Appendix E: Consultation and Coordination

Endangered Species Act (ESA) Section 7 Consultation - NMFS

United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT
WASHINGTON, DC 20240-0001

AUG 23 2018

Ms. Julie Crocker
NOAA-National Marine Fisheries Service
Protected Resources Division NMFS/NERO
55 Great Republic Drive
Gloucester, MA 01930

Dear Ms. Crocker:

The Bureau of Ocean Energy Management (BOEM) is seeking your concurrence with our 'not likely to adversely affect' and 'no effect' determinations related to BOEM's proposed geophysical and geological (G&G) survey activities to support identification, delineation, monitoring, and scientific investigation of sand resources in the Atlantic and Gulf of Mexico Outer Continental Shelf (OCS). The proposed activities, funded or managed by BOEM, would occur within a small portion of the following BOEM planning areas: North Atlantic, Mid-Atlantic, South Atlantic, Straits of Florida, and the Eastern, Central, and Western Gulf of Mexico. The basis for these determinations is outlined in this letter and further described in the Environmental Assessment (EA), available at: https://www.boem.gov/Regional-Projects/. This EA incorporates by reference, and updates as appropriate, the following documents prepared by BOEM in 2014 and 2017 which analyzed similar sand survey activities in the Atlantic and Gulf of Mexico:

BOEM. 2014. Proposed Geophysical and Geological Activities in the Atlantic OCS to Identify Sand Resources and Borrow Areas North Atlantic, Mid-Atlantic, and South Atlantic-Straits of Florida Planning Areas Final Environmental Assessment. OCS EIS/EA BOEM 2013-219. Herndon, VA. March 2014. 170 pp + apps.

BOEM. 2017. Gulf of Mexico OCS proposed geological and geophysical activities: Western, Central, and Eastern Planning Areas; final programmatic environmental impact statement. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA. EIS/EA BOEM 2017-051. 792 pp. + apps.

Proposed Action

In order to identify OCS sand resources and support both long-term and emergency planning goals, BOEM proposes to execute comprehensive sand survey activities in the Atlantic and Gulf of Mexico OCS. State-of-the-art technology and methods will be used to collect and analyze geophysical and geological data. A rigorous mitigation strategy to minimize environmental effects is included as a component of the proposed action (Section 2.2 and Appendix B). The proposed action would include three components: (1) reconnaissance-scale surveys to identify and delineate OCS sand resources; (2) site-specific, high-resolution geophysical surveys to further delineate borrow areas and investigate for the presence of objects of archaeological significance, munitions of explosive concern (MEC), and hard bottom or other sensitive benthic habitat in the vicinity of potential borrow areas; and (3) research and/or monitoring surveys to detect geologic and morphological changes in sand resource areas.

Two general survey types will be employed: geophysical surveys for mapping the geologic framework and seafloor condition and geological surveys to collect sediment samples and shallow sediment cores (20 ft [6.1 m] maximum length). The geophysical surveys obtain information about sedimentary architecture, shallow hazards (e.g., MEC or buried cables), archaeological resources, and sensitive benthic habitats and do not impact the seafloor; geological surveys collect information on sediment composition and textural properties and impact a small footprint of the seafloor at the location of the core. Detailed descriptions of the survey techniques and equipment types are provided in the EA (Table 2-1 and Appendix A).

Surveys would aim to decrease the overall number of vessel mobilizations and reduce redundant data collection. The survey design and selection of technologies, deployment modes, and timing would balance data quality needs and avoid and minimize potential environmental impacts. To the extent possible, BOEM proposes to use the least number of lowest-energy (and highest-frequency) acoustic sources to obtain the necessary geophysical data, thereby reducing potential for impacts to marine animals. Appendix A provides a more detailed characterization of these proposed sources and their sound propagation characteristics. No airguns or sparkers will be used.

Sand survey activities, whether reconnaissance or site-specific in nature, could be conducted simultaneously, or in sequence, depending upon the information needs, field conditions, and efficiency factors. On average, up to about 70 line-miles (113 km) of geophysical data could be collected per day resulting in up to 8,000-16,000 line-miles (12,875-25,750 line-km) of geophysical surveys for the entire study area. Approximately 15 vibracores per day per mobilization will be collected. Of the sediment samples, which are primarily used to ground-truth the geophysical data, it is anticipated that most would be vibracores, with a small portion being grab samples. All estimates are based on one vessel completing the surveys; however, more than one vessel could be used.

The study area lies within the Atlantic and Gulf of Mexico coastal waters out to 50 meters (m) (164 feet [ft]) deep. The surveys will primarily occur in the OCS; however, some surveys will extend into to state waters investigated through State Cooperative Agreements. Sand survey activities would not occur across the entire study area simultaneously but would be of limited spatial extent at any one time. The study area includes adjacent transit corridors used for vessel mobilization, demobilization, and access to support bases. Sensitive and protected areas, such as Cape Cod Bay, Stellwagen Bank National Marine Sanctuary, and Florida Keys National Marine Sanctuary, are specifically excluded.

Effects Determinations

The mitigation and monitoring measures supporting the effects determinations in the table below are described in detail in Appendix B of the EA. As discussed with NMFS previously, BOEM is applying very precautious and protective mitigation in order to ensure the potential for effects to ESA-listed species or designated critical habitat are eliminated or minimized to the maximum extent possible.

Species	Listing status[a]	Critical habitat in action area (y/n)	Effects determination[b]	Reasons for determination
North Atlantic right whale (*Eubalaena glacialis*)	E	Y, North and Southeast US	NLAA	Limited acoustic footprint, mitigation measures (i.e., observers, acoustic exclusion zones,

				time area restrictions, vessel strike avoidance)
Blue whale (*Balaenoptera musculus*), fin whale (*Balaenoptera physalus*), sei whale (*Balaenoptera borealis*), and sperm whale (*Physeter catodon* (=*macrocephalus*))	E	N	NE	Unlikely to occur within the offshore action area, limited acoustic footprint, mitigation measures (i.e., observers, exclusions zones, time area restrictions)
Loggerhead turtle (*Caretta caretta,*)	T (Northwest Atlantic Ocean DPS)	Y, Virginia through Mississippi	NLAA	Acoustic sources largely outside of hearing range, limited acoustic footprint; mitigation measures (i.e., observers, acoustic exclusion zones, vessel strike avoidance)
Loggerhead turtle Critical Habitat	--	Y, Virginia through Mississippi	NE	Short duration activities in a localized area are not expected to affect habitat or prey species
Green turtle (*Chelonia mydas*)	T (North Atlantic DPS)	N	NLAA	Acoustic sources largely outside of hearing range, limited acoustic footprint; mitigation measures (i.e., observers, acoustic exclusion zones, vessel strike avoidance)
Hawksbill turtle (*Eretmochelys imbricata*), Kemp's ridley turtle (*Lepidochelys kempii*), *leatherback turtle (*Dermochelys coriacea*)	E (*proposed NW Atlantic DPS leatherback sub-population as threatened)	N	NLAA	Acoustic sources largely outside of hearing range, limited acoustic footprint; mitigation measures (i.e., observers, acoustic exclusion zones, vessel strike avoidance)
Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*)	T (Gulf of Maine DPS), E (New York Bight DPS, Chesapeake Bay DPS, Carolina DPS, South Atlantic DPS)	N	NE	Unlikely to occur within the limited acoustic footprint of the action
Gulf Sturgeon (Acipenser oxyrinchus desotoi)	T	Y, Florida to Louisiana (spawning rivers and adjacent estuarine areas)	NE	Unlikely to occur within the limited acoustic footprint of the action

Atlantic salmon (*Salmo salar*)	E	N	NE	Unlikely to occur within the offshore action area
Giant manta ray (*Manta birostris*), oceanic whitetip shark (*Carcharinus lonigmanus*)	T	N	NE	Unlikely to occur within the limited acoustic footprint of the action
Smalltooth sawfish (*Pristis pectinate*)	E	Y, SW Florida (shallow coastal waters)	NE	Unlikely to occur within the limited acoustic footprint of the action
Nassau Grouper (*Epinephalus striatus*)	T	N	NE	Unlikely to occur within the limited acoustic footprint of the action
Corals: elkhorn (*Acropora palmata*), staghorn (*Acropora cervicornis*), boulder star (*Orbicella franksi*), mountainous star (*Orbicella faveolata*), lobed star (*Orbicella annularis*), rough cactus (*Mycetophyllia ferox*), pillar (*Dendrogyra cylindrus*)	T	Y, Florida	NE	Limited knowledge of impacts to coral from acoustic sources, mitigation measures (i.e., avoid sensitive benthic habitat)

[a](E=endangered, T=threatened)
[b](NLAA=Not likely to adversely effect, NE=No effect)

BOEM believes there will be 'no effect' to the seven coral species from the proposed action given:

- limited occurrence of these species relative to the proposed activities.
- avoid anchoring, geological sampling, and any other bottom disturbing activities in the vicinity of sensitive benthic habitat (e.g., coral reef and hard bottom communities) and associated communities (Appendix A).
- bottom disturbing activities in sensitive habitat areas will be avoided by using a dynamically positioned vessel to support geological sampling and/or require site-specific geophysical data in advance of sampling to map and otherwise avoid benthic resources.
- before bottom-sampling is conducted, a geological sampling plan will be submitted to BOEM, and BOEM will confirm that the plan is consistent with the required mitigation measures.

BOEM has determined that there will be 'no effect' on blue, fin, sei, and sperm whales from the proposed action given:

- project area includes water depths less than 50 m, and the distribution range of these species are generally offshore and in deeper waters.
- proposed geophysical sound sources operate above the hearing range of these species.
- where sound sources are within the hearing range, levels would fall below 160 dB within 100 m of the sound source; protected Species Observers (PSOs) would monitor this zone and require shut down of the source if an individual approaches thus avoiding exposure to levels above 160 dB.

- passive acoustic monitoring will be required during any periods of reduced visibility if the sound source is within the hearing ranges of these species.
- NMFS-developed vessel strike avoidance measures will be in place during vessel transit.
- vessel speeds are further restricted if a marine mammal is sighted.
- marine debris and pollution prevention protocols will be required.

BOEM has determined that there will be 'no effect' on Gulf Sturgeon, Atlantic sturgeon, Atlantic salmon, scalloped hammerhead shark, giant manta ray, oceanic whitetip shark, smalltooth sawfish, and Nassau grouper from the proposed action given:

- the species are unlikely to occur within the limited acoustic footprint of the action.
- proposed geophysical sound sources operate above the hearing range of these species.
- limited physical disturbance to the sea floor and water column is expected.

BOEM has determined that the proposed action 'may affect but is not likely to adversely affect' the North Atlantic right whales; loggerhead, green, hawksbill, Kemp's ridley, and leatherback sea turtles. This is primarily given:

- operators will be required to avoid sensitive seafloor and near-seafloor resources which are often favored by sea turtle species.
- acoustic footprint is limited to action area.
- operators will be required to have training in marine trash and debris elimination and a marine pollution control plan.
- passive acoustic monitoring will be required during any periods of reduced visibility if the sound source is within the hearing ranges of these species.
- where sound sources are within the hearing range, levels would fall below 160 dB within 100 m of the sound source; PSOs would monitor this zone and require shut down of the source if an individual approaches thus avoiding exposure to levels above 160 dB.
- vessel speeds are further restricted if a marine mammal or sea turtle is sighted.
- implementation of the NMFS Compliance Guide for the Right Whale Ship Strike Reduction Rule (50 CFR 224.105).
- when North Atlantic right whales are sighted at any time during the year, vessels, regardless of size, must maintain a minimum separation distance of 500 m.

Again, BOEM requests your concurrence with these determinations within 30 days of receipt of this letter. If you have questions, please contact Doug Piatkowski at 703-787-1833 or me at 703-787-1703.

Sincerely,

Jill K. Lewandowski

Jill K. Lewandowski
Chief, Division of Environmental Assessment

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FEB 0 1 2019

Jill Lewandowski, Chief
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Dear Ms. Lewandowski:

We have completed consultation pursuant to section 7 of the Endangered Species Act (ESA) of 1973, as amended, concerning the Bureau of Ocean Energy Management's (BOEM) proposed geophysical and geological surveys to support identification, delineation, monitoring, and scientific investigation of sand resources in the Atlantic and Gulf of Mexico Outer Continental Shelf (OCS). We reviewed your August 23, 2018, consultation request and related materials including your June 2018 draft Environmental Assessment (EA), its accompanying appendices, and clarifying information provided to us via email through December 7, 2018. We initiated consultation on December 7, 2018, but consultation was held in abeyance for 38 days due to a lapse in appropriations and resulting partial government shutdown. Consultation resumed on January 28, 2019.

You determined that the proposed action will have no effect on blue whales, elkhorn and staghorn corals and their designated critical habitat, and critical habitat designated for loggerhead sea turtles, Gulf sturgeon, smalltooth sawfish, and North Atlantic right whales. We are not aware of any information that is contrary to these determinations. Because you made "no effect" determinations for these species and critical habitat, they will not be considered in this consultation. You determined that the proposed action would have no effect on fin, sei and sperm whales, any distinct population segment (DPS) of Atlantic sturgeon, the Gulf of Maine DPS of Atlantic salmon, Gulf sturgeon, giant manta ray, smalltooth sawfish, oceanic whitetip shark, and Nassau grouper; however, as discussed with your staff, the rationale you presented regarding effects of the action on these species is not consistent with a "no effect" determination. Rather, your rationale is consistent with a "may affect" finding and the definition of "discountable effects" (i.e., effects are "extremely unlikely to occur"); therefore, we conclude that the action may affect, but is not likely to adversely affect these species. You determined that the proposed action may affect, but is not likely to adversely affect North Atlantic right whales, loggerhead sea turtles, green sea turtles, Kemp's ridley, leatherback, or hawksbill sea turtles; as explained below, we concur with these determinations. The rationale for our "not likely to adversely affect" determinations is presented below. More information on the status of these species in the action area, as well as relevant listing documents, status reviews and recovery plans, can be found within the EA (BOEM 2018) and on NMFS webpages and is accessible at: *https://www.greateratlantic.fisheries.noaa.gov/protected/section7/listing/index.html*,

https://sero.nmfs.noaa.gov/protected_resources/section_7/threatened_endangered/index.html, and *https://www.fisheries.noaa.gov/species-directory*.

