatiotemporal prediction models of cetacean habitats in the mid-western North Atlantic Ocean (from Cape Hatteras, North Carolina, U.S.A. to Nova Scotia, Canada). Marine Mammal Science 18(4): 920-939.

Marine Mammal Commission. 2011. Assessing the long-term effects of the BP Deepwater Horizon oil spill on marine mammals in the Gulf of Mexico: a statement of research needs. Marine Mammal Commission, Bethesda, Maryland, 38 pages.

Minerals Management Service. 2007. Geological & geophysical data acquisition; Outer Continental Shelf through 2004-2005. OCS Report MMS 2007-049, 36 pages.

Moore, S.E., R.R. Reeves, B.L. Southall, T.J. Ragen, R.S. Suydam, and C.W. Clark. 2012. A new framework for assessing the effects of anthropogenic sound on marine mammals in a rapidly changing Arctic. BioScience 62(3):289-295.

National Research Council. 2005. Marine mammal populations and ocean noise: determining when noise causes biologically significant effects. National Academies Press, Washington, D.C., 126 pages. (Available at: http://www.nap.edu/)

Post, P., R. Klazynski, E. Klocek, T. DeCort, T. Riches, K. Li, E. Elliott, and R. Poling. 2012. Assessment of undiscovered technically recoverable oil and gas resources of the Atlantic Outer Continental Shelf 2011 as of January 1, 2009. Bureau of Ocean Energy Management BOEM 2012-016, 39 pages.

Richardson, W.J., C.R. Greene, Jr., C.I. Malme, and D.H. Thomson. 1995. Marine mammals and noise. Academic Press, San Diego, CA, 576 pages.

Schick, R.S., P.N. Halpin, A.J. Read, C.K. Slay, S.D. Kraus, B.R. Mate, M.F. Baumgartner, J.J. Roberts, B.D. Best, C.P. Good, S.R. Loarie, and J.S. Clark. 2009. Striking the right balance in right whale conservation. Canadian Journal of Fisheries and Aquatic Sciences 66:1399–1403.

Waring, G.T., E. Josephson, K. Maze-Foley, and P.E. Rosel (eds.). 2011. U.S. Atlantic and Gulf of Mexico marine mammal stock assessments – 2011. National Marine Fisheries Service, 319 pages. (Available at: http://www.nmfs.noaa.gov/pr/pdfs/sars/ao2011.pdf)

Weilgart, L. (ed.). 2010. Report of the workshop on alternative technologies to seismic airgun surveys for oil and gas exploration and their potential for reducing impacts on marine mammals. Monterey, California, USA, 31st August – 1st September, 2009. Okeanos – Foundation for the Sea, Auf der Marienhöhe 15, D-64297 Darmstadt, 29+iii pages.

North Carolina
Department of Administration

Beverly Eaves Perdue, Governor

Moses Carey, Jr., Secretary

June 5, 2012

Mr. Gary Goeke
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
Office of Environment (GM 623E)
1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

Re: SCH File # 12-E-0000-0294; BOEM is producing a Programmatic Environmental Impact Statement to evaluate potential significant environmental effects of multiple geological and geophysical activities on the Atlantic Outer Continental Shelf.

Dear Mr. Goeke:

The above referenced environmental impact information has been reviewed through the State Environmental Review Clearinghouse. Attached to this letter are comments made in the review of this document that the agencies indicate need to be addressed in your future environmental documents.

Should you have any questions, please do not hesitate to call.

Sincerely,

William E. H. Creech

Attachments

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail state.clearinghouse@doa.nc.gov

Location Address:
116 West Jones Street
Raleigh, North Carolina

North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

MEMORANDUM

To: Zeke Creech
State Clearinghouse

FROM: Melba McGee
Environmental Review

RE: 12-0294 BOEM's Proposed Geological and Geophysical Activities in the Mid-Atlantic and South Atlantic Planning Areas

DATE: May 31, 2012

The Department of Environment and Natural Resources has reviewed the Draft Programmatic Environmental Impact Statement provided by the Bureau of Ocean Energy Management (BOEM). The purpose of the environmental document is to evaluate geological and geophysical survey activities for oil and gas exploration and production, renewable energy, and marine minerals in the Mid-Atlantic and South Atlantic OCS and adjacent state waters. This Draft Programmatic EIS consists of a wide range of information, a broad geographic scope and raises a variety of concerns that need to be assessed in more detail to inform decision-makers about the results of such actions.

Information obtained by G & G surveys and the types of survey activities used to gather the facts has the potential to affect North Carolina's coastal counties, the ocean seafloor, recreational and commercial fishing operations, fish habitat, spawning behavior and biological communities in general. With respect to sound effects, agencies raise concerns with the uncertainty regarding the impacts and more details should be provided in reference to avoidance, minimization and appropriate mitigation. Due to the complexity of this project and the significance of the geographic area, the department also recommends that secondary and cumulative impacts be thoroughly addressed and the analysis should also take into account the level of impacts that could occur.

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-707-8600 \ Internet: http://portal.ncdenr.org

In conclusion, the department feels additional efforts are needed in addressing the attached comments and encourages further investigation regarding the concerns raised by our commenting agencies. Our primary interest at this time is to work closely with the BOEM in identifying specific environmental concerns and encourage direct communication with this department if additional information is needed.

Attachments

North Carolina Department of Environment and Natural Resources
Division of Coastal Management

Beverly Eaves Perdue
Governor

Braxton C. Davis
Director

Dee Freeman
Secretary

May 25, 2012

Melba McGee
Environmental Coordinator
Office of Legislative & Intergovernmental Affairs
Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

SUBJECT: Comments on BOEM's Proposed Geological and Geophysical Activities Occurring on the Atlantic Outer Continental Shelf, Offshore, North Carolina (SCH#12-0294 and DCM#20120025)

Dear Ms. McGee:

Thank you for the opportunity to review the Draft Programmatic Environmental Impact Statement (DEIS, March 2012) for proposed Geologic and Geophysical Activities occurring on the Atlantic Outer Continental Shelf (OCS) in the Mid-Atlantic and South Atlantic Planning Areas that was prepared under the guidance of the Bureau of Ocean Energy Management (BOEM). The purpose of the DEIS is to describe and evaluate the potential environmental effects of geological and geophysical survey activities in Federal waters of the Mid-Atlantic and South Atlantic OCS and adjacent State waters. When completed as a final environmental impact statement it will be incorporated by BOEM into the permitting process for geologic and geophysical surveying activities in support of oil and gas exploration, renewable energy, and marine minerals. The purpose of this review by the North Carolina Division of Coastal Management (DCM) is to assess the adequacy of the environmental analysis contained in the DEIS.

Prior Comments from the North Carolina Division of Coastal Management (DCM): In response to BOEM's scoping request on the then proposed DEIS, DCM responded on March 23, 2009 outlining North Carolina's concerns (copy attached). DCM compliments BOEM for incorporating these concerns into its DEIS analysis.

Alternative "A" versus Alternative "B": The "*Proposed Action*" is Alternative "A". The DEIS notes that the overall potential impacts of each alternative are broadly similar. However, under Alternative "B" there is an expanded "*time area closure*", which is designed to further protect marine life such as the North Atlantic right whale, loggerhead turtles. An additional environmental concern relates to potential damage to hard bottom/deep coral areas from deep-towed sonar arrays. In the event that other State agencies request that Alternative "B" be implemented as the "*Proposed Action*", DCM would support their recommendations.

Commercial and Recreational Fishing: Commercial and recreational fishing are significant coastal activities in North Carolina. Geological and geophysical (G&G) surveying activities, depending on how they are conducted, many have a reasonable foreseeable effect on North Carolina's coastal resources and coastal uses thereby triggering consistency review even when the activity is proposed to be conducted in Federal waters.