Summary of the Proposed Action and Action Area

The action that we are consulting on is Alternative A, as described in BOEM's June 2018 draft EA[1], inclusive of all proposed survey requirements and mitigation measures described in full in Appendix B to the EA. A complete description of all equipment to be used is included in Appendix A of the EA. These descriptions are incorporated by reference here. In summary, BOEM is proposing to use boat based geophysical and geotechnical (G&G) survey equipment to identify OCS areas that contain appropriate sand resources that may serve as future borrow areas. Surveys will be carried out in the Atlantic Ocean and the Gulf of Mexico at depths less than 50 meters. BOEM will provide funding to a contractor to carry out the survey work. The proposed work will he a combination of reconnaissance and site-specific surveys.

We note that BOEM is not proposing to issue any leases for sand removal at any new OCS borrow areas and no dredging or other sand removal efforts are proposed at this time. We have considered whether future dredging of any borrow areas discovered during these surveys meet the definition of "indirect", "interrelated" or "interdependent" actions and have determined that they do not. Indirect effects are those that are caused later in time, but are still reasonably certain to occur; while any dredging at the borrow sites would occur after the surveys were completed, and therefore be "later in time," dredging is not reasonably certain to occur. That is because we do not know if any sand resources will be discovered and even if they are, there is no funding obligated or plans in place to remove sand from those areas, and at this time, BOEM is not proposing to issue any leases for or otherwise authorize use of OCS sand resources. Interrelated actions are those that are part of a larger action and depend upon the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration (50 CFR 402.02). Future dredging and beach nourishment activities would be carried out to provide storm protection and/or restore storm damage; these activities do not depend on the proposed G&G surveys for their justification and any future dredging and beach nourishment has independent utility apart from the proposed G&G surveys. As such, these future potential actions are not considered interdependent or interrelated actions and effects of any future dredging and/or beach nourishment are not considered indirect effects of the action under consultation. Any future leasing, dredging, and beach nourishment activities would be considered in a subsequent and separate environmental review and would be the subject of separate ESA Section 7 consultation between BOEM and/or USACE and NMFS. Thus, this consultation does not evaluate the effects of any future activities at the potentially identified borrow areas.

The action area is defined by regulation as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 CFR 402.02). The proposed surveys will occur at depths less than 50 m within the following BOEM Planning Areas: North Atlantic, Mid-Atlantic, South Atlantic, Straits of Florida, and the Eastern, Central and Western Gulf of Mexico. The Action Area for this consultation is consistent with the Study

[1] The draft EA and all appendices are available at: https://www.boem.gov/Regional-Projects/.

Area described on page 3 of the EA, which includes the areas to be surveyed as well as the vessel transit routes between existing Atlantic and Gulf coast ports and the survey area.

Effects of the Action on NMFS Listed Species

Potential effects of the proposed action can be broadly categorized into the following categories: (1) acoustic effects, (2) effects to benthic habitat, (3) and effects of an increase in vessel traffic.

ESA Listed Fish

The following ESA listed fish occur within portions of the action area and may be affected by the action: Atlantic sturgeon (Gulf of Maine, New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs), Gulf sturgeon, Gulf of Maine DPS of Atlantic salmon, smalltooth sawfish, giant manta ray, oceanic whitetip shark, and Nassau grouper. As explained below, we have determined that the proposed action may affect, but is not likely to adversely affect, these species.

Acoustic Effects - Geophysical Surveys

The only geophysical survey equipment that operates at a frequency within the estimated hearing range for ESA listed fish that may occur in the action area (i.e., frequency less than 1 kHz; Popper et al. 2014) are the boomer and chirp (see Table A-1 in Appendix A of the draft EA). All other survey equipment operates at a frequency higher than these species are expected to hear; therefore, we do not expect any effects to listed fish exposed to increased underwater noise from the other higher frequency survey equipment. The boomer and chirp produce impulsive sounds; therefore, it is reasonable to use the criteria developed for pile driving and seismic airguns, which also produce impulsive sounds, when considering effects of exposure to this equipment. However, unlike pile driving which produces repetitive impulsive noise in a single location, the geophysical survey sound sources are moving; therefore, the potential for repeated exposure to multiple pulses is much lower when compared to pile driving. As such, we are only considering the "peak" exposure criteria; because the sound source is moving we do not expect individual fish to be exposed to multiple pulses, therefore, use of the cumulative sound exposure criteria, which considers multiple exposures over a short period of time, is not reasonable here.

The available information suggests that for impulsive noise sources (such as the boomer or chirp), a fish needs to be exposed to peak noise levels of at least 206 dB re: 1 uPa peak before physiological impacts are likely (FHWG 2008, Popper et al. 2014). Table A-2 in Appendix A of the EA indicates that noise this threshold will only be experienced within less than one meter from the boomer or chirp. In order to be exposed to potentially injurious levels of noise, a fish would need to be within 1 m of the source; given the dispersed nature of ESA listed fish in the action area, the transient nature of the survey, and the expected avoidance behavior that would cause fish to swim away from, rather than towards, the sound source, we do not expect any listed fish to be close enough to the sound source to be exposed to potentially injurious levels of noise. Based on this, no physical effects to any listed fish, including injury or mortality, are expected to result from exposure to acoustic sources used for the geophysical surveys.

We use 150 dB re: 1 µPa rms as a threshold for examining the potential for behavioral responses by listed fish to noise with frequency less than 1 kHz. This is supported by information provided

in a number of studies (Andersson et al. 2007, Purser and Radford 2011, Wysocki et al. 2007). Responses to temporary exposure of noise of this level is expected to be a brief startle response but in the worst case, we expect that listed fish would completely avoid the area ensonified above 150 dB re: 1 uPa rms. During each pulse of the boomer or chirp, an area extending less than 100 m from the boomer or chirp would experience noise greater than 150 dB re: 1 uPa rms (BOEM 2014). As the sound source will be moving, any particular area will not be ensonified for more than a few seconds at a time; therefore, the potential for displacement from any particular area will also only last a few seconds. Because the area where increased underwater noise will be experienced is very small, transient and increased underwater noise will only be experienced in a particular area for seconds, we expect any effects to behavior to be minor and limited to a temporary disruption of normal behaviors or temporary avoidance of the ensonified area. Any behaviors that are temporarily disrupted will quickly resume. No fish will be displaced from a particular area (no more than 100 m) for more than a few seconds or have to swim more than 100 meters to avoid the noise. As all effects will be so small that they cannot be meaningfully measured, detected or evaluated these effects are insignificant.

Acoustic Effects - Geotechnical Surveys
Given the noise level at the source for the geotechnical survey equipment (145 dB re: 1 uPa rms; Erbe and McPherson 2017) is below the level that we expect may result in behavioral responses by fish, we expect effects to fish from exposure to this noise source to be extremely unlikely and, therefore, discountable.

Vessel Use
The only listed fish in the action area that are known to be at risk of vessel strike are Atlantic and Gulf sturgeon. We have no direct information on the risk of vessel strike to Atlantic or Gulf sturgeon in the Atlantic Ocean or Gulf of Mexico and no reports of vessel strikes outside of rivers and coastal bays. The risk of strike is expected to be considerably less in the ocean than in rivers. This is because of the greater water depth, lack of obstructions or constrictions and the more disperse nature of vessel traffic and more dispersed distribution of individual sturgeon. All of these factors are expected to decrease the likelihood of an encounter between an individual sturgeon and a vessel while also increasing the likelihood that a sturgeon would be able to avoid any vessel. While we cannot quantify the risk of vessel strike in the action area, we expect the risk to be low and considerably lower than it is within rivers and coastal bays. The action area is transited by thousands of vessels every year; the surveys will introduce one to three vessels in any particular area for a short period (days to weeks). We have considered whether this extremely small increase in vessel traffic is likely to increase the risk of strike for sturgeon in the action area.

In addition to thousands of commercial vessels transporting goods, the action area is transited by fishing vessels, ferries, Navy and USCG vessels and many private and recreational vessels. The addition of up to three vessels associated with the survey to the baseline would result in an extremely small increase in the total number of vessel trips in the action area (i.e., three vessels to tens of thousands). Given the small additional increase in vessel traffic and the generally low risk of vessel strike in the ocean, we expect that any increase in risk of vessel strike due to the action would be so small that it could not be meaningfully measured, detected, or evaluated.

Therefore, the effect of an increase in vessel traffic in the action area from the survey vessels is insignificant.

ESA Listed Sea Turtles

The following ESA listed sea turtles occur within the action area and may be affected by the action: Northwest Atlantic DPS of loggerhead sea turtles, North Atlantic DPS of green sea turtles, Kemp's ridley, hawksbill and leatherback sea turtles. As explained below, we have determined that the proposed action may affect, but is not likely to adversely affect, these species.

Sea Turtles - Acoustic Thresholds

In order to evaluate the effects of exposure to the survey noise by sea turtles, we relied on the available scientific literature. Sea turtles are low frequency hearing specialists, typically hearing frequencies from 30 Hz to 2 kHz, with a range of maximum sensitivity between 100 to 800 Hz (Bartol and Ketten 2006, Bartol et al. 1999, Lenhardt 1994, Lenhardt 2002, Ridgway et al. 1969). Currently, the best available data come from studies by O'Hara and Wilcox (1990) and McCauley et al. (2000b), who experimentally examined behavioral responses of sea turtles in response to seismic airguns. O'Hara and Wilcox (1990) found that loggerhead turtles exhibited avoidance behavior at estimated sound levels of 175 to 176 dB re: 1 µPa (rms) (or slightly less) in a shallow canal. McCauley et al. (2000b) reported a noticeable increase in swimming behavior for both green and loggerhead turtles at received levels of 166 dB re: 1 µPa (rms). At 175 dB re: 1 µPa (rms), both green and loggerhead turtles displayed increased swimming speed and increasingly erratic behavior (McCauley et al. 2000b). Based on these data, we assume that sea turtles would exhibit a behavioral response when exposed to received levels of 175 dB re: 1 µPa (rms) and higher.

In order to evaluate the effects of exposure to the survey noise by sea turtles that could result in physical effects, we relied on the available literature related to the noise levels that would be expected to result in sound-induced hearing loss (i.e., temporary threshold shift (TTS) or permanent threshold shift (PTS)); we relied on acoustic thresholds for PTS and TTS for impulsive sounds developed by the U.S. Navy for Phase III of their programmatic approach to evaluating the environmental effects of their military readiness activities (U.S. Navy 2017a). At the time of this consultation, we consider these the best available data since they rely on all available information on sea turtle hearing and employ the same statistical methodology to derive thresholds as in NMFS recently issued technical guidance for auditory injury of marine mammals (NOAA 2016). Below we briefly detail these thresholds and their derivation. More information can be found in the U.S. Navy's Technical report on the subject (U.S. Navy 2017a).

To estimate received levels from airguns and other impulsive sources expected to produce TTS in sea turtles, the U.S. Navy compiled all sea turtle audiograms available in the literature in an effort to create a composite audiogram for sea turtles as a hearing group. Since these data were insufficient to successfully model a composite audiogram via a fitted curve as was done for marine mammals, median audiogram values were used in forming the hearing group's composite audiogram. Based on this composite audiogram and data on the onset of TTS in fishes, an

auditory weighting function was created to estimate the susceptibility of sea turtles to TTS. Data from fishes were used since there are currently no data on TTS for sea turtles and fishes are considered to have hearing more similar to sea turtles than do marine mammals (Popper et al. 2014). Assuming a similar relationship between TTS onset and PTS onset as has been described for humans and the available data on marine mammals, an extrapolation to PTS susceptibility of sea turtles was made based on the methods proposed by (Southall et al. 2007). From these data and analyses, dual metric thresholds were established similar to those for marine mammals: one threshold based on peak sound pressure level (0-pk SPL) that does not incorporate the auditory weighting function nor the duration of exposure, and another based on cumulative sound exposure level (SELcum) that incorporates both the auditory weighting function and the exposure duration (Table 2). However, in order for the cumulative SEL metric to he relevant, a sea turtle would need to be exposed repeatedly to the sound source for the entire time period considered in the calculation (in this case, 24 hours). It is not reasonable to expect that any individual sea turtle would be exposed to the geophsyical surveys repeatedly for an entire 24 hours because the sound source will be constantly moving which eliminates the potential for continuous exposure even if a sea turtle did stay in the same small area for an extended period. For these reasons, we only consider the peak exposure (i.e., exposure to a single sound) to be relevant to this analysis.

Table 1. Acoustic thresholds identifying the onset of permanent threshold shift and temporary threshold shift for sea turtles exposed to impulsive sounds (U.S. Navy 2017a)

Hearing Group	Generalized Hearing Range	Permanent Threshold Shift Onset	Temporary Threshold Shift Onset
Sea Turtles	30 Hz to 2 kHz	204 dB re: 1 $Pa^2 \cdot s$ SEL_{cum} 232 dB re: 1 µPa SPL (0-pk)	189 dB re: 1 $\mu Pa^2 \cdot s$ SEL_{cum} 226 dB re: 1 µPa SPL (0-pk)

Acoustic Effects - Geophysical Surveys
None of the equipment being operated for this survey that overlaps with the hearing range for sea turtles is loud enough to result in PTS or TTS based on the peak exposure criteria. Therefore, physical effects are extremely unlikely to occur and, therefore, discountable.

As explained above, we assume that sea turtles would exhibit a behavioral response when exposed to received levels of 175 dB re: 1 µPa (rms) and higher at frequencies they can hear (see above). Modeled distances to the 175 dB re: 1 µPa (rms) isopleth were not provided by BOEM. However, distances to the 173 dB re: 1 µPa (rms) isopleth were provided (see Table A-2 in Appendix A of the DEA, BOEM 2018); given that the size of the 175 dB re: 1 µPa (rms) isopleth will be larger than the size of the 173 dB re: 1 µPa (rms) isopleth (because sound dissipates with distance from the sound source), using the 173 dB re: 1 µPa (rms) isopleth indicates that the area where sea turtles would experience potentially disturbing levels of sound is even smaller. For the equipment which produces sound within the hearing range of sea turtles, the size of the 173 dB re: 1 µPa (rms) isopleth extends no more than four meters from the source. Thus, a sea turtle would need to be within four m of the source to be exposed to potentially disturbing levels of noise. An exclusion zone of 100 meters around the survey equipment will be maintained using trained endangered species observers. Equipment will be shut down if a sea turtle is sighted

within the exclusion zone; this is expected to allow equipment to be shut down before a sea turtle gets close enough to the sound source to be exposed to disturbing levels of noise. However, even in the event that a sea turtle is submerged or otherwise not seen by the observer, in the worst case, we expect that sea turtles would startle and then avoid the area with noise louder than 173 dB re: 1 uPa rms, which extends less than 4 m from the source. Thus, in the worst case, a sea turtle would temporarily avoid that very small area for the few seconds that the increased noise is present in the area.

Because the area where increased underwater noise will be experienced is transient and increased underwater noise will only be experienced in a particular area for only seconds, we expect any effects to behavior to be minor and limited to a temporary disruption of normal behaviors or temporary avoidance of the ensonified area. No sea turtles will be displaced from a particular area for more than a few seconds. While the movements of individual sea turtles will be affected by the sound associated with the survey, these effects will be temporary (seconds to minutes) and localized (avoiding an area no larger than 4 m) and there will be only a minor and temporary impact on sea turtle behaviors. Therefore, effects to individual sea turtles from brief exposure to potentially disturbing levels of noise are expected to be limited to a brief startle, short increase in swimming speed and/or short displacement and will be so small that they cannot be meaningfully measured, detected, or evaluated; therefore, effects are insignificant.

Acoustic Effects - Geotechnical Surveys
Given the noise level produced by the geotechnical survey equipment (145 dB re: luPa rms) is below the level that we expect may result in behavioral responses hy sea turtles, we expect effects to sea turtles from exposure to geotechnical equipment noise to be extremely unlikely and, therefore, discountable.

Vessel Use
In 1990, the National Research Council estimated that 50 - 500 loggerhead and 5 - 50 Kemp's ridley sea turtles were struck and killed by boats annually in waters of the U.S. (NRC 1990). The report indicates that this estimate is highly uncertain and could be a large overestimate or underestimate. As described in the Recovery Plan for loggerhead sea turtles (NMFS and USFWS 2008), propeller and collision injuries from boats and ships are common in sea turtles. From 1997 to 2005, 14.9% of all stranded loggerheads in the U.S. Atlantic and Gulf of Mexico were documented as having sustained some type of propeller or collision injuries although it is not known what proportion of these injuries were post or ante-mortem. In general, the risk of strike for sea turtles is considered to be greatest in areas with high densities of sea turtles and small, fast moving vessels such as recreational vessels or speed boats (NRC 1990).

The surveys will result in increased vessel traffic in the action area that would not exist but for the surveys taking place. While we cannot quantify the risk of vessel strike for any sea turtle species in the action area, we have considered whether adding the vessel traffic associated with the action to the existing baseline will increase the risk of strike sea turtles in the action area. We expect the risk posed by project vessels to be lowered by the slow speeds (no greater than 12 knots during transit and approximately 3 knots during survey activities) and use of lookouts on all trips. Because the action will result in an extremely small increase in vessel traffic and because of the slow speed of those vessels and the use of look-outs, we expect that any increase

in the risk of vessel strike in the action area resulting from the action (compared to the risk in this area absent the project vessels) cannot be meaningfully measured, detected, or evaluated. Therefore, the effect to sea turtles from an increase in vessel traffic resulting from the survey is insignificant.

ESA Listed Whales

The following ESA listed whales occur within the action area and may be affected by the action: North Atlantic right whales, sei, sperm, and fin whales. As explained below, we have determined that the proposed action may affect, but is not likely to adversely affect, these species.

Acoustic Thresholds

NMFS finalized its *Technical Guidance for Assessing the Effects of Anthropogenic Noise on Marine Mammal Hearing* in July 2016. The Technical Guidance is a document that compiles, interprets, and synthesizes scientific literature to produce updated acoustic thresholds to assess how anthropogenic, or human-caused, sound affects the hearing of all marine mammals under NOAA Fisheries jurisdiction. These acoustic thresholds cover the onset of both temporary (TTS) and permanent hearing threshold shifts (PTS). Acoustic thresholds refer to the levels of sound that, if exceeded, will likely result in temporary or permanent changes in marine mammal hearing sensitivity. Additionally, NMFS considers exposure to impulsive noise greater than 160 dB re 1uPa rms to result in behavioral disruption.

Table 2. Acoustic thresholds identifying the onset of permanent threshold shift for ESA listed whales - impulsive sounds (NMFS 2016)

Hearing Group	Functional Hearing Range	Permanent Threshold Shift Onset (Received Levels)
Low Frequency Cetaceans (baleen whales)	7 Hz to 30 kHz	219 dB re: 1uPa peak 183 dB re: 1uPa SELcum
Mid Frequency Cetaceans (toothed whales)	150 Hz to 160 kHz	230 dB re: 1uPa peak 185 dB re: 1uPa SELcum

Acoustic Effects - Geophysical Surveys

Geophysical surveys may temporarily impact marine mammals in the area due to elevated in-water sound levels. Marine mammals are continually exposed to many sources of sound. Naturally occurring sounds such as lightning, rain, sub-sea earthquakes, and biological sounds *(e.g.,* snapping shrimp, whale songs) are widespread throughout the world's oceans. Marine mammals produce sounds in various contexts and use sound for various biological functions including, but not limited to social interactions, foraging, orientation, and predator detection. Interference with producing or receiving these sounds may result in adverse impacts. Audible distance, or received levels of sound depend on the nature of the sound source, ambient noise conditions, and the sensitivity of the receptor to the sound (Richardson et al. 1995). Type and significance of marine mammal reactions to sound are likely dependent on a variety of factors including, but not limited to, the behavioral state of the animal *(e.g.,* feeding, traveling, etc.),

frequency of the sound, distance between the animal and the source, and the level of the sound relative to ambient conditions (Southall et al. 2007).

For the equipment that operates within a frequency that can be perceived by ESA listed whales, noise will be loud enough to result in injury (temporary or permanent threshold shift) only within less than one meter of the source. BOEM will require maintenance of a 100 m exclusion zone during all surveys. Given how close a whale would need to be the source (i.e., within one meter), it is extremely unlikely that a whale could get that close to the source without being detected by the observers. Because we do not expect that a whale could be close enough to the sound source to be exposed to potentially injurious levels of noise (i.e., within 1 m of the source) without being detected by the observer (even at night or in poor visibility), it is extremely unlikely that any whale would be exposed to underwater noise that could result in injury. The potential for behavioral effects is considered below.

The area with underwater noise greater than 160 dB re: 1 uPa rms extends from 1 to 30 m from the source, depending on the particular equipment (see Table A-2 in Appendix A of the DEA). Given the monitoring of the exclusion zone (100 m), and how close a whale would need to be to the equipment (within 30 m) to be exposed to disturbing levels of noise, we expect that observers will be able to successfully maintain the exclusion zone and order the shutdown of noise producing equipment in time to avoid exposure. Therefore, exposure to disturbing levels of noise is extremely unlikely to occur and effects are discountable.

Acoustic effects - Geotechnical surveys
Given the noise level at the source (145 dB re: 1 uPa rms) is below the level that we expect may result in behavioral responses by ESA listed whales, we expect effects to ESA listed whales from exposure to geotechnical survey noise to be extremely unlikely and, therefore, discountable.

Vessel Traffic
In general, the probability of a vessel collision and the associated response depends, in part, on the size and speed of the vessel. The majority of vessel strikes of large whales occur when vessels are traveling at speeds greater than approximately 10 knots, with faster travel, especially of large vessels (80 m or greater), being more likely to cause serious injury or death (Conn and Silber 2013, Jensen and Silber 2004, Laist et al. 2001, Vanderlaan and Taggart 2007). If an animal is struck by a vessel, responses can include death, serious injury, and/or minor, nonlethal injuries, with the associated response depending on the size and speed of the vessel, among other factors (Conn and Silber 2013, Jensen and Silber 2004, Laist et al. 2001, Vanderlaan and Taggart 2007).

The following aspects of the proposed action decrease the likelihood of a vessel strike associated with these surveys:

1. The small number and small size of the vessels (no larger than 37 m) to be used for the surveys.
2. All vessels will travel no faster than 12 knots when going to and from the survey areas and, regardless of vessel size, and will travel at speeds below 10 knots in all Seasonal Management Areas and Dynamic Management Areas.

3. When conducting surveys, vessels would transit even slower (three to five knots) and would be producing sounds that would likely alert animals to the presence of the vessel well before the animals are within striking range such that they may avoid the vessel's path.
4. During all vessel operations (transits and active surveys), observers are required to lookout for and avoid approaching cetaceans and thus should be able to inform the vessel operators of the location of the animal to prevent a vessel strike.

For these reasons, it is extremely unlikely that a vessel associated with the surveys will strike an ESA-listed cetacean and, therefore, effects are discountable.

Effects to Benthic Habitat

Activities that disturb the sea floor will also affect benthic communities and can cause effects to listed species by reducing the numbers or altering the composition of the species upon which these species prey. Activities that may affect the sea floor and result in the loss of foraging resources for listed species are limited to vibracores and grab samples. Both of these survey methods will result in temporary disturbance of the benthos and a temporary loss of benthic resources. Effects to benthic resources and habitat will be restricted to very small-footprint locations (inches in diameter) within the study area where geotechnical samples will be taken. While the vibracore and grab sampler will take a portion of the benthos that will be brought onto the ship, because of the small size of the sample and the nature of the removal, there is no sediment plume associated with the sampling.

The vibracores and grab samples will affect an extremely small area (3-4 inches diameter) at each sampling location. While there will be some loss of benthic species at the sample sites, including potential forage items for listed species that feed on benthic resources, the amount of benthic resources potentially lost will be extremely small and limited to immobile individuals that cannot escape capture during sampling. The amount of potential forage lost for any benthic feeding species is extremely small, localized, and temporary. As such a small area will be disturbed and there will be a large distance between disturbed areas, recolonization is expected to be rapid. These temporary, isolated reductions in the amount of benthic resources are not likely to have a measurable adverse impact on any foraging activity or any other behavior of listed species; this is due to the small size of the affected areas and the temporary nature of any disturbance. As effects to listed species will be so small that they cannot be meaningfully measured, detected, or evaluated, effects are insignificant.

Conclusions

NMFS has reviewed BOEM's proposed action and concludes that activities to be carried out as described herein are not likely to adversely affect North Atlantic right whales, fin, sei, and sperm whales, any DPS of Atlantic sturgeon, the Gulf of Maine DPS of Atlantic salmon, Gulf sturgeon, giant manta ray, smalltooth sawfish, oceanic whitetip shark, Nassau grouper, loggerhead sea turtles, green sea turtles, Kemp's ridley, leatherback, or hawksbill sea turtles.

Reinitiation of consultation is required and shall be requested by BOEM or by NMFS where discretionary federal involvement or control over the action has been retained or is authorized by law and "(a) If the amount or extent of taking specified in the incidental take statement is exceeded; (b) If new information reveals effects of the action that may affect listed species or

critical habitat in a manner or to an extent not previously considered; (c) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or (d) If a new species is listed or critical habitat designated that may be affected by the identified action." For the activities considered here, no take is anticipated or exempted; take is defined in the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." If there is any incidental take of a listed species, reinitiation would be required. All observations of dead or injured listed species should be reported to us immediately.

Coordination with you regarding Essential Fish Habitat (EFH) was completed with our issuance of a letter addressed to you in November 2018. We look forward to continuing to work cooperatively with BOEM as these surveys move forward. Should you have any questions regarding this consultation, please contact Julie Crocker of my staff at (978)282-8480 or by e-mail (Julie.Crocker@noaa.gov).

Sincerely,

Michael Asaro
Acting Assistant Regional Administrator for
Protected Resources

CC: Piatkowski, BOEM
Boelke - F/NER4
Bernhart, SERO

File Code: Sec 7 BOEM OCS Sand Survey (2018)
PCTS: NER-2018-15093

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Endangered Species Act (ESA) Section 7 Consultation - FWS

United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT
WASHINGTON, DC 20240-0001

Mr. Leopoldo Miranda
Assistant Regional Director-Ecological Services
U.S. Fish and Wildlife Service - Southeast Region
1875 Century Boulevard
Atlanta, GA 30345-3319

AUG 16 2018

Mr. Ted Koch
Assistant Regional Director-Ecological Services
U.S. Fish and Wildlife Service - Southwest Region
P.O. BOX 1306
Albuquerque, New Mexico 87103-1306

Dear Mr. Miranda and Mr. Koch:

The Bureau of Ocean Energy Management (BOEM) is seeking your concurrence with our 'not likely to adversely affect' and 'no effect' determinations related to BOEM's proposed geophysical and geological (G&G) survey activities to support identification, delineation, monitoring, and scientific investigation of sand resources in the Atlantic and Gulf of Mexico Outer Continental Shelf (OCS). The proposed activities, funded or managed by BOEM, would occur from the state water boundary to 50 meter depths within the following BOEM planning areas: North Atlantic, Mid-Atlantic, South Atlantic, Straits of Florida, and the Eastern, Central, and Western Gulf of Mexico. The basis for these determinations is outlined in this letter and further described in the Environmental Assessment (EA) located on our website at: https://www.boem.gov/Regional-Projects/. This EA incorporates by reference, and updates as appropriate, the following documents prepared by BOEM in 2014 and 2017, which analyzed similar sand survey activities in the Atlantic and Gulf of Mexico:

BOEM. 2014. Proposed Geophysical and Geological Activities in the Atlantic OCS to Identify Sand Resources and Borrow Areas North Atlantic, Mid-Atlantic, and South Atlantic-Straits of Florida Planning Areas Final Environmental Assessment. OCS EIS/EA BOEM 2013-219. Herndon, VA. March 2014. 170 pp + apps.