The DEIS notes that survey vessel traffic has the potential to temporarily disrupt fishing operations, that the use of acoustic devices can result in fish behaving differently, hard bottom disturbances, and that "*marine space-use issues*" are a growing concern. With that in mind, DCM suggests the inclusion, in the FEIS, of a mitigation measure to require that an applicant for a BOEM G&G permit provide an assessment on whether the proposed G&G surveying activity would or would not have an effect on commercial and recreational fishing. This information would then be used as a basis for determining whether State consistency review would be required and for determining whether mitigation measures would be necessary to minimize adverse effects on commercial and recreational fishing.

Coastal Zone Management Act (Section 1.6.5 and Section 5.6): These two sections require a degree of editorial revision in the final environmental impact statement (FEIS) to further clarify the consistency review process. The DEIS correctly notes that: "There *are several standards of "Federal consistency*", however, these standards are not clearly articulated. For example, the DEIS notes that: "*Federal agency activities must be "consistent to the maximum extent practicable" with relevant enforceable policies ....*", however the standard "*If an activity will have direct, indirect, or cumulative effects, the activity is subject to Federal consistency.*" is lost in the overall verbiage. The preceding sentence is also incomplete since it needs to incorporate the concept: "*effect on any coastal use or coastal resource*".

The DEIS notes that G&G ancillary seismic activities may require the preparation of an OCS plan. While that may be accurate, the relevance of "*Ancillary Activities*" discussion to the overall consistency review process is unclear.

While factual, the statement that: "*G&G activities conducted by another Federal agency are not subject to BOEM authorization.*" does not negate the fact that these proposed activities may still require consistency review.

DCM suggests that these DEIS sections be re-worded in the FEIS to resolve the concerns expressed.

Coastal Zone Management Act (Section 1.6.5 and Section 5.6): These sections do not disclose how BOEM intends to inform a State on proposed activities that could potentially have a "*coastal effect*" that may consequently require consistency review. We recommend that BOEM provide a brief description in the FEIS concerning how a State will be notified concerning proposed activities that may have a "*coastal effect*".

The comments above represent comments only from the North Carolina Division of Coastal Management. Other North Carolina State agencies, such as the Division of Marine Fisheries and the Wildlife Resources Commission are likely to comment. We encourage BOEM to consider their comments and, to the extent feasible, to incorporate them into the "*Proposed Action*". Thank you for your consideration of the North Carolina Coastal Management Program.

Sincerely,

Stephen Rynas, AICP
Federal Consistency Coordinator

cc: Braxton Davis, Division of Coastal Management
Doug Huggett, Division of Coastal Management
Mike Lopazanski, Division of Coastal Management
Michele Walker, Division of Coastal Management

North Carolina Department of Environment and Natural Resources
Division of Coastal Management

Beverly Eaves Perdue
Governor

James H. Gregson
Director

Dee Freeman
Secretary

March 23, 2009

Joe Christopher, Regional Supervisor
Leasing and Environment (MS 5410)
Minerals Management Service -Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123–2394

Re: Comments on Geological and Geophysical Exploration (G&G) on the Atlantic Outer Continental Shelf (OCS) - PEIS Scope

Dear Mr. Christopher:

I am writing in response to the Notice of Intent to prepare a Programmatic Environmental Impact Statement (PEIS) and Call for Interest for Future Industry Geological and Geophysical Activity on the Atlantic Outer Continental Shelf published in January 21, 2009 Federal Register. I appreciate the opportunity to offer the following comments to aid the Minerals Management Service (MMS) in determining the significant issues and alternatives for analysis in the PEIS.

As stated in the Description of Geological and Geophysical Activities published by MMS, seismic surveys have the potential for "significant" impacts on the marine environment including physical and acoustic impacts on marine life. North Carolina's coastal and ocean resources are an integral part of the State's economy, supporting thriving fishing and tourism industries. In analyzing seismic survey impacts, it will be imperative that the PEIS address the effects on fish and fish habitat including sub-lethal behavioral changes due to mechanically and electrically generated acoustic sources. These impacts could possibly include changes in feeding behavior, interruption of spawning behavior and effects from episodic acoustic events.

With regard to fish habitat, North Carolina's continental shelf consists primarily of rock covered with a thin veneer of sand less than two meters thick. When these "hard bottom" areas are exposed, they can be covered with living or dead encrusting organisms such as corals and other invertebrates. The complex three-dimensional structure offered by hard bottoms provide excellent habitat for reef fish. Due to the habitat potential, all of the hard bottoms in the south Atlantic are designated by the National Marine Fisheries Service as Essential Fish Habitat under the Sustainable Fisheries Act of 1994. Beyond the edge of the continental shelf (greater than 600m) there have recently been discovered, areas of deep water corals including *Lophelia* and *Enalopsammli*. Since deep penetration, deep-tow side scan sonar and electromagnetic surveys

400 Commerce Ave., Morehead City, NC 28557
Phone: 252-808-2808 \ FAX: 252-247-3330 Internet: www.nccoastalmanagement.net

involve towed cables or receivers placed on the sea floor, the PEIS must address physical impacts to these habitats. As the deep-water corals are especially fragile, activities in an around these communities, particularly the use of deep-tow side scan sonar utilizing a chain dragged along the seafloor, must avoid these areas to preserve this biological community.

The Division of Coastal Management appreciates the opportunity to comment on this issue and encourages the Minerals Management Service to coordinate with other North Carolina environmental agencies to ensure that all relevant issues are included in the PEIS.

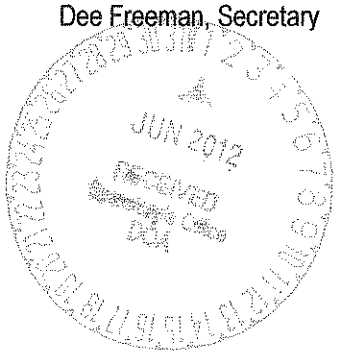
Sincerely,

James H. Gregson, Director

cc: Dee Freeman
Robin Smith
Steve Wall

North Carolina Department of Environment and Natural Resources
Division of Parks and Recreation

Beverly Eaves Perdue, Governor | Lewis R. Ledford, Director | Dee Freeman, Secretary



MEMORANDUM

TO: Melba McGee, Environmental Coordinator
Office of Legislative and Intergovernmental Affairs

FROM: Amin Davis, Environmental Review Coordinator
Division of Parks and Recreation

SUBJECT: Bureau of Ocean Energy Management: Atlantic OCS Proposed Geological and Geophysical Activities

REFERENCE: Project No. 12-0294

Dear Melba,

The North Carolina Division of Parks and Recreation (DPR) has reviewed relevant portions of the Bureau of Ocean Energy Management's (BOEM) Draft Programmatic Environmental Impact Statement (DPEIS) which describes their proposed Geological and Geophysical Activities (G&G) along the Atlantic Outer Continental Shelf and within their Mid-Atlantic and South Atlantic Planning Areas. DPR understands that BOEM's Area of Interest includes the entire shoreline of coastal North Carolina and that the Port of Wilmington is considered one of five likely shore bases for proposed G&G activities. DPR also understands that the following actions are proposed:

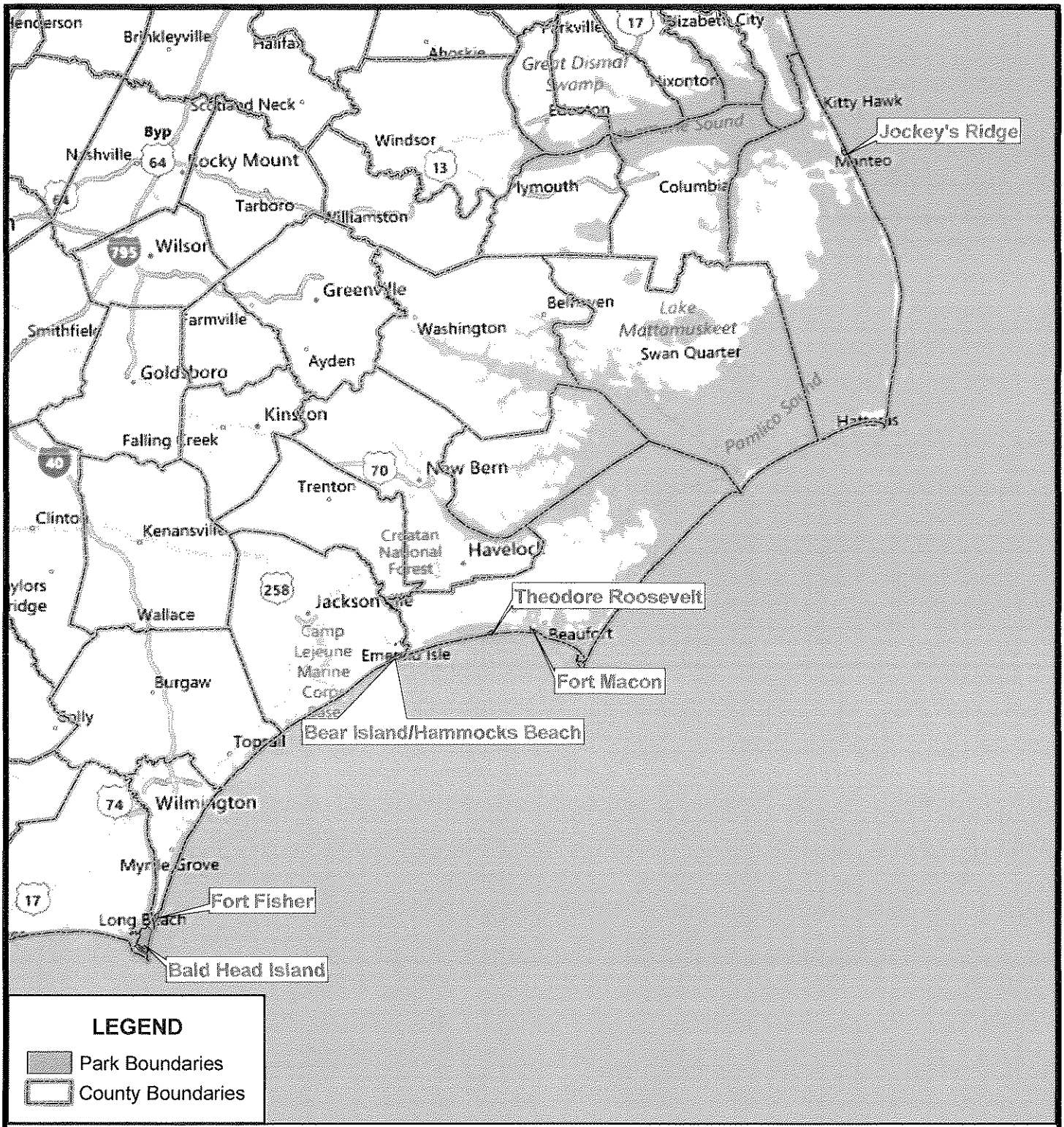
- "various types of deep penetration seismic airgun surveys used almost exclusively for oil and gas exploration and development;
- other types of surveys and sampling activities used only in support of oil and gas exploration and development, including electromagnetic surveys, deep stratigraphic and shallow test drilling, and various remote sensing methods;
- high-resolution geophysical (HRG) surveys used in all three program areas to detect geohazards, archaeological resources, and certain types of benthic communities; and
- geological and geotechnical bottom sampling used in all three program areas to assess the suitability of seafloor sediments for supporting structures (e.g., platforms, pipelines, cables, wind turbines) or to evaluate the quantity and quality of sand for beach nourishment projects."

There are at least three State Parks (Fort Macon, Bear Island/Hammocks Beach, and Jockey's Ridge), two State Natural Areas (Bald Head Island and Theodore Roosevelt), and one State Recreational Area (Fort Fisher) that are situated along or adjacent to Atlantic Ocean shoreline. DPR respectfully requests that these areas be included in the Final PEIS and any associated documents, as most are not currently listed in the DPEIS. Additionally, DPR respectfully requests that BOEM and its partners conduct consultations with staff of DPR properties if potential adverse impacts to DPR natural/recreational resources, or rare species habitats are identified.

1615 Mail Service Center, Raleigh, North Carolina 27699-1615
Phone: 919-707-9300 • Internet: www.ncparks.gov

Please contact me at (919) 707-9329 if you have additional questions or concerns.

CC via email: Adrian Oneal, East District Superintendent
Brian Strong, DPR Chief of Planning and Natural Resources
Debo Cox, Jockey's Ridge State Park Superintendent
James Sasser, DPR Coastal Region Biologist
Jeff Owen, Fort Fisher State Recreation Area Superintendent
Misty Buchanan, NHP Natural Area Inventory Manager
Paul Donnelly, Hammocks Beach State Park Superintendent
Randy Newman, Fort Macon State Park Superintendent
Sue Regier, DPR Land Protection



Scale: 1" = 2,000'

Sources: Bing Maps

Prepared / Date: AKD/5-22-12

BOEM Atlantic OCS G&G Activities
DENR Project Review # 12-0294
Coastal North Carolina

North Carolina Division of Parks and Recreation

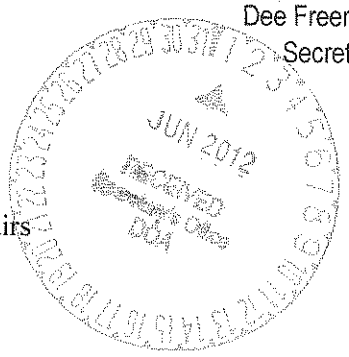
Vicinity Map

Figure 1

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Marine Fisheries
Dr. Louis B. Daniel III
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary



May 29, 2012

TO: Melba McGee, Environmental Coordinator
NC DENR, Office of legislative & Intergovernmental Affairs

FROM: Anne Deaton, Section Chief
NC DMF, Habitat Protection Section

SUBJECT: Draft Programmatic Environmental Impact Statement for Atlantic OCS Proposed Geological and Geophysical Activities in the mid and South Atlantic Planning Areas

The NC Division of Marine Fisheries (DMF) has reviewed the draft Programmatic Environmental Impact Statement (PEIS) provided by the Bureau of Ocean Energy Management (BOEM) examining geological and geophysical (G & G) survey activities for oil and gas exploration and production, renewable energy, and marine minerals. This action was determined to be necessary prior to issuing permits for G & G activity from Delaware Bay to Cape Canaveral, Florida, shore to 350 nmi. There are currently nine pending applications to conduct seismic airgun surveys for oil and gas exploration.

Three alternatives are included. Alternatives A and B are identical except that Alternative B includes additional safeguards to reduce impacts on marine mammals from seismic airgun surveys, such as time-area closures to protect marine mammals and sea turtles, and use of passive acoustic monitoring (PAM) prior to use of airgun to improve detection and avoidance of marine mammals. Alternative C is status quo – to continue permitting on a case by case basis. DMF prefers Alternative B over A because of the additional resource protections.

DMF has authority to protect and conserve marine and estuarine resources and public trust resources pursuant to GS 143B-10. Benthic surveys to assess bathymetry, bottom composition and occurrence of biological resources, such as hard bottom are useful for management of our coastal resources (including siting of wind energy structures and beach fill sources) if done in a manner that does not impact fish and habitat resources. The primary concerns related to the proposed activities include:

- Negative effect of seismic airgun noise
- Seafloor disturbance during surveys
- No vessel zones
- Fuel spills and drilling discharges

There is increasing concern on the impact of anthropogenic sound on marine life. The prolonged noise associated with seismic airgun surveys can cause displacement of marine mammals or finfish, mask biologically important sounds critical for life history functions, and cause temporary hearing loss (Popper and Hastings 2009). Disruption of normal migration patterns can potentially affect fish populations and commercial or recreational fishing activity. The document states that the impact significance of this activity will be moderate for marine mammals and negligible to minor for fish. Marine mammals are an important component of NC's coastal ecosystem, and state and federal fishery agencies go to great extent to reduce fishery related takes. The high number of estimated takes (32,367 dolphins and whales per year) is a concern to DMF. Additional measures to reduce takes should be incorporated into the document.