BOEM. 2017. Gulf of Mexico OCS proposed geological and geophysical activities: Western, Central, and Eastern Planning Areas; final programmatic environmental impact statement. U.S. Dept. of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, New Orleans, LA. EIS/EA BOEM 2017-051. 792 pp. + apps.

The species analyzed represent a compilation of species identified through the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website. A similar request for concurrence is being sent to the National Marine Fisheries Service for species under their jurisdiction.

Proposed Action

In order to identify OCS sand resources and support both long-term and emergency planning goals, BOEM proposes to execute comprehensive sand survey activities in the Atlantic and Gulf of Mexico OCS. State-of-the-art technology and methods will be used to collect and analyze geophysical and geological data. A rigorous mitigation strategy to minimize environmental effects is included as a component of the proposed action (Appendix B). The proposed action would include three components: (1) reconnaissance-scale surveys to identify and delineate OCS sand resources; (2) site-specific, high-resolution geophysical surveys to further delineate borrow areas and investigate for the presence of objects of archaeological significance, munitions of explosive concern (MEC), and hard bottom or other sensitive benthic habitat in the vicinity of potential borrow areas; and (3) research and/or monitoring surveys to detect geologic and morphological changes in sand resource areas.

Two general survey types will be employed: geophysical surveys for mapping the geologic framework and seafloor condition and geological surveys to collect sediment samples and shallow sediment cores (20 ft [6.1 m] maximum length). The geophysical surveys obtain information about sedimentary architecture, shallow hazards (e.g., MEC or buried cables), archaeological resources, and sensitive benthic habitats and do not impact the seafloor; geological surveys collect information on sediment composition and textural properties and impact a small footprint of the seafloor at the location of the core. Detailed descriptions of the survey techniques and equipment types are provided in the EA (Appendix A).

Surveys would aim to decrease the overall number of vessel mobilizations and reduce redundant data collection. The survey design and selection of technologies, deployment modes, and timing would balance data quality needs and avoid and minimize potential environmental impacts. To the extent possible, BOEM proposes to use the least number of lowest-energy (and highest-frequency) acoustic sources to obtain the necessary geophysical data, thereby reducing potential for impacts to marine animals. Appendix A provides a more detailed characterization of these proposed sources and their sound propagation characteristics. No airguns or sparkers will be used.

Sand survey activities, whether reconnaissance or site-specific in nature, could be conducted simultaneously, or in sequence, depending upon the information needs, field conditions, and efficiency factors. On average, up to about 70 line-miles (113 km) of geophysical data could be collected per day resulting in up to 8,000-16,000 line-miles (12,875-25,750 line-km) of geophysical surveys for the entire study area. Approximately 15 vibracores per day per mobilization will be collected. Of the sediment samples, which are primarily used to ground-truth the geophysical data, it is anticipated that most would be vibracores, with a small portion being grab samples. All estimates are based on one vessel completing the surveys; however, more than one vessel could be used.

The study area lies within the Atlantic and Gulf of Mexico coastal waters out to 50 meters (m) (164 feet [ft]) deep. The surveys will primarily occur in the OCS; however, some surveys will extend into to state waters investigated through state cooperative agreements. Sand survey activities would not occur across the entire study area simultaneously but would be of limited spatial extent at any one time. The study area includes adjacent transit corridors used for vessel mobilization, demobilization, and access to support bases. Sensitive and protected areas, such as Cape Cod Bay, Stellwagen Bank National Marine Sanctuary, and Florida Keys National Marine Sanctuary, are specifically excluded.

Effects Determination

The mitigation and monitoring measures supporting the effects determinations in the table below are described in detail in Appendix B of the EA. The table below contains an overview of our effects analysis followed by a summary narrative of the reasons supporting BOEM's determinations. BOEM is applying proactive protective mitigation in order to ensure the potential for effects to ESA-listed species or designated critical are eliminated or minimized to the maximum extent possible.

Species	Listing Status[a]	Critical habitat in action area (Y/N)	Effects determination[b]. location within EA	Reasons for determination (mitigation and monitoring measures found in Section 3.4 of Appendix B)
West Indian manatee (*Trichechus manatus latirostris*)	T	Y	NLAA	Unlikely to occur within the offshore action area, limited acoustic footprint, limited nearshore vessel traffic, standard manatee mitigation measures (i.e., observers, vessel speed restrictions), majority of sound sources outside of hearing range, slow survey speed lowers strike risk
Red knot (*Calidris canutus rufa*); piping plover (*Charadrius melodus*); northern long-eared bat (Myotis septentrionalis)	T	N	NE	No plausible route of effect associated with the in-water acoustic footprint and associated noise impact,
Roseate tern (*Sterna dougallii dougallii*)	E (Northeast U.S. nesting Population), T (Western Hemisphere except Northeast U.S.)			
Bermuda petrel (*Pterodroma cahow*); Kirtland's warbler (*Dendroica kirtlandii*)	E			

[a] (E=endangered, T=threatened)
[b] (NLAA=Not likely to adversely effect, NE=No effect)

BOEM has determined that the proposed action is 'not likely adversely affect' the West Indian manatee given it is unlikely to occur in the proposed action area. All sand surveys will be conducted offshore of manatee habitat and distribution range; however, limited transit of survey vessels to and from port may occur within manatee habitat. In order to reduce strike risk, BOEM will require other

relevant standard manatee construction conditions be in place when operating within the species range. All vessels will follow routes of deep water whenever possible. Further, if utilized, the chirp towfish would be towed as closely to the seafloor as possible to further reduce the zone of ensonification and possible exposure.

Again, BOEM requests your concurrence with this determination in accordance with Section 7 of the Endangered Species Act within 30 days of receipt of this letter. If you have questions or need additional information, please contact Doug Piatkowski at 703-787-1833 or me at 703-787-1703.

Sincerely,

Jill K. Lewandowski
Chief, Division of Environmental Assessment

cc:

Mr. Craig Aubrey
US Fish and Wildlife Service
Endangered Species
5275 Leesburg Pike
Falls Church, VA 22041-3803

Mr. Jerry Ziewitz
US Fish and Wildlife Service
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Mr. Glenn Smith
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500 Gold Ave. SW 1306
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Hansen, Deena <deena.hansen@boem.gov>

Sand Survey Activities for BOEM's Marine Minerals Program - Atlantic and Gulf of Mexico

Smith, Glenn <glenn_s_smith@fws.gov> Mon, Aug 27, 2018 at 1:33 PM
To: "Piatkowski, Douglas" <douglas.piatkowski@boem.gov>
Cc: Jerry Ziewitz <jerry_ziewitz@fws.gov>, Deena Anderson <deena.hansen@boem.gov>, Craig Aubrey <craig_aubrey@fws.gov>, Delfinia Montano <delfinia_montano@fws.gov>

Hi Doug-

As we had previously discussed, for the Northeast Region, we reviewed and agree with your "NE" determinations for our species, but for policy and legal reasons, don't generally provide official concurrence on those determinations. So it seems like you would only need official concurrence for the manatee.

Please let me know if you have any questions.

Glenn
[Quoted text hidden]
--
Glenn S. Smith

300 Westgate Center Dr.
Hadley, MA 01035
413-253-8627

"Continuous improvement is better than delayed perfection." Mark Twain

"Better Conservation More Efficiently" Section 7(a)(1)
Proactive, landscape, level, strategic conservation!

Hansen, Deena <deena.hansen@boem.gov>

Fwd: Southeast Region Response on Request for Concurrence on Effect Determinations for Proposed BOEM Geophysical and Geological Survey Activities

Piatkowski, Douglas <douglas.piatkowski@boem.gov> Wed, Oct 10, 2018 at 10:18 AM
To: Deena Anderson <deena.hansen@boem.gov>, "Jessica Mallindine (Google Drive)" <jessica.mallindine@boem.gov>

See email below containing USFWS SE Region Concurrence.

---------- Forwarded message ---------
From: **Tawes, Robert** <robert_tawes@fws.gov>
Date: Wed, Oct 10, 2018 at 9:56 AM
Subject: Southeast Region Response on Request for Concurrence on Effect Determinations for Proposed BOEM Geophysical and Geological Survey Activities
To: Douglas Piatkowski <douglas.piatkowski@boem.gov>
Cc: Jack Arnold <jack_arnold@fws.gov>, Christine Willis <christine_willis@fws.gov>, Ziewitz, Jerry <jerry_ziewitz@fws.gov>

> Hi Doug, On August 27, 2018, we received your letter (attached) requesting concurrence on effects determinations for federally threatened and endangered species and critical habitat related to referenced survey activities at numerous marine locations along the eastern seaboard. As I mentioned in a voicemail I left you on Friday, we concur with the Bureau of Ocean Energy Management (BOEM) determination that the project "may affect, but is not likely to adversely affect" the West Indian Manatee. We likewise reviewed and agree with your "No Effect" determinations for the other species, but for policy and legal reasons, don't generally provide official concurrence on those determinations. No Effect determinations are the Action Agency's call and do not need to be reviewed by the Service.
>
> Thanks for the opportunity to review. If you have any questions or need additional information, please contact me at 404/679-7142

--
Rob W. Tawes
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Department of the Interior, Bureau of Ocean Energy Management Headquarters,
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Bureau of Ocean Energy Management
Division of Environmental Assessment
45600 Woodland Road, VAM-OEP

Coastal Zone Management Act (CZMA) – All State responses to BOEM Consistency Determinations (CDs)

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL
DIVISION OF CLIMATE, COASTAL, & ENERGY

DELAWARE COASTAL MANAGEMENT PROGRAM

100 W. WATER STREET, SUITE 7B
DOVER, DELAWARE 19904

Phone: (302) 739- 9283
http://de.gov/coastal

November 30, 2018

Leighann Budde Brandt
Marine Minerals Branch - Leasing Division
Bureau of Ocean Energy Management
45600 Woodland Road, VAM-LD
Sterling, VA 20166

RE: Delaware Coastal Management Program - Federal Consistency Determination Review for BOEM Sand Survey Activities Atlantic and Gulf of Mexico (FC 2018.0119)

Dear Ms. Brandt,

The Delaware Coastal Management Program (DCMP) of the Delaware Department of Natural Resources and Environment Control (DNREC) has completed its review of the above referenced project. This letter is in response to the federal consistency determination dated August 29, 2018 and received September 17, 2018, submitted by you on behalf of the Bureau of Ocean Energy Management's (BOEM) Marine Minerals Branch.

PROPOSED ACTION

The BOEM, Marine Minerals Branch is proposing to conduct geological and geophysical survey activities that support identification, delineation, monitoring, and scientific investigation of sand resources on the Atlantic and Gulf of Mexico Outer Continental Shelf. According to the Environmental Assessment drafted by BOEM, the proposed action would include three components: (1) reconnaissance-scale surveys to identify and delineate OCS sand resources; (2) site-specific, high-resolution geophysical surveys to further delineate borrow areas and investigate the presence of objects of archaeological significance, munitions of explosive concern (MEC), and hard bottom or other sensitive benthic habitat in the vicinity of potential borrow areas; and (3) research and/or monitoring surveys to detect geologic and morphological changes in sand resource areas.

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities located inside or outside of Delaware's federally approved coastal management area that can have reasonably foreseeable

effects on coastal uses and resources must be implemented in a manner consistent, to the maximum extent practicable, with the relevant enforceable policies of the DCMP including: coastal waters management, subaqueous lands and coastal strip management, living resources, air quality, historic and cultural areas management, pollution prevention, and coastal management coordination.

FEDERAL CONSISTENCY ANALYSIS

The Delaware CZM Program consists of a network of programs administered by several agencies. The DNREC DCMP coordinates the review of consistency determinations with agencies administering the enforceable and advisory policies of the program. The following agencies participated in this review:

DNREC, Division of Fish and Wildlife, Fisheries Section
DNREC, Division of Fish and Wildlife, Wildlife Species Conservation and Research Program
DNREC, Division of Watershed Stewardship, Shoreline and Waterway Management Section
DNREC, Division of Air Quality
Delaware Department of State (DOS), Division of Historical and Cultural Affairs

Please be advised that in addition to the survey requirements and mitigation measures outlined for the protection of living resources (including right whales), sensitive habitats, and historic site avoidances in Appendix B of BOEM's Marine Minerals Program Atlantic and Gulf of Mexico Draft Environmental Assessment, it would be preferable for the sand surveys to take place off the coast of Delaware from November 1 – April 30 to minimize impacts to sea turtles.

Additionally, please note that activities on the outer continental shelf off the coast of Delaware which require a temporary or permanent attachment to the seafloor may necessitate coordination with the Delaware Division of Air Quality (7 Del Admin Code 1150 and 40 CFR 55).

According to the information submitted, the proposed federal action is consistent with the enforceable policies of the Delaware CZM Program. The Delaware CZM Program has no objections with the determination.

PUBLIC PARTICIPATION

In accordance with 15 CFR §930.42, the public was invited to participate in the review of the BOEM's sand survey activities in the Atlantic and Gulf of Mexico. Public notice of this proposed action was published in the Delaware State News, The News Journal, and DNREC public notices list service from September 30, 2018 through October 19, 2018. No public comments were received in response to the public notice.

CONCURRENCE

Based on its review and pursuant to National Oceanic and Atmospheric Administration regulations (15 CFR 930), the DCMP concurs that BOEM's sand survey activities in the Atlantic and Gulf of Mexico, as proposed, is consistent to the maximum extent practicable with the Delaware CZM program.

Thank you for the opportunity to review and respond to BOEM's sand survey activities in the Atlantic and Gulf of Mexico. If you have any questions, please contact me or Jennifer Holmes of my staff at (302) 739-6377.

Sincerely,

Kimberly B. Cole, Administrator
Delaware Coastal Management Program

KBC/jlh

cc: Brian Cameron, Jr., BOEM
Jason Davis, DNREC – DFW
John Clark, DNREC - DFW
Mike Powell, DNREC – DWS
Mark Prettyman, DNREC - DAQ
Gwen Davis, DOS - DHCA
File FC 2018.0119

Fwd: [EXTERNAL] BOEM Sand Surveys - Delaware Federal Consistency

Brandt, Leighann <leighann.brandt@boem.gov> Wed, Nov 28, 2018 at 12:12 PM
To: Deena Hansen <deena.hansen@boem.gov>

fyi

---------- Forwarded message ---------
From: **Holmes, Jennifer L. (DNREC)** <Jennifer.Holmes@state.de.us>
Date: Wed, Nov 28, 2018 at 2:53 PM
Subject: [EXTERNAL] BOEM Sand Surveys - Delaware Federal Consistency
To: leighann.brandt@boem.gov <leighann.brandt@boem.gov>
Cc: Cameron, Jr., Brian <brian.cameronjr@boem.gov>, Scarborough, Bob W. (DNREC) <Bob.Scarborough@state.de.us>, Cole, Kimberly B. (DNREC) <Kimberly.Cole@state.de.us>

Dear Ms. Brandt,

Please find below draft wording for preferences/notations for the federal consistency decision letter for BOEM's Sand Surveys in the Atlantic and Gulf of Mexico. Please note that these are preferences/notations and are **not** conditions.

> *Please be advised that in addition to the survey requirements and mitigation measures outlined for the protection of living resources, sensitive habitats, and historic site avoidances in Appendix B of BOEM's Marine Minerals Program Atlantic and Gulf of Mexico Draft Environmental Assessment, it would be preferable for the sand surveys to take place off the coast of Delaware from November 1 – April 30 to minimize impacts to sea turtles.*

> *Additionally, please note that activities on the outer continental shelf off the coast of Delaware which require a temporary or permanent attachment to the seafloor may necessitate coordination with the Delaware Division of Air Quality (7 Del Admin Code 1150 and 40 CFR 55).*

The federal consistency decision letter will be sent to you via e-mail no later than 4:00 pm Friday, November 30, 2018. An original copy will be sent via US mail. Please feel free to contact me if you have any questions or concerns.

Thank you,
Jennifer Holmes

Jennifer L. Holmes

Federal Consistency Coordinator

Delaware Coastal Programs

DNREC, Division of Climate, Coastal, & Energy

100 W. Water St, Ste 7B

Dover, Delaware 19904

302-739-9283

http://www.dnrec.delaware.gov/coastal

--
Leighann Budde Brandt, P.G.
Coastal Geologist
Marine Minerals Branch - Leasing Division
Bureau of Ocean Energy Management
45600 Woodland Road, VAM-LD
Sterling, VA 20166
T: 703-787-1570
leighann.brandt@boem.gov
http://www.boem.gov/

FLORIDA DEPARTMENT OF
Environmental Protection

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

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

November 9, 2018

Mr. Michael Celata
Regional Director
Bureau of Ocean Energy Management
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd
New Orleans, Louisiana 70123-2394

RE: Bureau of Ocean Energy Management (BOEM) – Consistency Determination for Sand Survey Activities for BOEM's Marine Minerals Program: Atlantic and Gulf of Mexico (GM 623E)

Dear Mr. Celata:

The State of Florida has completed a review of the Consistency Determinations (CD) for Bureau of Ocean Energy Management's (BOEM) draft Environmental Assessment (EA) for the proposed Sand Survey Activities for BOEM's Marine Minerals Program – Atlantic and Gulf of Mexico (GOM). The state previously submitted comments regarding the EA on September 10, 2018. BOEM is responsible for managing the extraction of non-energy minerals including sand and gravel. The purpose of the proposed action is to conduct sand survey activities to identify, delineate, monitor, and research potential sand resources for future projects, facilitating access to and supporting management of Outer Continental Shelf (OCS) sand resources that may be needed in beach nourishment and coastal restoration projects.

Florida supports sand survey activities that help to locate offshore sand deposits important to beach and shoreline restoration. The 825 miles of pristine sandy coastline are one of the state's most valuable resources, important to Florida's economy and environment. Florida invests millions of dollars annually to protect, preserve and manage our valuable sandy beaches and adjacent coastal systems. The beach and dune system are often the first line of defense against storms, absorbing wave energy and reducing the damage to upland structures. The ability to maintain these beach systems is dependent on the increasingly limited sand resources that exist nearshore and offshore of the coast, forcing the use of sand from the OCS.

The proposed study area lies within the Atlantic and GOM coastal waters out to a 50-meter depth with addition of state waters investigated through state cooperative agreement. Sensitive and protected areas will be excluded, which includes the Florida Keys National Marine Sanctuary. The EA and CD provide an analysis to determine whether significant impacts on Atlantic and GOM resources could occur because of the proposed sand survey activities and specifies mitigation measures that would be implemented to avoid or minimize impacts to physical, biological or social/cultural resources. Prior to sand survey activities beginning, BOEM will coordinate with stakeholders to determine areas of greatest need. Following this coordination, detailed survey and sampling plans including defined geographic scope and timing will be developed prior to

undertaking any proposed activities and consultations. The protection of marine and coastal habitats, their associated species, and historical resources along Florida's coasts are critical to the state.

The Florida Department of Environmental Protection, designated as the State's lead coastal management agency pursuant to section 306(c) of the Coastal Zone Management Act, 16 U.S.C. section 1456(c), and section 380.22, Florida Statutes, hereby notifies BOEM that the state does not object to the consistency determinations for proposed geological and geophysical activities along the Gulf of Mexico and Atlantic coasts.

Additional comments from the Florida Department of State and Treasure Coast Regional Planning Council are enclosed for your consideration.

Thank you for the opportunity to review and we look forward to reviewing the final EA to ensure that Florida's resources will be protected. Should you have any questions, please contact Shana Kinsey-Carlsen at shana.kinsey@dep.state.fl.us or (850) 245-2185.

Sincerely,

Kevin Claridge, Director
Florida Coastal Office

Enclosure

cc: Helen Rucker, BOEM
Tershara Matthews, BOEM
Brian Cameron, BOEM
archaeology@boem.gov

FLORIDA DEPARTMENT of STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

Ms. Shana Kinsley-Carlsen
Department of Environmental Protection
3900 Commonwealth Boulevard, MS 235
Tallahassee, FL 32399-3000

September 27, 2018

RE: DHR Project File No.: 2018-4802
Draft EA – MMP Sand Survey Activities – Gulf of Mexico & Atlantic
SAI#: FL201809138411C & FL201809188434C

Dear Ms. Kinsley-Carlsen:

This office reviewed the referenced document to identify issues for possible concerns regarding impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*. Our review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966* as amended, Chapters 267 and 373, *Florida Statutes*, Florida's Coastal Management Program, and implementing state regulations, for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places*, or otherwise of historical, architectural, or archaeological value. The State Historic Preservation Officer is to advise and assist state and federal agencies when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

We reviewed the information submitted regarding the draft EA, and note that BOEM is seeking a wide range of information regarding resource assessment of all OCS areas in order to avoid, minimize or mitigate adverse effects on historic properties (specifically historic shipwrecks). Since measures consistent with NEPA and federal consistency requirements are in place for requisite site surveys to locate and evaluate historic sites and properties, and for the avoidance of adverse impacts to significant resources, this agency concurs that the proposed survey activities will have no adverse impact on historic properties.

If you have any questions, please contact Deena Woodward, Community Assistance Consultant, by email at *Deena.Woodward@dos.myflorida.com*, or by telephone at 850.245.6333 or 800.847.7278.

Sincerely,

Jason Aldridge
For

Timothy A. Parsons, Ph.D.
Director, Division of Historical Resources
& State Historic Preservation Officer

From:	Michael Busha
To:	Kinsey, Shana
Subject:	FW: SAI# FL201809138411C & FL201809188434 - Consistency Determinations for BOEM Draft Environmental Assessment Sand Survey Activities for BOEM's Marine Minerals Program: Atlantic and Gulf of Mexico;
Date:	Wednesday, October 17, 2018 11:07:25 AM
Attachments:	image003.png

Thank you for the opportunity to comment on the Draft Environmental Assessment. Below are Council comments:

Treasure Coast beaches represent a significant natural resource and an important component of the region's economy. Strategic Regional Policy Plan Policy 3.3.1.1 states that the Region's natural resources should be protected to ensure their continued existence for the benefit and enjoyment of future generations. While this action is considered consistent with that policy, Council would like to take this opportunity to renew previously expressed concerns on federal government policies for sand sources and beach renourishment. All seven counties in Southeast Florida rely on beach renourishment in some form or another to protect property and maintain the beach as an economic asset. At the same time, all seven counties are continuously confronted with the challenge of finding feasible and suitable sources of sand. Council recommends that BOEM take a regional approach to this issue and broaden the scope of the proposed study to consider creating a multi-year regional comprehensive plan for beach renourishment and identify long-term offshore resources for all counties in southeastern Florida. This includes working with Congress and the U.S. Army Corps of Engineers (Corps) to provide the Corps the authority to access and utilize non-domestic sand sources where they present a better, more sustainable alternative. Non-domestic sand sources that should be considered include the Bahamas, Turks & Caicos, Dominican Republic, and Belize. Additionally, consideration should be given to more sustainable solutions for beach erosion such as installation of permeable groins and other new technologies designed to reduce erosion and promote accretion of sand on the beaches. It is also recommended that prior to any use of the any offshore borrow sites for obtaining sand, it should be determined that coral reefs and other environmentally sensitive marine resources are not impacted by the sand collecting operation.

Michael J. Busha
Executive Director
Treasure Coast Regional Planning Council
421 SW Camden Avenue
Stuart, FL 34994
772.221.4060
mbusha@tcrpc.org

From: Kinsey, Shana [mailto:Shana.Kinsey@dep.state.fl.us]
Sent: Wednesday, September 19, 2018 4:27 PM
To: Phelps, Dan; Dow, Roxane; Deena Woodward; Shirley, Michael; Laakkonen, Keith; Walczak, Joanna;

Harper, Jennifer; Gregg, Lisa; fwcconservationplanningservices@myfwc.com; Arthur, Jonathan; KAL.KNICKERBOCKER@FRESHFROMFLORIDA.COM; Johnson, John S.; compliancepermits@dos.myflorida.com; Lazar, Ann; Taylor, David M.; DCPPermits@deo.myflorida.com; Markovich, Martin; kelley.smithburk@freshfromflorida.com; austin.mount@wfrpc.org; CRietow@thearpc.com; koons@ncfrpc.org; bteeple@nefrc.org; hharling@ecfrpc.org; sean@tbrpc.org; mwuerstle@swfrpc.org; Michael Busha; isabelc@sfrpc.com
Cc: Prado, Rebecca; Stahl, Chris; Claridge, Kevin
Subject: SAI# FL201809138411C & FL201809188434 - Consistency Determinations for BOEM Draft Environmental Assessment Sand Survey Activities for BOEM's Marine Minerals Program: Atlantic and Gulf of Mexico;
Importance: High

SAI# FL201809138411C – CD for BOEM's MMP Sand Survey Activities Draft EA – Gulf of Mexico

SAI# FL201809188434C - CD for BOEM's MMP Sand Survey Activities Draft EA – Atlantic

All:

Attached for your review are copies of Bureau of Ocean Energy Management's (BOEM) Consistency Determinations (CD) regarding the Draft Environmental Assessment (EA) for Sand Survey Activities for BOEM's Marine Minerals Program: Atlantic and Gulf of Mexico. The CDs evaluates the proposed future sand survey activities (geological and geophysical survey activities) as described in the Draft EA. There are two separate CD's: one for the Gulf of Mexico Planning Areas and one for the Atlantic Planning Areas and hoping for less confusion and duplicative reviews, I have sent them together.

As part of its National Environmental Policy Act responsibility, BOEM analyzed the potential environmental impacts of the proposed sand survey activities in the MMP Sand EA which is incorporated by reference in the attached CDs. The MMP Sand EA is available at https://www.boem.gov/MMP-Sand-Survey-Draft-EA-Final/.

BOEM developed the CDs according to the requirements of the Coastal Zone Management Act (CZMA) (16 U.S.C. §§ 1451-1464). BOEM determined whether the future conduct of reconnaissance level and site-specific surveys in the Gulf of Mexico and Atlantic Planning Areas to support coastal recovery/resiliency efforts related to ongoing sand needs will be consistent to the maximum extent practicable with the enforceable policies of Florida's approved coastal management program (16 U.S.C. § 1456(c)(l)(A)).

Please review the information provided for consistency with your agency's authorities under the Florida Coastal Management Program. Should you have any comments, they should be received by **Wednesday October 17, 2018**.

Should you have any questions, please contact me at Shana.Kinsey@dep.state.fl.us or (850) 245-2185.

Thank you in advance for your assistance.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION
ONE CONSERVATION WAY • BRUNSWICK, GA 31520 • 912.264.7218
COASTALGADNR.ORG

MARK WILLIAMS
COMMISSIONER

DOUG HAYMANS
DIRECTOR

October 19, 2018

Ms. Leighann Brandt
USDOI, BOEM Division of Environmental Assessment
Lieghann.brandt@boem.gov

RE: Consistency Determination: Sand Survey Activities for BOEM's Marine Minerals Program – Atlantic and Gulf of Mexico, DEA

Dear Ms. Brandt:

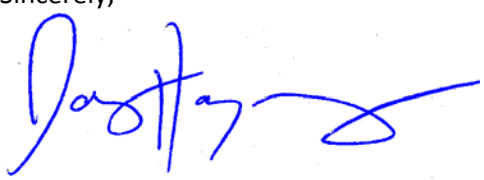
Staff of the Georgia Coastal Management Program (GCMP) have reviewed your letter dated August 29, 2018 and received September 18, 2018, the attached federal consistency determination under the Coastal Zone Management Act, and the attached draft environmental assessment (DEA) for Sand Survey Activities for Bureau of Ocean Energy Management (BOEM) Marine Minerals Program in the Atlantic and Gulf of Mexico.