It has been documented that several clupeid species are impacted by high frequency sounds. These species of fish include American shad (*Alosa sapidissima*), blueback herring (*Alosa aestivalis*) and alewife (*Alosa*

pseudoharengus), which are hearing "specialists" and able to detect sounds at frequencies greater than 120kHz, although American shad display optimal hearing sensitivity in the ranges of 25-50Hz and 200-800Hz. The extent that the noise will alter behavior in such a manner that it impacts the ability of a fish to forage, avoid predators, navigate or find a mate is unknown. Some studies have shown that high frequency sounds (124.6 and 130.9 kHz) have caused river herring to avoid certain areas for up to an hour (Nestler et al. 1992). Low frequency sounds such as seismic air guns can also mask biological sounds, cause temporary hearing loss, or alter fish behavior.

The DMF has concerns regarding the cumulative impacts of the proposed seismic survey activities on blueback herring and alewife, collectively known as river herring. These species are depleted all along the Atlantic seaboard and several states have imposed harvest moratoria until the cause(s) of the decline can be determined. North Carolina enacted a moratorium on harvest of river herring in December 2006 and has expended significant taxpayer resources to both restore the stock and determine causes of the decline. The Atlantic States Marine Fisheries Commission (ASMFC) has determined that American shad are also depleted coastwide and is taking steps to address the decline. Adequate information was not provided in the PEIS to support a finding that there would be negligible to minor impacts on these species. Given that the states are working diligently to curtail or greatly reduce fishing harvest to enhance population recovery, and that river herring is a candidate for listing, any additional negative effects to the population should be avoided. Additional information on the effects of seismic air gun blasts on, and how to avoid impacts to clupeids, sturgeon and other species should be obtained, included and considered in this PEIS.

Seafloor disturbance associated with G & G surveys is another concern to DMF. There is extensive hard bottom habitat on the continental shelf off of NC in both state and federal waters. Hard bottom habitat is a critical habitat for many commercially and recreationally important fisheries, particularly the snapper-grouper complex. The document should include how survey activities will avoid impacting the structurally complex hard bottom. Towed gear, and test drilling could result in structural damage to hard bottom. Contamination from drilling discharge and fuel spills can chemically damage hard bottom.

The document states that temporary no vessel zones may be imposed around survey sites. North Carolina's coastal ocean supports significant commercial and recreational fisheries, including snapper-grouper, flounder, and shrimp. More specific details are needed on the location and type of activities, and the spatial and temporal extent of closures, to determine if no vessel zones would adversely affect commercial or recreational fishing activities.

Compliance with recommendations of the 2010 NC Coastal Habitat Protection Plan are mandated by the Fisheries Reform Act (G.S. 143B-279.8). Recommendation 3.6 states: "Ensure that energy development and infrastructure is designed and sited in a manner that minimizes negative impacts to fish habitat, avoids new obstructions to fish passage, and where possible, provides positive impacts." The concerns raised above should be fully addressed in the final PEIS to satisfy this recommendation.

Thank you for the opportunity to provide input on this project. If you have any comments or questions, please call me at 910-796-7315 or email anne.deaton@ncdenr.gov.

Literature Cited

Nestler, J.M., G.R. Ploskey, J. Pickens, J. Menezes, and C. Schilt. 1992. Responses of Blueback Herring to High-Frequency Sound and Implications for Reducing Entrainment at Hydropower Dams. North American Journal of Fisheries Management 12(4): 667-683.

Popper, A. N. and Hastings, M.C. 2009. Review Paper: The effects of anthropogenic sources of sound on fishes Journal of Fish Biology 75: 455–489.

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Coastal Management

Beverly Eaves Perdue
Governor

Braxton C. Davis
Director

Dee Freeman
Secretary

May 25, 2012

Melba McGee
Environmental Coordinator
Office of Legislative & Intergovernmental Affairs
Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

SUBJECT: Comments on BOEM's Proposed Geological and Geophysical Activities Occurring on the Atlantic Outer Continental Shelf, Offshore, North Carolina (SCH#12-0294 and DCM#20120025)

Dear Ms. McGee:

Thank you for the opportunity to review the Draft Programmatic Environmental Impact Statement (DEIS, March 2012) for proposed Geologic and Geophysical Activities occurring on the Atlantic Outer Continental Shelf (OCS) in the Mid-Atlantic and South Atlantic Planning Areas that was prepared under the guidance of the Bureau of Ocean Energy Management (BOEM). The purpose of the DEIS is to describe and evaluate the potential environmental effects of geological and geophysical survey activities in Federal waters of the Mid-Atlantic and South Atlantic OCS and adjacent State waters. When completed as a final environmental impact statement it will be incorporated by BOEM into the permitting process for geologic and geophysical surveying activities in support of oil and gas exploration, renewable energy, and marine minerals. The purpose of this review by the North Carolina Division of Coastal Management (DCM) is to assess the adequacy of the environmental analysis contained in the DEIS.

Prior Comments from the North Carolina Division of Coastal Management (DCM): In response to BOEM's scoping request on the then proposed DEIS, DCM responded on March 23, 2009 outlining North Carolina's concerns (copy attached). DCM compliments BOEM for incorporating these concerns into its DEIS analysis.

Alternative "A" versus Alternative "B": The "*Proposed Action*" is Alternative "A". The DEIS notes that the overall potential impacts of each alternative are broadly similar. However, under Alternative "B" there is an expanded "*time area closure*", which is designed to further protect marine life such as the North Atlantic right whale, loggerhead turtles. An additional environmental concern relates to potential damage to hard bottom/deep coral areas from deep-towed sonar arrays. In the event that other State agencies request that Alternative "B" be implemented as the "*Proposed Action*", DCM would support their recommendations.

Commercial and Recreational Fishing: Commercial and recreational fishing are significant coastal activities in North Carolina. Geological and geophysical (G&G) surveying activities, depending on how they are conducted, many have a reasonable foreseeable effect on North Carolina's coastal resources and coastal uses thereby triggering consistency review even when the activity is proposed to be conducted in Federal waters.

The DEIS notes that survey vessel traffic has the potential to temporarily disrupt fishing operations, that the use of acoustic devices can result in fish behaving differently, hard bottom disturbances, and that "*marine space-use issues*" are a growing concern. With that in mind, DCM suggests the inclusion, in the FEIS, of a mitigation measure to require that an applicant for a BOEM G&G permit provide an assessment on whether the proposed G&G surveying activity would or would not have an effect on commercial and recreational fishing. This information would then be used as a basis for determining whether State consistency review would be required and for determining whether mitigation measures would be necessary to minimize adverse effects on commercial and recreational fishing.

Coastal Zone Management Act (Section 1.6.5 and Section 5.6): These two sections require a degree of editorial revision in the final environmental impact statement (FEIS) to further clarify the consistency review process. The DEIS correctly notes that: "There *are several standards of "Federal consistency*", however, these standards are not clearly articulated. For example, the DEIS notes that: "*Federal agency activities must be "consistent to the maximum extent practicable" with relevant enforceable policies ....*", however the standard "*If an activity will have direct, indirect, or cumulative effects, the activity is subject to Federal consistency.*" is lost in the overall verbiage. The preceding sentence is also incomplete since it needs to incorporate the concept: "*effect on any coastal use or coastal resource*".

The DEIS notes that G&G ancillary seismic activities may require the preparation of an OCS plan. While that may be accurate, the relevance of "*Ancillary Activities*" discussion to the overall consistency review process is unclear.

While factual, the statement that: "*G&G activities conducted by another Federal agency are not subject to BOEM authorization.*" does not negate the fact that these proposed activities may still require consistency review.

DCM suggests that these DEIS sections be re-worded in the FEIS to resolve the concerns expressed.

Coastal Zone Management Act (Section 1.6.5 and Section 5.6): These sections do not disclose how BOEM intends to inform a State on proposed activities that could potentially have a "*coastal effect*" that may consequently require consistency review. We recommend that BOEM provide a brief description in the FEIS concerning how a State will be notified concerning proposed activities that may have a "*coastal effect*".