The proposed action is to identify potential sand resources for projects as well as facilitate access to and support management of Outer Continental Shelf (OCS) sand resources that may be needed in beach nourishment and coastal restoration projects. Data will be collected in close coordination with or by States from 3 miles off the coast out to 50 meters deep.

Approximately 8,000 – 16,000 line-miles would be surveyed in one year and a total of 2,000 – 3,000 geological samples would be collected. On average up to about 70 line-miles of geophysical data would be collected per day that included approximately 15 vibracores and 50 benthic grabs. Vessels would range from approximately 28 ft. to 120 ft. and travel at 3-5 knots, but may travel 10-12 knots in transit. Approximately 70% - 85% of the survey work would be reconnaissance in nature and 15% - 30% would be site-specific, high-resolution surveys or associated with scientific investigation or project-specific monitoring. No airguns or sparkers would be used.

The proposed mitigation measures for Alternative A appear adequate to minimize potential impacts to marine mammals and sea turtles. The Program concurs with your consistency determination. This determination ensures that the proposed project has been designed to comply to the maximum extent practicable with the applicable enforceable policies of the Georgia Coastal Management Program. Please feel free to contact Kelie Moore or me if we can be of further assistance.

Sincerely,



Doug Haymans
Director

JOHN BEL EDWARDS
GOVERNOR

THOMAS F. HARRIS
SECRETARY

State of Louisiana

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF COASTAL MANAGEMENT

November 19, 2018

Helen Rucker
Chief, Environmental Assessment Section
Office of Environment (GM 623E)
Bureau of Ocean Energy Management,
Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard, New Orleans, LA
70123-2394.
Via e-mail: helen.rucker@boem.gov

RE: **C20180146**, Coastal Zone Consistency
Bureau of Ocean Energy Management (BOEM)
Direct Federal Action
Proposed Outer Continental Shelf sand survey activities for the Marine Minerals Program
Offshore, Louisiana

Dear Ms. Rucker:

The above referenced project has been reviewed for consistency with the Louisiana Coastal Resources Program in accordance with Section 307 (c) of the Coastal Zone Management Act of 1972, as amended. The project, as proposed in this application, is consistent with the LCRP.

If you have any questions concerning this determination please contact Jeff Harris of the Consistency Section at (225) 342-7949 or jeff.harris@la.gov.

Sincerely,

/S/ Charles Reulet
Administrator
Interagency Affairs/Field Services Division

CR/SK/jh

cc: Brian Cameron, BOEM

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
21 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0021

PAUL R. LEPAGE
GOVERNOR

PATRICK C. KELIHER
COMMISSIONER

November 29, 2018

Jill K. Lewandowski
Chief, Division of Environmental Assessment
United States Department of the Interior
Bureau of Ocean Energy Management
1849 C Street, NW
Washington, D.C. 20240-0001

RE: CZMA consistency; OCS sand survey activities

Dear Ms. Lewandowski:

I am writing in response to your letter dated August 29, 2018[1], which provided the Bureau of Ocean Energy Management's ("BOEM") determination pursuant to Section 307 of the Coastal Zone Management Act (16 U.S.C. §1456(c)) and its implementing regulations (15 C.F.R. Part 930, Subpart C) that its proposed program of sand survey activities involving reconnaissance-level and site specific surveys along the Atlantic and Gulf of Mexico coasts is consistent to the maximum extent practicable with the enforceable policies of Maine's coastal zone management program. As outlined in your letter and further detailed in the draft Environmental Assessment ("EA") provided as information in support of BOEM's consistency determination, these geological and geophysical survey activities are intended to support coastal recovery and resiliency efforts and to help identify OCS sand resources, and may be conducted in OCS areas adjacent to Maine's coastal waters in the future.

The Maine Departments of Environmental Protection ("DEP"), Marine Resources ("DMR"), and Inland Fisheries and Wildlife ("DIFW") have reviewed BOEM's determination and EA. On or about September 28, 2018, the State published notice of the opportunity to provide DEP written comments on BOEM's proposal.[2]

Based on review of BOEM's proposal by DEP, DMR, and DIFW, the State finds that BOEM's proposed survey program does not involve activities that trigger review under the enforceable policies of Maine's coastal management program. Consequently, further consistency review of BOEM's survey proposal is not required.

In many places along the Maine coast, there is a high density of lobster and other fishing gear in both federal and state waters, especially in the summer months; and thus, as BOEM and DMR staff have discussed, there is potential for conflicts with fishing gear and fishing activity in the potential survey

[1] The State received this letter on September 12, 2018. BOEM and the Maine Coastal Program agreed to extend the period for review of BOEM's consistency determination to December 3, 2018.
[2] DEP received no public comments on the proposal.

areas on the OCS off Maine, particularly if towed survey gear were used. To help ensure that any such potential conflicts are avoided and minimized, DMR has urged that BOEM coordinate closely with DMR, if and when survey activities off Maine are being actively designed and planned, so that DMR can assist BOEM in identifying where in the survey area(s) under consideration potential conflicts are reasonably foreseeable and ways to avoid and minimize them. In addition, DMR has asked that BOEM consult with and provide notice to DMR of the date(s), time(s), and location(s) of survey activities to be undertaken in OCS areas off Maine, preferably at least 45 days prior to their initiation, so that DMR can provide notice to the commercial fishing industry.

I'm pleased to note that, following discussion with DMR, BOEM staff has agreed to coordinate with and provide pre-survey notice as well as notice of suspension and completion of surveys to DMR in accordance with the attached communications protocol and related form. BOEM has played a valuable leadership role in regional ocean planning efforts in the Northeast that have emphasized the benefits and need and articulated shared federal-state objectives to improve cooperation and coordination among federal and state agencies regarding management of ocean activities. By working closely with DMR to help avoid and minimize conflicts between its survey activities and marine harvesting and other existing uses, BOEM will help make progress on this important policy issue. Please contact Sarah Cotnoir at DMR (207-624-6596; Sarah.Cotnoir@maine.gov), DMR's point of contact for pre-survey notice and related matters, to discuss any follow-up questions regarding such consultation.

I also note that BOEM's proposed survey program activities would involve measures to avoid, minimize, and monitor potential adverse effects on marine mammals and other marine resources as well as conflicts with navigation and commercial fishing, and urge BOEM to ensure full implementation of such measures.

Please note that related federal activities, such as dredging to remove and transport OCS sand resources and deposition of those materials as beach nourishment, if proposed at a later date (no such activities are proposed in BOEM's consistency determination), may require review for consistency with the enforceable policies of the Maine Coastal Program. We encourage BOEM to consult and coordinate with the State as early as practicable in its planning process for any such activities.

Please contact Todd Burrowes on my staff (207-287-1496; todd.burrowes@maine.gov) if you have questions or need additional information. Thanks for your consideration.

Sincerely,

Kathleen Leyden
Director, Maine Coastal Program

cc: w/attachments
Sarah Cotnoir, DMR
Denis-Marc Nault, DMR
Mark Stebbins, DEP
John Perry, DIFW

Protocol for Enhanced Federal-State Cooperation on
Public Outreach Regarding BOEM's Ocean Survey Activities

1. Pre-survey notice to DMR. Forty-five (45) days, or as soon as practicable, prior to initiation of field work for any survey related to identification or characterization of potential sand and gravel resources at a location on Outer Continental Shelf (OCS) adjacent to Maine's coastal waters, BOEM will provide the DMR contact person listed below a written notice of its plans to initiate that activity which contains the following:

- A brief description of the survey activity and contact information for BOEM staff who can provide additional information or respond to questions about it;
- A map that depicts the location(s) in which the activity will be conducted ("survey area"), including the entire route to the survey area that the research vessel intends to take, superimposed on an official NOAA-issued nautical chart at a resolution that depicts the entire route in relation to adjacent shorelines ("survey area map");
- the date(s) and time(s) of day during which the activity will occur;
- the type of in-water, towed, or submerged equipment that will be used; and
- the radio frequency and cell phone number that may be used to contact the survey vessel at sea.

DMR's contact person will share this notice with other appropriate personnel at DMR, including a marine patrol officer with supervisory responsibility for the survey area.

2. DMR review and coordination with BOEM. Within ten (10) days of receipt of BOEM's notice, DMR will provide BOEM any activity-specific comments it may have regarding potential conflicts between the proposed activity and in-water marine harvesting-related gear ("gear conflicts") due to the time of year, time of day, specific location, or other aspects of the activity as detailed in the notice, as well as activity-specific suggestions on how to avoid and minimize such gear conflicts. Promptly after receipt of any such comments, and if requested by DMR, BOEM and DMR will meet at a mutually agreeable time (by teleconference) to discuss potential modifications, if any, that may be made to the activity as proposed to avoid and minimize potential gear conflicts. BOEM will consider any such comments from DMR and, to the extent practicable, modify its proposed activity to avoid and minimize potential gear conflicts identified by DMR.

3. Notice to marine harvesters of initiation of survey-related activity. As soon as practicable, prior to initiation of the proposed activity BOEM will provide DMR pertinent updated information about the proposed activity if BOEM has made any modifications to the activity following consultation with DMR as outlined in section 2, above.

Using this information provided by BOEM, DMR will, if it deems appropriate, notify holders of marine harvesting licenses, the pertinent Lobster Zone Council(s), and any other pertinent species-specific

advisory council(s) in the survey area. DMR will determine the entities and individuals to be notified and whether to provide that notice electronically or by First Class mail.

4. Notice of changes in survey status. BOEM will notify the DMR staff contact by e-mail when a survey for which pre-survey notice has been provided is suspended, re-initiated, or completed. The DMR staff contact will provide this information to the marine patrol officer with supervisory responsibility for the survey area and other DMR personnel as appropriate.

5. Relationship to other activity-related requirements. BOEM and DMR recognize that the consultation and public outreach-related actions detailed in this protocol supplement and are in no way intended to and do not alter, supplant, or otherwise affect their obligations under applicable federal or state law, including but not limited to any requirements related to proposed modification of any activity for which the State of Maine has issued water quality certification pursuant to Section 401 of the Clean Water Act or federal consistency concurrence pursuant to Section 307 of the Coastal Zone Management Act.

DMR staff contact: Sarah Cotnoir, Resource Management Coordinator - 207.624.6596; Sarah.Cotnoir@maine.gov

Notification of BOEM Ocean Survey-Related Field Work

E-mail completed form to:
Sarah Cotnoir, Maine Department of Marine Resources, Sarah.Cotnoir@maine.gov, 45 days prior to start of the survey or related field work

Project and BOEM contact	
Dates of field work	
Time of day field work will occur	
Type of equipment used (specify if towed or hull mounted)	
Vessel name and type	
Contact info for vessel activity	VHF Channel: Cell phone:
Brief description of field work	
Insert a map that includes where the field work will be conducted, including the entire route to the survey area in reference to the shoreline that the vessel intends to take, superimposed on an official NOAA Chart	

STATE OF MISSISSIPPI
Phil Bryant
Governor

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES
Joe Spraggins, Executive Director

October 18, 2018

Michael A. Celata
Regional Director
Bureau of Ocean Energy Management
1201 Elmwood Park Boulevard GM 623E
New Orleans, LA 70123

Re: DMR-190076: Sand Survey Activities

Dear Mr. Cameron:

The Department of Marine Resources in cooperation with other state agencies is responsible under the Mississippi Coastal Program (MCP) for managing the coastal resources of Mississippi. Proposed activities in the coastal area are reviewed to ensure that the activities are in compliance with the MCP.

The Department has completed its review of the above-referenced proposal under the Coastal Zone Management Act of 1972 and the Coastal Zone Reauthorization Amendments of 1990 and as the lead coastal program agency for the State of Mississippi pursuant to 16 U.S.C. Section 1456(c) and Mississippi Code § 57-15-5, concurs with BOEM's consistency certification for this action.

The above granted consistency certification was based upon the plan presented. If you have any questions regarding this letter, please contact Kristyn McGuire with the Bureau of Wetlands Permitting at 228-523-4033 or kristyn.mcguire@dmr.ms.gov.

Sincerely,

Willa J. Brantley
Director, Bureau of Wetlands Permitting

WJB/km

CC: Brian Cameron Jr., BOEM

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

October 16, 2018

Leighann Budde Brandt, P.G.
Marine Minerals Branch – Leasing Division
Bureau of Ocean Energy Management
45600 Woodland Road, VAM-LD
Sterling, VA 20166

RE: File No. 2018-06; Atlantic OCS Geological and Geophysical Survey Activities

Dear Ms. Brandt:

The New Hampshire Coastal Program has received the Bureau of Ocean Energy Management's federal consistency determination and Draft Environmental Assessment for proposed geological and geophysical survey activities (sand survey activities) along the Atlantic Outer Continental Shelf, pursuant to Section 307(c)(1) of the Coastal Zone Management Act, 16 U.S.C. §1456(c)(1). After reviewing the proposed activities, we find them to be consistent, to the maximum extent practicable, with the enforceable policies of New Hampshire's federally approved coastal management program.

Should you have any questions, please feel free to contact me at (603) 559-0025.