The comments above represent comments only from the North Carolina Division of Coastal Management. Other North Carolina State agencies, such as the Division of Marine Fisheries and the Wildlife Resources Commission are likely to comment. We encourage BOEM to consider their comments and, to the extent feasible, to incorporate them into the "*Proposed Action*". Thank you for your consideration of the North Carolina Coastal Management Program.

Sincerely,

Stephen Rynas, AICP
Federal Consistency Coordinator

cc: Braxton Davis, Division of Coastal Management
Doug Huggett, Division of Coastal Management
Mike Lopazanski, Division of Coastal Management
Michele Walker, Division of Coastal Management

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Coastal Management
Beverly Eaves Perdue
Governor
James H. Gregson
Director
Dee Freeman
Secretary

March 23, 2009

Joe Christopher, Regional Supervisor
Leasing and Environment (MS 5410)
Minerals Management Service -Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123–2394

Re: Comments on Geological and Geophysical Exploration (G&G) on the Atlantic Outer Continental Shelf (OCS) - PEIS Scope

Dear Mr. Christopher:

I am writing in response to the Notice of Intent to prepare a Programmatic Environmental Impact Statement (PEIS) and Call for Interest for Future Industry Geological and Geophysical Activity on the Atlantic Outer Continental Shelf published in January 21, 2009 Federal Register. I appreciate the opportunity to offer the following comments to aid the Minerals Management Service (MMS) in determining the significant issues and alternatives for analysis in the PEIS.

As stated in the Description of Geological and Geophysical Activities published by MMS, seismic surveys have the potential for "significant" impacts on the marine environment including physical and acoustic impacts on marine life. North Carolina's coastal and ocean resources are an integral part of the State's economy, supporting thriving fishing and tourism industries. In analyzing seismic survey impacts, it will be imperative that the PEIS address the effects on fish and fish habitat including sub-lethal behavioral changes due to mechanically and electrically generated acoustic sources. These impacts could possibly include changes in feeding behavior, interruption of spawning behavior and effects from episodic acoustic events.

With regard to fish habitat, North Carolina's continental shelf consists primarily of rock covered with a thin veneer of sand less than two meters thick. When these "hard bottom" areas are exposed, they can be covered with living or dead encrusting organisms such as corals and other invertebrates. The complex three-dimensional structure offered by hard bottoms provide excellent habitat for reef fish. Due to the habitat potential, all of the hard bottoms in the south Atlantic are designated by the National Marine Fisheries Service as Essential Fish Habitat under the Sustainable Fisheries Act of 1994. Beyond the edge of the continental shelf (greater than 600m) there have recently been discovered, areas of deep water corals including *Lophelia* and *Enalopsammli*. Since deep penetration, deep-tow side scan sonar and electromagnetic surveys

400 Commerce Ave., Morehead City, NC 28557
Phone: 252-808-2808 \ FAX: 252-247-3330 Internet: www.nccoastalmanagement.net

involve towed cables or receivers placed on the sea floor, the PEIS must address physical impacts to these habitats. As the deep-water corals are especially fragile, activities in or around these communities, particularly the use of deep-tow side scan sonar utilizing a chain dragged along the seafloor, must avoid these areas to preserve this biological community.

The Division of Coastal Management appreciates the opportunity to comment on this issue and encourages the Minerals Management Service to coordinate with other North Carolina environmental agencies to ensure that all relevant issues are included in the PEIS.

Sincerely,

James H. Gregson, Director

cc: Dee Freeman
Robin Smith
Steve Wall

State of North Carolina
Department of Environment and Natural Resources

Reviewing Office: WASHINGTON

INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

Project Number: 12-0294 Due Date: 05-25-2012

After review of this project it has been indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office. determined that the ENR permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
☐	Permit to construct & operate wastewater treatment facilities, sewer system extensions & sewer systems not discharging into state surface waters.	Application 90 days before begin construction or award of construction contracts. On-site inspection. Post-application technical conference usual.	30 days (90 days)
☐	NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begin activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90-120 days (N/A)
☐	Water Use Permit	Pre-application technical conference usually necessary	30 days (N/A)
☐	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a well.	7 days (15 days)
☒	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
☐	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100 thru 2Q.0300)	Application must be submitted and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113).	90 days
☐	Permit to construct & operate Transportation Facility as per 15 A NCAC (2D.0800, 2Q.0601)	Application must be submitted at least 90 days prior to construction or modification of the source.	90 days
☐	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
☐	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950.		
☐	Complex Source Permit required under 15 A NCAC 2D.0800		
☐	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres to be disturbed. Plan filed with proper Regional Office (Land Quality Section) At least 30 days before beginning activity. A fee of **$65** for the first acre or any part of an acre. An express review option is available with additional fees.		20 days (30 days)
☐	Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable stormwater conveyances and outlets.		(30 days)
☐	Mining Permit	On-site inspection usual. Surety bond filed with ENR Bond amount varies with type mine and number of acres of affected land. Any are mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
☐	North Carolina Burning permit	On-site inspection by N.C. Division Forest Resources if permit exceeds 4 days	1 day (N/A)
☐	Special Ground Clearance Burning Permit - 22 counties in coastal N.C. with organic soils	On-site inspection by N.C. Division Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual bum is planned."	1 day (N/A)
☐	Oil Refining Facilities	N/A	90-120 days (N/A)
☐	Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction. certify construction is according to ENR approved plans. May also require permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of $200.00 must accompany the application. An additional processing fee based on a percentage or the total project cost will be required upon completion.	30 days (60 days)

Project Number: 12-0294 Due Date: 05-25-2012		Normal Process Time (statutory time limit)
PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	
☐ Permit to drill exploratory oil or gas well	File surety bond of $5,000 with ENR running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to ENR rules and regulations.	10 days N/A
☐ Geophysical Exploration Permit	Application filed with ENR at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days N/A
☐ State Lakes Construction Permit	Application fees based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property.	15-20 days N/A
☐ 401 Water Quality Certification	N/A	60 days (130 days)
☐ CAMA Permit for MAJOR development	$250.00 fee must accompany application	55 days (150 days)
☐ CAMA Permit for MINOR development	$50.00 fee must accompany application	22 days (25 days)
☐ Several geodetic monuments are located in or near the project area. If any monument needs to be moved or destroyed, please notify: N.C. Geodetic Survey, Box 27687 Raleigh, NC 27611		
☐ Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100.		
☒ Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation.		
☐ Compliance with 15A NCAC 2H 1000 (Coastal Stormwater Rules) is required.		45 days (N/A)
☒ Tar Pamlico or Neuse Riparian Buffer Rules required.		

* Other comments (attach additional pages as necessary, being certain to cite comment authority)
See attached messages from DAQ
Regional DLR referred to DLR headquaters for comments
Regional DWQ referred to DWQ headquaters for comments

REGIONAL OFFICES

Questions regarding these permits should be addressed to the Regional Office marked below.

☐ **Asheville Regional Office**
2090 US Highway 70
Swannanoa, NC 28778
(828) 296-4500

☐ **Fayetteville Regional Office**
225 North Green Street, Suite 714
Fayetteville, NC 28301-5043
(910) 433-3300

☐ **Mooresville Regional Office**
610 East Center Avenue, Suite 301
Mooresville, NC 28115
(704) 663-1699

☐ **Raleigh Regional Office**
3800 Barrett Drive, Suite 101
Raleigh, NC 27609
(919) 791-4200

☒ **Washington Regional Office**
943 Washington Square Mall
Washington, NC 27889
(252) 946-6481

☐ **Wilmington Regional Office**
127 Cardinal Drive Extension
Wilmington, NC 28405
(910) 796-7215

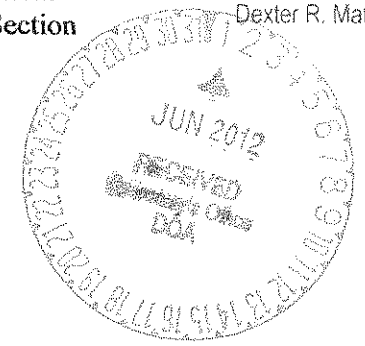
☐ **Winston-Salem Regional Office**
585 Waughtown Street
Winston-Salem, NC 27107
(336) 771-5000

North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue, Governor
Dee Freeman, Secretary

Division of Waste Management
Underground Storage Tank Section

Dexter R. Matthews, Director



TO: Melba McGee, Environmental Coordinator

FROM: Scott Bullock, Regional UST Supervisor JSB

COPY: Robert Davies, Corrective Action Branch Head

DATE: May 15, 2012

RE: CDBG Environmental Review – Environmental Impact Statement to Evaluate Potential Significant Environmental Effects of Multiple Geological and Geophysical Activities on the Atlantic Outer Continental Shelf

The subject area is outside the scope of the Petroleum Underground Storage (UST) Section. However, onshore support facilities should aware of the following concerning handling of petroleum, petroleum USTs and petroleum above ground storage tanks (ASTs):

1. The Washington Regional Office (WaRO) UST Section recommends removal of any abandoned or out-of-use petroleum USTs or petroleum ASTs. The UST Section should be contacted regarding use of any proposed or on-site petroleum USTs or ASTs. We may be reached at (252) 946-6481.

2. Any petroleum ASTs must be installed and maintained in accordance with applicable local, state, and federal regulations. For additional information it is advisable that the North Carolina Department of Insurance at (919) 661-5880 ext. 239, USEPA (404) 562-8761, local fire department, and Local Building Inspectors be contacted.

3. Any onshore petroleum spills must be contained and the area of impact must be properly restored. Petroleum spills of significant quantity must be reported to the North Carolina Department of Environment & Natural Resources – Division of Waste Management Underground Storage Tank Section in the Washington Regional Office at (252) 946-6481.

4. Any soils excavated during demolition or construction that show evidence of petroleum contamination, such as stained soil, odors, or free product must be reported immediately to the local Fire Marshall to determine whether explosion or inhalation hazards exist. Also, notify the UST Section of the Washington Regional Office at (252) 946-6481. Petroleum contaminated soils must be handled in accordance with all applicable regulations.

5. Any questions or concerns regarding spills from petroleum USTs, ASTs, or vehicles should be directed to the UST Section at (252) 946-6481.

If you have any questions or need additional information, please contact me at 252-948-3906.

Mcgee, Melba Washington Regional Office

From: Fisher, Robert
Sent: Friday, May 25, 2012 3:01 PM
To: Hardison, Lyn
Subject: RE: Intergovernmental Review: Atlantic OCS Proposed Geological and Geophysical Activities

Lyn,
I searched through the ***Atlantic G&G Programmatic EIS and found where they had determined there would be no, or negligible, impact on air quality. I cut & pasted those sections of the EIS that support my conclusion.***

On page 1-14
1.6.9. Clean Air Act
The OCSLA (43 U.S.C. 1334[a][8]) requires the Secretary to promulgate and administer regulations that comply with the National Ambient Air Quality Standards (NAAQS) pursuant to the Clean Air Act (CAA) (42 U.S.C. 7401 *et seq.*) and to the extent that authorized activities significantly affect the air quality of any State. Under provisions of the Clean Air Act Amendments (CAAA) of 1990, the U.S. Environmental Protection Agency (USEPA) Administrator, in consultation with the Secretary and the Commandant of the U.S. Coast Guard (USCG), established requirements to control air pollution in OCS areas of the Arctic, Atlantic, Pacific, and parts of the Gulf of Mexico.
Outer Continental Shelf sources within 25 nmi (40.2 km) of the States' seaward boundaries are subject to the same Federal and State requirements as sources located onshore. Outer Continental Shelf sources beyond 25 nmi of the States' boundaries are subject to Federal requirements for Prevention of Significant Deterioration (PSD) promulgated pursuant to Part C of Title 1 of the CAAA. The CAAA also establish procedures to allow the USEPA Administrator to exempt any OCS source from a control technology requirement if it is technically infeasible or poses an unreasonable threat to health or safety. The BOEM air quality regulations (30 CFR 250 Subpart C) assess and control OCS emissions that may impact air quality in onshore areas. The BOEM applies defined criteria to determine which OCS plans require an air quality review and performs an impact-based analysis on the selected plans to determine whether the emission source would potentially cause a significant onshore impact. If an emission source is determined to be significant and therefore requires air quality modeling, the USEPA-preferred model (the steady-state Gaussian, Offshore and Coastal Dispersion [OCD] model) should be used.
Because the review under this document is programmatic in nature and does not address project-specific information regarding air quality issues, it will not result in a permit application under the CAA. Future, site-specific proposals will be reviewed by BOEM to ensure CAA standards or permit requirements are met and that agreed-upon measures will avoid, minimize, or mitigate potential adverse effects.

On page 2-46
2.4.2. Issues Considered but Not Analyzed
As part of the scoping process, CEQ regulations require agencies to identify and eliminate from detailed study the issues that are not significant to the proposed action, have been covered by prior environmental review, or do not fulfill the purpose and need of the proposed action. ***Chapter 4.1.1*** *describes the screening process for impact analysis and identifies issues that were considered but not analyzed in detail. Examples include impacts of underwater noise on plankton; impacts of seafloor-disturbing activities on geology and sediment quality; impacts of vessel effluents on water quality; and impacts of vessel and aircraft emissions on air quality.*

On page 4-4
4.1.1.2. Resource Screening
Several resource areas were identified as having no expected impacts from G&G activities, including

DEPARTMENT OF ENVIRONMENT AND
NATURAL RESOURCES
DIVISION OF WATER RESOURCES
PUBLIC WATER SUPPLY SECTION

Project Number
12-0294
County
Multiple

Inter-Agency Project Review Response

Project Name: US Dept of Interior/Bureau of Ocean Energy Mgmt (BOEM) Project Environmental Review – BOEM is producing Programmatic Environmental Impact Statement to evaluate potential significant environmental effects of multiple geological and geophysical activities on Atlantic Outer Continental Shelf

Comments provided by:

[ ] Regional Program Person

[X] Regional Supervisor for Public Water Supply Section

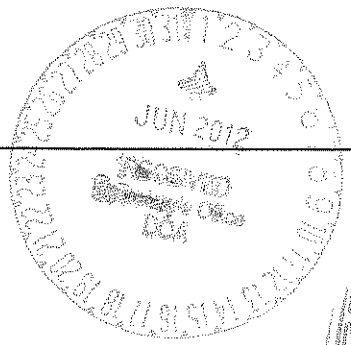
[ ] Central Office program person

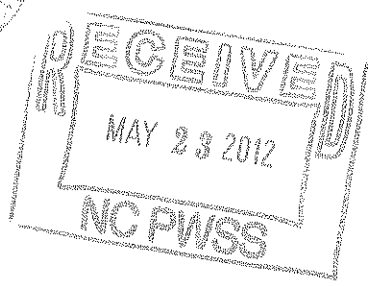
Name: Joey White Telephone #: (252) 948-3894 Date Rec'd: 05/18/12
Joey C. White Date Rev'd: 05/22/12

Program within Division of Environmental Health:

[X] Public Water Supply

[ ] Other, Name of Program_____





Response (check all applicable):

[X] No objection to project as proposed

[ ] No comment

[ ] Insufficient information to complete review

[ ] Comments attached

[X] See comments below

- Proposed surveys do not appear to directly affect potable water supplies based on submitted documents, however possible secondary effects are difficult to anticipate.
- Public water systems in the Coastal Counties of Currituck, Dare, and Hyde withdraw water from deep confined aquifers.