Sincerely,

Christian Williams
Program Coordinator
New Hampshire Coastal Program

cc: Jill Lewandowski, BOEM
Doug Grout, NHF&G

STATE OF NEW YORK
DEPARTMENT OF STATE
ONE COMMERCE PLAZA
99 WASHINGTON AVENUE
ALBANY, NY 12231-0001
WWW.DOS.NY.GOV

ANDREW M. CUOMO
GOVERNOR

ROSSANA ROSADO
SECRETARY OF STATE

December 3, 2018

Leighann Budde Brandt, P.G.
Coastal Geologist
Marine Minerals Branch – Leasing Division
Bureau of Ocean Energy Management
45600 Woodland Road, VAM-LD
Sterling, VA 20166

Re: **F-2018-1014 (DA)** - U.S. Bureau of Ocean Energy Management (BOEM) submission of a consistency determination for the "Sand Survey Activities for BOEM's Marine Minerals Program Atlantic and Gulf of Mexico Draft Environmental Assessment."
Concurrence with Consistency Determination

Dear Leighann Budde Brandt:

The Department of State has completed its review of the BOEM's consistency determination regarding the Draft Environmental Assessment for "Sand Survey Activities for BOEM's Marine Minerals Program Atlantic and Gulf of Mexico," with the New York State Coastal Management Program.

Based upon the information submitted, the Department of State concurs with BOEM's consistency determination regarding this matter.

Please feel free to contact us at (518) 474-6000 or e-mail at: CR@dos.ny.gov and reference file no. F-2018-1014 (DA).

Sincerely,

Gregory L. Capobianco
Office of Planning, Development and
Community Infrastructure

ecc: Mike Snyder, NYS DOS Oceans and Great Lakes Program

NEW YORK STATE OF OPPORTUNITY. | Department of State

State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-2069

October 5, 2018

Jill K. Lewandowski, Chief
Division of Environmental Assessment
Bureau of Ocean Energy Management
Marine Minerals Program
45600 Woodland Road
Sterling, Virginia 20166

Re: Federal Consistency Determination for Sand Survey Activities - Atlantic and Gulf Coasts
CRMC File 2018-09-060

Dear Ms. Lewandowski,

The Rhode Island Coastal Resources Management Council (CRMC) is in receipt of your letter dated August 29, 2018 with attachments and received by this office via email on September 13, 2018. Your letter requests concurrence for the consistency determination (CD) for the proposed federal action by the Bureau of Ocean Energy Management (BOEM) to conduct a proposed program of sand survey activities (geological and geophysical surveys) along the Atlantic and Gulf coasts. The proposed survey activities will take place from the state/federal boundary to 50 meter depths on the Outer Continental Shelf (OCS). In support of the request BOEM has prepared a Draft Environmental Assessment (Draft EA) *Sand Survey Activities for BOEM's Marine Minerals Program - Atlantic and Gulf of Mexico* (BOEM 2018-033).

The proposed federal action includes: Alternative B that would place additional operational restrictions for geophysical surveys and time-area closures within the Atlantic; and Alternative C, which is the no action alternative. Included as part of the Draft EA were Appendices A (Description of Equipment), B (Survey Requirements and Mitigation Measures) and C (Essential Fish Habitat). BOEM has conducted an analysis of the proposed federal actions and reasonably foreseeable coastal effects with the enforceable polices of the State's Coastal Resources Management Program, and the analysis is provide as Table 1 with your filing. The relevant state enforceable policies applicable to the proposed federal action on the OCS, specifically within the State's current geographic location description, are contained within the CRMC's Ocean Special Area Management Plan (Chapter 11). These enforceable policies were recently codified under the new Rhode Island uniform code of state regulations as 650-RICR-20-05-11. See: https://rules.sos.ri.gov/regulations/part/650-20-05-11

The CRMC is the federally-designated coastal zone management agency for the State of Rhode Island, and thus has federal consistency review authority in this matter pursuant to the Coastal Zone Management Act (CZMA) at 16 USC §§ 1456(c), and the CZMA's implementing regulations at 15 CFR § 930 Subpart C – Consistency for Federal Agency Activities. CRMC staff have reviewed your filing and the Draft EA and note that any subsequent sand and gravel mining activities resulting from the identification of such resources by the surveys will be subject to any state requirements. See Table 1 at 2. .

Some of the mitigation measures within Appendix B include, but are not limited to, the following actions to minimize coastal effects:

- No hydrophone streamer or other source towline may exceed 100 m (328 ft) beyond the survey vessel, and during surveys, the operator must notify all fishing vessels observed within 2 km (6500 ft) of a geophysical survey to avoid potential entanglement in fishing gear.
- Notification of pending survey activities will be made in the U.S. Coast Guard Local Notice to Mariners no less than 48 hours prior to commencement of all geologic and geophysical survey activities.
- BOEM will adopt an avoidance strategy to mitigate potential effects to sensitive cultural resources and sensitive benthic communities and habitats. Among these measures, BOEM will require that a geological sampling plan be submitted by the contractor to BOEM, and will require that all potential archaeological resources be avoided by a minimum of 50 meters (164 feet). Contractors will also be required to report suspected historic and pre-contact archaeological resources to BOEM and take necessary precautions to protect said resources.

Your letter states that "the proposed activities will be consistent, to the maximum extent practicable, with state-identified enforceable policies of the Rhode Island Coastal Management Program." See BOEM letter at 1. Furthermore, the proposed federal action includes "a rigorous mitigation strategy to minimize environmental effects" as a component of the proposed action. See Draft EA at 4.

Therefore, based on the filings with this office the CRMC hereby concurs that the proposed BOEM program of sand survey activities (geological and geophysical surveys) for Alternatives A or B that may be conducted within the State's GLD to be consistent to the maximum extent practicable with the federally approved Rhode Island Coastal Resources Management Program, the Ocean Special Area Management Plan (650-RICR-20-05-11) and the enforceable policies and regulations therein. The CRMC is issuing this determination in accordance with 15 CFR § 930.41. Any substantial change to the proposed activity, as detailed in the Draft EA and the materials filed by BOEM, following the issuance of this concurrence may require a separate CZMA review by the CRMC pursuant to 15 CFR § 930.46.

Please contact me at 401-783-3370 or email jwillis@crmc.ri.gov should you have any questions or require further assistance.

Sincerely,

Jeffrey M. Willis, Deputy Director,
Coastal Resources Management Council

/lat

cc: Grover J. Fugate, CRMC Executive Director
David Beutel, CRMC Aquaculture Coordinator
James Boyd, CRMC Policy Analyst
David Reis, CRMC Environmental Scientist
Danni Goulet, CRMC Marine Infrastructure Coordinator
David Kaiser, NOAA Senior Policy Analyst

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 1111 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

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

November 13, 2018

Ms. Leighann Budde Brandt, P.G.
Marine Minerals Branch - Leasing Division
Bureau of Ocean Energy Management
45600 Woodland Road, VAM-LD
Sterling, Virginia 20166

RE: Federal Consistency Determination, Sand Survey Activities for BOEM's Marine Minerals Program, Bureau of Ocean Energy Management, DEQ 18-138F

Dear Ms. Brandt:

The Commonwealth of Virginia has completed its review of the Federal Consistency Determination (FCD) for the above-referenced project. The Department of Environmental Quality (DEQ) is responsible for coordinating Virginia's review of federal consistency documents and responding to appropriate officials on behalf of the Commonwealth. This letter is in response to your submission dated August 29, 2018 (received September 17, 2018), requesting the state's concurrence with the FCD prepared by the Bureau of Ocean Energy Management for the proposed activity. The following agencies participated in this review:

Department of Environmental Quality
Department of Game and Inland Fisheries
Department of Conservation and Recreation
Marine Resources Commission
Department of Health

In addition, the Department of Historic Resources, Virginia Institute of Marine Science, and the Hampton Roads and Accomack-Northampton Planning District Commissions were invited to comment on the proposed project.

PROJECT DESCRIPTION

The Bureau of Ocean Energy Management (BOEM) proposes to conduct sand survey activities (geological and geophysical survey activities) along the Atlantic and Gulf of Mexico coasts, including the Outer Continental Shelf (OCS) off Virginia. The purpose of the proposed action is to identify potential sand resources for projects as well as

facilitate access to and support management of OCS sand resources that may be needed in beach nourishment and coastal restoration projects. BOEM proposes to conduct:

1. reconnaissance-scale surveys to identify and delineate OCS sand resources;
2. site-specific, high-resolution geophysical surveys to further delineate borrow areas and investigate the presence of objects of archaeological significance, munitions of explosive concern (MEC), and hard bottom or other sensitive benthic habitat in the vicinity of potential borrow areas; and
3. research and/or monitoring surveys to detect geologic and morphological changes in sand resource areas.

Two general survey types would be employed:

1. geophysical surveys for mapping the geologic framework and seafloor condition and
2. geological surveys to collect sediment samples and shallow sediment cores (20 feet maximum length).

The least number of lowest-energy (and highest-frequency) acoustic sources would be used to obtain the necessary geophysical data, thereby reducing the potential for impacts to marine animals. No airguns or sparkers would be used. For sediment samples, approximately 15 vibracores and up to 50 benthic grabs per day could be collected. The proposed sand survey activities will take place from the state/federal boundary to 50 meter depths.

PUBLIC PARTICIPATION

In accordance with 15 CFR §930.2, the public was invited to participate in the review of the FCD. Public notice of this proposed action was published in OEIR's Program Newsletter and on the DEQ website from October 4, 2018 through October 24, 2018. No public comments were received in response to the notice.

FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT

Pursuant to the Coastal Zone Management Act of 1972 (§ 1456(c)), as amended, and the federal consistency regulations implementing the CZMA (15 CFR Part 930, Subpart C, § 930.30 *et seq.*) federal actions that can have reasonably foreseeable effects on Virginia's coastal uses or resources must be conducted in a manner which is consistent to the maximum extent practicable with the Virginia Coastal Zone Management (CZM) Program. The Virginia CZM Program is comprised of a network of programs administered by several agencies. In order to be consistent with the Virginia CZM Program, the federal agency must obtain all the applicable permits and approvals listed under the enforceable policies of the Program prior to commencing the activities.

FEDERAL CONSISTENCY CONCURRENCE

Based on our review of the FCD and the comments submitted by agencies administering the enforceable policies of the Virginia CZM Program, DEQ concurs that the proposed action is consistent to the maximum extent practicable with the Virginia CZM Program. If, prior to implementation, the proposed activities should change significantly and any of the enforceable policies of the Virginia CZM Program would be affected, pursuant to 15 CFR, Part 930, Subpart C, §930.46(a), BOEM must submit supplemental information to DEQ for review and approval. Other state approvals which may apply to this action are not included in this consistency concurrence. Therefore, BOEM must ensure that the proposed activities are conducted in accordance with all applicable federal, state, and local laws and regulations.

FEDERAL CONSISTENCY ANALYSIS

According to information in the FCD, the proposed action would have no effect on the following enforceable policies of the Virginia CZM Program: subaqueous lands management, wetlands management, dunes management, nonpoint source pollution control, shoreline sanitation, and coastal lands management. The agencies of the Commonwealth that are responsible for the administration of the enforceable policies of the Virginia CZM Program generally agree with the determination. BOEM must ensure that the proposed action is consistent with the policies. In addition, in accordance with 15 CFR, Subpart C, §930.39(c), BOEM considered the effects of the propose action on the advisory policies of the CZM Program and found it consistent with those policies. The analysis which follows responds to the discussion of the enforceable policies of the Virginia CZM Program that apply to this project and review comments submitted by agencies that administer the enforceable policies.

1. Fisheries Management. According to the FCD (page 1), impact-producing factors include: (1) active sound sources (i.e., electromechanical sources [e.g., boomer and chirp sub-bottom profilers, side-scan sonars, and single beam, interferometric, or multi-beam depth sounders]) and vessel and equipment noise, including vibracoring; (2) vessel presence and traffic; (3) vessel waste and accidental discharge (including marine trash); and (4) seafloor disturbance. Cumulative impacts upon fish are expected to be negligible, with the exception of minor potential impacts from vessel strikes or fuel spills.

1(a) Agency Jurisdiction. The fisheries management enforceable policy is administered by the Virginia Marine Resources Commission (VMRC) (Virginia Code §28.2-200 to §28.2-713) and the Department of Game and Inland Fisheries (DGIF) (Virginia Code §29.1-100 to §29.1-570). In addition, the Virginia Department of Health (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.

1(b) Agency Findings.

(i) Virginia Marine Resources Commission

VMRC staff is concerned about the use of geophysical/seismic studies in state and adjacent waters which could impact important finfish, crab, or shellfish resources. While VMRC has no objection to BOEM's consistency findings for Alternative A (Proposed Action), Alternative B may be preferable as it further minimizes impacts to important natural resources as it would prevent simultaneous deployment and geophysical and geological data collection, and when sampling, avoids unnecessary seafloor disturbance. The single deployment of survey methods, in addition to the avoidance of identified Habitat Areas of Particular Concern (HAPCs), would allow more opportunity for sound sensitive species to leave the area.

(ii) Department of Game and Inland Fisheries

DGIF defers the state's concurrence to VMRC, since the project area is located within marine waters.

(iii) Virginia Department of Health Division of Shellfish Sanitation

VDH-DSS finds that the project will not affect shellfish growing waters.

1(c) Conclusion. The proposed activity is consistent to the maximum extent practicable with the fisheries management enforceable policy of the Virginia CZM Program.

For additional information, contact VMRC, Tony Watkinson at (757) 247-2250, and/or DGIF, Amy Ewing at (804) 367-2211.

2. Subaqueous Lands Management. According to the FCD (page 2), the proposed action consists of reconnaissance studies over large areas and potential site-specific sampling to determine whether identified sand resources are of sufficient quality and quantity to warrant further exploration. However, the document states that the potential study area is not in close proximity to state-owned subaqueous lands. The proposed sand survey activities will take place from the state/federal boundary to 50 meter depths.

2(a) Agency Jurisdiction. The management program for subaqueous lands establishes conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, tidal wetlands, adjacent or nearby properties, anticipated public and private benefits, and water quality standards established by the Department of Environmental Quality. The program is administered by the Virginia Marine Resources Commission (Virginia Code §28.2-1200 to §28.2-1213).

2(b) Agency Findings. VMRC finds that the proposed federal activity would not require a permit from the agency, since no fill of state-owned submerged lands is proposed. However, survey activities may occur within state waters (shoreline to 3 nautical miles).