Return to:
Public Water Supply Section
Environmental Review Coordinator
for the Division of Water Resources

North Carolina Department of Environment and Natural Resources
Office of Conservation, Planning, and Community Affairs

Beverly Eaves Perdue
Governor

Linda Pearsall
Director

Dee Freeman
Secretary

June 4, 2012

MEMORANDUM

TO: Melba McGee, DENR Environmental Coordinator

FROM: Harry LeGrand, Natural Heritage Program

SUBJECT: ER – BOEM producing a Programmatic EIS to evaluate potential significant environmental effects of multiple geological and geophysical activities on the Atlantic Outer Continental Shelf

REFERENCE: Project No. 12-0294

The Natural Heritage Program database does not include rare species, significant natural communities, significant natural heritage areas, or conservation/managed areas off the coastline of the state, other than Registry agreements for several submerged outcrops – the Topsail Outcrop and the Masonboro Outcrop. However, the National Audubon Society has identified a large area off the Outer Banks of Dare County as the Outer Continental Shelf IBA (Important Bird Area) (see enclosed material). This area, near the Continental Slope, is the most important offshore foraging area off the North Atlantic Coast for a number of seabirds, including the globally rare Bermuda Petrel and the Black-capped Petrel. This IBA also is included on the North Carolina Conservation Planning Tool map.

Also enclosed is a listing of the Federally Endangered and Threatened species in North Carolina and its inshore waters. Of the mammal list, the Fin Whale, Humpback Whale, Right Whale, Sperm Whale, and West Indian Manatee are seen annually in our waters, and the Sei Whale is casually seen. Of the five reptiles on the list, the Loggerhead Turtle, Green Turtle, Kemp's Ridley Turtle, and Leatherback Turtle occur annually; the Hawksbill Turtle is casual. The Shortnose Sturgeon is also a concern regarding the project.

The Mid-Atlantic Planning Area, as shown on Figure 1-1 in the document, captures part of the range of most of the species listed above. It is thus important that surveys for these rare species be conducted or evaluated, and presented in a Final EIS. This is especially true for the sea turtles, most of which nest on beaches of the state, and for the seabirds found in the region, especially in the Outer Continental Shelf IBA.

Please do not hesitate to contact me at 919-707-8603 if you have questions or need further information.

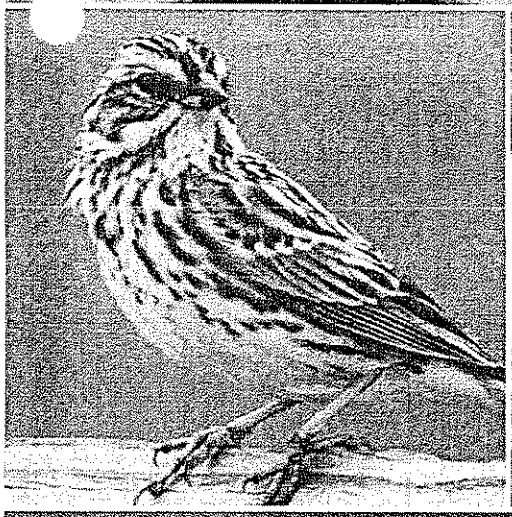
Enclosures

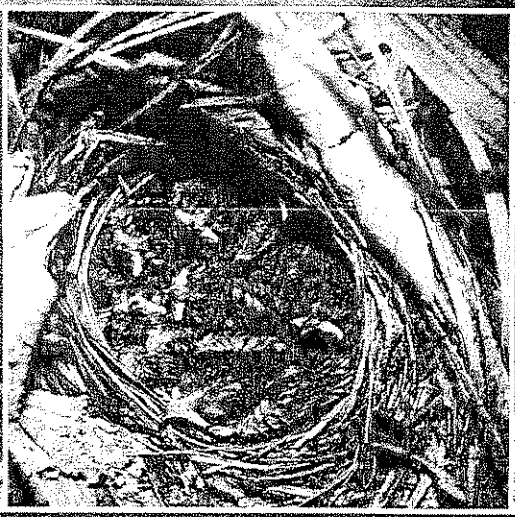
Mailing address: 1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Location: 217 W. Jones Street, Raleigh NC 27604
Phone: 919-707-8600 Webpage: www.oneNCNaturally.org

2010 EDITION

Important Bird Areas

OF NORTH CAROLINA

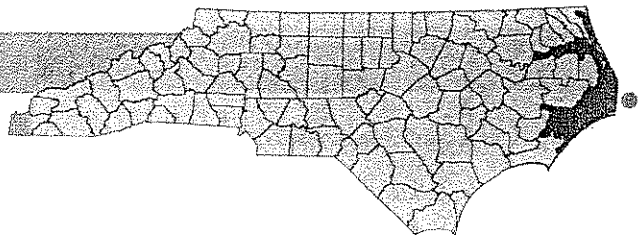




Audubon NORTH CAROLINA

Compiled by Walker Golder and Curtis Smalling

Outer Continental Shelf



Location: Atlantic Ocean, offshore of Cape Hatteras

Total Size: 245,621.3 ha (606,943.4 acres)

Site Description: This site is unique in that it is the open ocean of the Atlantic. The Outer Continental Shelf site includes an area with water depth of 90–915 m (295–3,000 feet) on the western boundary of the Gulf Stream, offshore of Cape Hatteras. This is a site where two major Atlantic currents mix, forming a very rich marine environment. Large mats of Sargassum form surface reefs and concentrate rare and endangered seabirds, marine mammals, marine turtles, and fish. The site is an important commercial and sport fishing area, as well as an important commercial bird-watching area.

Habitats: Open ocean, Sargassum along frontal boundaries.

Land Use: Commercial and recreational fishing, ship traffic.

Primary Threats: Oil and natural gas exploration, Sargassum harvest, overfishing, commercial long-lining, offshore wind energy development.

Protection Status: The site is currently afforded no formal protection.

Conservation Issues: Oil companies hold offshore leases in the area of peak concentrations of seabirds. Past attempts to obtain permits for oil and natural gas exploration have met great public opposition and have not yet been successful. North Carolina is forming a task force to work with the United States Office of Minerals and Mines to formulate guidelines for offering leases for wind energy development and natural gas exploration.

Birds: This site has the greatest diversity of seabirds and marine mammals in the southeastern United States. For tropical species, the site probably has the greatest density of seabirds in the southeastern United States. Birds and other marine life concentrate here because of upwelling and currents. An important percentage of the global populations of Black-capped and Bermuda Petrels may be present in this Important Bird Area.

Monitoring and Research: The only regular monitoring that occurs is through commercial pelagic trips offered by Patteson Tours.

Key Bird Species

Criterion	Species	No.	Year	Average Number 2004–9
3a	Northern Fulmar	51	2008	14
2a	Black-capped Petrel	312	2007	150
1	Bermuda Petrel	3	2009	1
3a	Trinidad Petrel	6	2007	2
3a	Fea's Petrel	2	2009	2
2b	Cory's Shearwater	130	2009	221
2b	Greater Shearwater	130	2007	65
2b	Sooty Shearwater	166	2009	67
2b	Manx Shearwater	8	2009	15
2b	Audubon's Shearwater	80	2009	71
3a	Wilson's Storm Petrel	554	2007	472
3a	European Storm Petrel	1	2009	1
3a	Swinhoe's Storm Petrel	1	2009	<1
1	Band-rumped storm Petrel	16	2009	17
3a	Leach's Storm Petrel	36	2009	18
3a	White-tailed Tropicbird	3	2006	1
3a	Red-billed Tropicbird	2	2009	1
3a	Pomarine Jaeger	11	2009	8
3a	Long-tailed Jaeger	11	2009	4
3a	Parasitic Jaeger	5	2009	2
3a	South Polar Skua	20	2009	4
3a	Great Skua	2	2008	<1
3a	Bridled Tern	39	2007	17
3a	Sooty Tern	10	2009	50
3a	Artic Tern	6	2009	1
3a	Red Phalarope	1,151	2008	233
3a	Red-necked Phalarope	81	2007	31
3a	Dovekie	106	2008	18
3a	Razorbill	78	2008	70
3a	Atlantic Puffin	3	2008	<1
3c	pelagic seabirds	7,904	2009	10,129

Raleigh Ecological Services Field Office

Conserving the Nature of America

- Raleigh ES Office Home
- About Us
  - Mission
  - Service Area
  - Strategic Plan
  - Staff Directory
  - Sandhills Sub-office
  - Directions
- Frequently Asked Questions
- Programs
  - Coastal
  - Educational Outreach
  - Endangered Species
  - Environmental Contaminants
  - Partners for Fish and Wildlife
  - Project Planning
- Species
  - Endangered & Threatened Species
  - Migratory Birds
  - Migratory Fish
  - Invasive Species
- Conservation Partnerships
  - Albemarle Pamlico Community Conservation Collaboration
  - Cape Fear Arch Conservation Collaboration
  - Chatham County Conservation Partnership
  - Dan River Coalition
  - Greater Uwharrie Conservation Partnership
  - North Carolina Longleaf Coalition
  - North Carolina Prescribed Fire Council
  - North Carolina Sandhills Conservation Partnership
  - Onslow Bight Conservation Forum
  - Piedmont Prairie Partnership
  - Upper Tar Collaboration
- Contact Us
- National Wildlife Refuges in North Carolina

Endangered and Threatened species of North Carolina

The Endangered Species Act of 1973 (ESA) protects species of plants and animals that are in danger of extinction. The purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. The ESA is administered by the U.S. Fish and Wildlife Service (USFWS) and the Commerce Department's National Marine Fisheries Service (NMFS), part of the National Oceanic and Atmospheric Administration. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and sea turtles.