2(c) Recommendation. BOEM should inform and coordinate all surveying activities proposed in state waters with VMRC.

2(d) Conclusion. The proposed action is consistent to the maximum extent practicable with the subaqueous lands management enforceable policy of the Virginia CZM Program.

3. Point Source Pollution Control. The FCD (page 3), states that all sand survey activities will occur under a contractor-developed marine pollution control plan. The contractor must prepare for and take all necessary precautions to prevent discharges of waste or hazardous materials that may impair water quality. In the event of such an occurrence, notification and response will be in accordance with applicable requirements of National Oil and Hazardous Substances Pollution Contingency Plan (40 C.F.R. Part 300).

3(a) Agency Jurisdiction. The point source program is administered by the State Water Control Board (DEQ) pursuant to Virginia Code §62.1-44.15. Point source pollution control is accomplished through the implementation of: (1) the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered in Virginia as the Virginia Pollutant Discharge Elimination System (VPDES) permit program; and (2) the Virginia Water Protection (VWP) Permit program administered by DEQ (Virginia Code §62.1-44.15:20 et seq.) and Water Quality Certification pursuant to Section 401 of the Clean Water Act.

3(b) Agency Findings. The VWP Permit Program at the DEQ Tidewater Regional Office (TRO) did not indicate that project activities would not require VWP Permit review.

3(c) Conclusion. The activities are consistent to the maximum extent practicable with the point source pollution control enforceable policy of the Virginia CZM Program, provided the project scope does not change.

For additional information and coordination, contact DEQ-TRO, Jeffrey Hannah at (757) 518-2146.

ADDITIONAL ENVIRONMENTAL CONSIDERATIONS

In addition to the enforceable policies of the Virginia CZM Program, comments were also provided with respect to other applicable requirements and recommendations. The project proponent must ensure that this project conducted in accordance with all applicable federal, state, and local laws and regulations.

1. Natural Heritage Resources.

1(a) Agency Jurisdiction.

(i) *The Virginia Department of Conservation and Recreation's (DCR) Division of Natural Heritage (DNH).*

DNH's mission is conserving Virginia's biodiversity through inventory, protection and stewardship. The Virginia Natural Area Preserves Act (Virginia Code §10.1-209 through 217), authorizes DCR to maintain a statewide database for conservation planning and project review, protect land for the conservation of biodiversity, and protect and ecologically manage the natural heritage resources of Virginia (the habitats of rare, threatened and endangered species, significant natural communities, geologic sites, and other natural features).

(ii) *The Virginia Department of Agriculture and Consumer Services (VDACS).*

The Endangered Plant and Insect Species Act of 1979 (Virginia Code Chapter 39 §3.1-1020 through 1030) authorizes VDACS to conserve, protect and manage endangered and threatened species of plants and insects. Under a Memorandum of Agreement established between VDACS and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species.

1(b) Agency Findings.

(i) Natural Heritage Resources

According to the information currently in DCR files, natural heritage resources have not been documented within two miles of the project boundary. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

(ii) Protected Marine Species

DCR-DNH finds that there is the potential for several state- and federally-listed species including marine mammals, sea turtles, and marine/coastal birds to occur in the project area.

(iii) State Natural Area Preserves

DCR-DNH finds that there are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

(iv) State-Listed Plants and Insect Species

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

1(c) Recommendations.

(i) Protected Marine Species

Due to the legal status of these species, DCR-DNH recommends coordination with the National Marine Fisheries Service (NMFS), DGIF, and the U.S. Fish and Wildlife Service (USFWS) to ensure compliance with protected species legislation.

(ii) Natural Heritage Resources

Contact DCR-DNH to secure updated information on natural heritage resources if the scope of the project changes and/or six months has passed before it is utilized. New and updated information is continually added to the Biotics Data System.

2. Wildlife Resources and Protected Species.

2(a) Agency Jurisdiction. The Virginia 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. Code §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*.

2(b) Agency Findings. DGIF finds that listed fishes, sea turtles, marine mammals, and shorebirds occur in the project area.

2(c) Recommendations. DGIF recommends that BOEM continue to coordinate with the USFWS and the NOAA Fisheries Service regarding protection of listed fishes, sea turtles, marine mammals, and shorebirds.

For additional information, contact DGIF, Amy Ewing at (804) 367-2211.

REGULATORY AND COORDINATION NEEDS

1. State Subaqueous Lands. BOEM must coordinate any surveying activities proposed in state waters with VRMC, Tony Watkinson at (757) 247-2250 or tony.watkinson@mrc.virginia.gov.

2. Natural Heritage Resources. Contact DCR-DNH, Rene Hypes at (804) 371-2708, to secure updated information on natural heritage resources if the scope of the project changes and/or six months pass before the project is implemented, since new and updated information is continually added to the Biotics Data System.

Thank you for the opportunity to comment on the FCD for Sand Survey Activities for BOEM's Marine Mineral Program in the OCS off Virginia. The detailed comments of reviewing agencies are attached for your review. Please contact me at (804) 698-4204 or John Fisher at (804) 698-4339 for clarification of these comments.

Sincerely,

Bettina Rayfield, Program Manager
Environmental Impact Review and Long-Range Priorities

Enclosures

Ec: Tony Watkinson, VMRC
Lauren Pudvah, VMRC
Amy Ewing, DGIF
Robbie Rhur, DCR
Emily Hein, VIMS
Roger Kirchen, DHR
Ben McFarlane, HRPDC
Elaine Meil, A-NPDC
Leighann Budde Brandt, BOEM

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
ENVIRONMENTAL IMPACT REVIEW COMMENTS

10/29/2018

PROJECT NUMBER: 18-138F

PROJECT TITLE: Sand Survey Activities for BOEM's Marine Minerals Program

As Requested, TRO staff has reviewed the supplied information and has the following comments:

Petroleum Storage Tank Cleanups:
No comments.

Petroleum Storage Tank Compliance/Inspections:
No comments.

Virginia Water Protection Permit Program (VWPP):
Based on the information submitted, the proposed activities will only impact offshore tidal subaqueous bottom by taking vibracore and benthic grab samples for sand surveys. Provided the project scope doesn't change, the project is consistent with the VWP program.

Air Permit Program :
No Comments

Water Permit Program :
No comments.

Waste Permit Program :
No comment at this time. Contact Sean Priest at 757-518-2141 or jonathan.priest@deq.virginia.gov if you require additional information.

Storm Water Program:
No comments.

The staff from the Tidewater Regional Office thanks you for the opportunity to provide comments.

Sincerely,

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
ENVIRONMENTAL IMPACT REVIEW COMMENTS

10/29/2018

PROJECT NUMBER: 18-138F

PROJECT TITLE: Sand Survey Activities for BOEM's Marine Minerals Program

Cindy Robinson
Environmental Specialist II
5636 Southern Blvd.
VA Beach, VA 23462
(757) 518-2167
Cindy.Robinson@deq.virginia.gov

COMMONWEALTH of VIRGINIA

Marine Resources Commission
2600 Washington Avenue
Third Floor
Newport News, Virginia 23607

Matthew J. Strickler
Secretary of Natural Resources

Steven G. Bowman
Commissioner

October 23, 2018

Department of Environmental Quality
Attn: John Fisher
1111 East Main St.
Richmond, VA 23219

Re: Federal Consistency Determination
Sand Survey Activities for BOEM's Marine Minerals Program

Dear Mr. Fisher:

This will respond to the request for comments regarding the Federal Consistency Determination for the Sand Survey Activities for Bureau of Ocean Energy Management's (BOEM) Marine Minerals Program project (DEQ #18-138F). Specifically, the BOEM has proposed to conduct: (1) reconnaissance-scale surveys to identify and delineate OCS sand resources; (2) site-specific, high-resolution geophysical surveys to further delineate borrow areas and investigate the presence of objects of archaeological significance, munitions of explosive concern (MEC), and hard bottom or other sensitive benthic habitat in the vicinity of potential borrow areas; and (3) research and/or monitoring surveys to detect geologic and morphological changes in sand resource areas.

We reviewed the provided documents and found the proposed federal activity would not require a permit from the Virginia Marine Resources Commission's (Commission) since no fill of state-owned submerged lands is proposed. However, the project may contain survey activities within the Commonwealth's state waters (shoreline to 3 nautical miles). As such, BOEM should inform and coordinate all surveying activities proposed in-state waters with the Commission. Please be advised that the Commission pursuant to Chapter 12, 13, & 14 of Title 28.2 of the Code of Virginia administers permits required for submerged lands, tidal wetlands, and beaches and dunes.

While we have no objection to the consistency findings provided by the applicant for option A, option B may be preferable as it further minimizes impacts to important natural resources. Commission staff are concerned about the use of geophysical/seismic studies in State and adjacent waters which could impact important finfish, crab, or shellfish resources. Option B would prevent simultaneous deployment and geophysical and geological data collection, and when sampling, avoids unnecessary seafloor disturbance. The single deployment of survey methods in addition to the avoidance of identified Habitat Areas of Particular Concern (HAPCs), would allow more opportunity for sound sensitive species to leave the area.

Should you have any questions please contact me at (757) 247- 2250 or by email at tony.watkinson@mrc.virginia.gov. Thank you for the opportunity to comment.

Sincerely,

Tony Watkinson
Chief, Habitat Management Division

TW/lrp
HM

COMMONWEALTH of VIRGINIA
DEPARTMENT OF HEALTH
DIVISION OF SHELLFISH SANITATION

Marissa J. Levine, MD, MPH, FAAFP
State Health Commissioner

109 Governor Street, 6th Floor
P.O. Box 2448
Richmond, Virginia 23218

Ph: 804-864-7487
Fax: 804-864-7481

MEMORANDUM

DATE: 10/9/2018

TO: John E. Fisher
Department of Environmental Quality

FROM: B. Keith Skiles, MPH, Director
Division of Shellfish Sanitation

SUBJECT: Sand Survey Activities for BOEM's Marine Minerals Program

City / County: Virginia

Waterbody: Atlantic Ocean

Type: ☐ VPDES ☐ VMRC ☐ VPA ☐ VWP ☐ JPA ☑ Other: Environmental assesment

Application / Permit Number: 18-138F

☑ The project will not affect shellfish growing waters.

☐ The project is located in or adjacent to approved shellfish growing waters, however, the activity as described will not require a change in classification.

☐ The project is located in or adjacent to condemned shellfish growing waters and the activity, as described, will not cause an increase in the size or type of the existing closure.

☐ The project will affect condemned shellfish waters and will not cause an increase in the size of the total condemnation. However, a prohibited area (an area from which shellfish relay to approved waters for self-purification is not allowed) will be required within a portion of the currently condemned area. See comments.

☐ A buffer zone (including a prohibited area) has been previously established in the vicinity of this discharge, however, the closure will have to be revised. Map attached.

☐ This project will affect approved shellfish waters. If this discharge is approved, a buffer zone (including a prohibited area) will be established in the vicinity of the discharge. Map attached.

☐ Other.

ADDITIONAL COMMENTS:

Area #:

ACW

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director

Rochelle Altholz
Deputy Director of Administration and Finance

Russell W. Baxter
Deputy Director of Dam Safety & Floodplain Management and Soil & Water Conservation

Thomas L. Smith
Deputy Director of Operations

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

MEMORANDUM

DATE: October 24, 2018

TO: John Fisher, DEQ

FROM: Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT: DEQ 18-138F, BOEM Sand Survey Activities

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in our files, natural heritage resources have not been documented within two miles of the project boundary. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

There is potential for several state and federally-listed species including marine mammals, sea turtles, and marine/coastal birds to occur in the project area. Due to the legal status of these species, DCR-DNH recommends coordination with the National Marine Fisheries Service (NMFS), the Virginia Department of Game and Inland Fisheries (VDGIF), and the United States Fish and Wildlife Service (USFWS) to ensure compliance with protected species legislation.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The VDGIF maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov.

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

Cc : Amy Ewing, VDGIF
David O'Brien, NMFS
Troy Andersen, USFWS

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

ESSLog# 39148_18-138F_BOEMSandSurveys_DGIF_AME20181026

1 message

Ewing, Amy <amy.ewing@dgif.virginia.gov>
To: John Fisher <john.fisher@deq.virginia.gov>

Fri, Oct 26, 2018 at 2:38 PM

John,
We recommend this project continue to be closely coordinated with the USFWS and NOAA Fisheries Service regarding protection of listed fishes, sea turtles, marine mammals, and shorebirds.

We defer consistency to MRC, as this project area is located within marine waters.

Thanks, Amy

Amy Ewing
Environmental Services Biologist
Manager, Fish and Wildlife Information Services
P 804.367.2211
Virginia Department of Game & Inland Fisheries
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228
www.dgif.virginia.gov

Commonwealth of Virginia

Fisher, John <john.fisher@deq.virginia.gov>

Re: NEW PROJECT BOEM Sand Survey Activities, DEQ #18-138F

1 message

Warren, Arlene <arlene.warren@vdh.virginia.gov> Wed, Oct 24, 2018 at 4:48 PM
To: John Fisher <john.fisher@deq.virginia.gov>

Project Name: Sand Survey Activities for BOEM's Marine Minerals Program
Project #: 18-138 F
UPC #: N/A
Location: Virginia Shores

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility.**

There are no public groundwater wells within a 1-mile radius of the project site.

There are no surface water intakes located within a 5-mile radius of the project site.

The project is not within the watershed of any public surface water intakes.

There are no apparent impacts to public drinking water sources due to this project.

- No comments were received from the Office of Environmental Health Services, Division of Shellfish Sanitation Mr. Keith Skiel.

The Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

Best Regards,

Arlene Fields Warren

GIS Program Support Technician

Office of Drinking Water

Virginia Department of Health

109 Governor Street

Richmond, VA 23219

(804) 864-7781

On Tue, Sep 25, 2018 at 10:42 AM Fulcher, Valerie <valerie.fulcher@deq.virginia.gov> wrote:

> **Good morning - this is a new OEIR review request/project:**