The ESA allows the USFWS and the NMFS to list species of plants and animals as threatened or endangered. "Endangered" means a species is in danger of extinction throughout all or a significant portion of its range. "Threatened" means a species is likely to become endangered within the foreseeable future. In addition, candidate species are species for which the agencies have enough information to warrant proposing them for listing, but are precluded from doing so by higher listing priorities. For additional information about the ESA, please see Endangered Species Act Basics.

Currently, 52 federally threatened and endangered species are known to occur in North Carolina. Fact sheets for each protected species are available by clicking on the name of the species below. Links to additional information about each species are located at the bottom of individual fact sheets.

The North Carolina Natural Heritage Program (NCNHP), as part of its mission to preserve the biological diversity of North Carolina, maintains an inventory of all known locations of rare taxa and serves as the state's data source of locality information of natural areas and rare and federally and state listed plant and animal species. Using NCNHP data, the USFWS has developed a County List of federally protected species by each North Carolina county.

Since most of our federally threatened and endangered plants are not readily identifiable throughout the year, surveys must be conducted during the time of year when the species are recognizable by their flowers and/or vegetative characters. Please see the Optimal Survey Windows for Plants document for additional information about conducting surveys for listed plant species.

Survey protocols for Red cockaded Woodpeckers can be found in the revised Recovery Plan.

Since freshwater mussels and fish require removal from the water and extensive handling, Endangered Species Recovery Permits are required to conduct surveys for these species. Please contact the Raleigh Field Office for additional information.

For additional information about the endangered species consultation process and instructions on preparing a biological assessment or biological evaluation, please see our Endangered Species Consultation page.

Mammals

Carolina Northern Flying Squirrel - E
Fin Whale - E
Humpback Whale - E
Indiana Bat - E
Red Wolf - E
Right Whale - E
Sei Whale - E
Sperm Whale - E
Virginia Big-eared Bat - E
West Indian Manatee - E, Manatee Fact Sheet, NC Manatee Guidelines

Birds

Piping Plover - E
Red-cockaded Woodpecker - E
Wood Stork - E

Reptiles and Amphibians

Green Turtle - T
Hawksbill Turtle - E
Kemp's Ridley Turtle - E
Leatherback Turtle - E
Loggerhead Turtle - T

Fish

Cape Fear Shiner - E
Roanoke Logperch - E
Shortnose Sturgeon - E

Mussels and Snails

Appalachian Elktoe - E
Carolina Heelsplitter - E
Cumberland Bean Pearlymussel - E
Dwarf Wedgemussel - E
James Spinymussel - E
Littlewing Pearlymussel - E
Tar River Spinymussel - E
Noonday Globe - T

Plants

American Chaffseed - E
Blue Ridge Goldenrod - T
Bunched Arrowhead - E
Canby's Dropwort - E
Cooley's Meadowrue - E
Dwarf-flowered Heartleaf - T
Golden Sedge - E
Green Pitcher Plant - E
Harperella - E
Heller's Blazing Star - T
Michaux's Sumac - E
Mountain Golden Heather - T
Mountain Sweet Pitcher Plant - E
Pondberry - E
Roan Mountain Bluet - E
Rock Gnome Lichen - E
Rough-leaf Loosestrife - E

- Alligator River NWR
- Cedar Island NWR
- Currituck NWR
- Mackay Island NWR
- Mattamuskeet NWR
- Pea Island NWR
- Pee Dee NWR
- Pocosin Lakes NWR
- Roanoke River NWR
- Swanquarter NWR

- Ecological Services Offices in North Carolina
  - Asheville ES Field Office
  - Raleigh ES Field Office
  - Sandhills ES Suboffice
- National Fish Hatcheries in North Carolina
  - Edenton NFH
- Fisheries Resources Coordination Offices in North Carolina
  - South Atlantic Fisheries Coordination Office

Spotfin Chub - T
Waccamaw Silverside - T

Insects and Spiders

Saint Francis' Satyr Butterfly - E
Spruce-fir Moss Spider - E

Schweinitz's Sunflower - E
Seabeach Amaranth - T
Sensitive Joint-vetch - T
Small-anthered Bittercress - E
Small Whorled Pogonia - T
Smooth Coneflower - E
Spreading Avens - E
Swamp Pink - T
Virginia Spiraea - T
White Irisette - E

Last Updated: June 1, 2012

From:	Anita_Barnett@nps.gov
To:	WASO_EQD_ExtRev@nps.gov; G&GEIS
Cc:	Darby, Valincia; Stanley, Joyce A
Subject:	DES-12/0015 No comments
Date:	Wednesday, May 30, 2012 1:34:53 PM

The National Park Service has reviewed DES-12/0015 the Atlantic OCS Proposed Geological and Geophysical Activities: Mid- Atlantic and South Planning Areas and we have no comments.

Thank you for the opportunity to review and provide comments.

Anita Barnett
Environmental Protection Specialist
Planning and Compliance Division
Southeast Region
National Park Service
404-507-5706

National Park Service
100 Alabama Street
Building 1924
Atlanta GA 30303

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 3 1 2012

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Jill Lewandowski
U.S. Department of the Interior
Bureau of Ocean Energy Management
(MS 4042)
381 Elden Street
Herndon, VA 20170-4817

Dear Ms. Lewandowski:

In accordance with our responsibilities under Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA), the Environmental Protection Agency (EPA) has reviewed the Bureau of Ocean Energy Management's (BOEM) draft Programmatic Environmental Impact Statement (PEIS) on the Atlantic Outer Continental Shelf (OCS) Proposed Geological and Geophysical Activities for the Mid-Atlantic and South Atlantic Planning Areas (CEQ No. 20120094).

The draft PEIS evaluates the types of geological and geophysical (G&G) surveys and activities on the Atlantic OCS during the 2012-2020 period in three program areas managed by BOEM: oil and gas exploration and production; renewable energy; and marine minerals. The purpose of the proposed action is to gather state-of-the-practice data about the ocean bottom and subsurface. These data would provide information about the location and extent of oil and gas reserves, seafloor conditions for oil and gas or renewable energy installations, and marine minerals deposits off the U.S. Atlantic Coast. In addition to the No Action alternative, BOEM evaluated two alternatives (Alternatives A and B) with respect to the G& G activities that could be conducted which differ only with respect to certain mitigation measures.

EPA believes that the draft PEIS provides an adequate discussion of the potential environmental impacts and we have not identified any potential environmental impacts requiring substantive changes. Since a preferred alternative was not identified in the draft PEIS, we are rating both alternatives as LO – "Lack of Objections." A summary of EPA's rating is attached.

We appreciate the opportunity to review the draft EIS and look forward to reviewing the final PEIS related to this project. The staff contact for the review is Candi Schaedle and she can be reached at (202) 564-6121.

Sincerely,

Susan E Bromm

Susan E. Bromm
Director
Office of Federal Activities

Attachment

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

Environmental Impact of the Action

LO-Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS sate, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate
The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alterative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information
The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment