

**Finding of No Historic Properties Affected
For the
Issuance of Commercial Leases within the Delaware Wind Energy Area
For Wind Energy Development on the Outer Continental Shelf
under the “Smart from the Start” Initiative**

Finding

APR 26 2012

The Bureau of Ocean Energy Management (BOEM) has made a Finding of No Historic Properties Affected for this undertaking. Through lease stipulations, BOEM will require the lessee to avoid, during geotechnical (sub-bottom) sampling activities, any potential historic properties identified through high-resolution geophysical surveys.

Documentation in Support of the Finding

I. Description of the Undertaking

Background

The Energy Policy Act of 2005, Pub. L. No. 109-58, added Section 8(p)(1)(C) to the Outer Continental Shelf (OCS) Lands Act (OCSLA), which grants the Secretary of the Interior the authority to issue leases, easements, or rights-of-way on the OCS for the purpose of renewable energy development, including wind energy development. See 43 U.S.C. § 1337(p)(1)(C). The Secretary delegated this authority to the former Minerals Management Service (MMS), now BOEM. On April 22, 2009, BOEM promulgated final regulations implementing this authority at 30 CFR Part 585.

Under the renewable energy regulations, the issuance of leases and subsequent approval of wind energy development on the OCS is a staged decision-making process. A commercial lease gives the lessee the exclusive right to subsequently seek BOEM approval for the development of the leasehold. The lease does not grant the lessee the right to construct any facilities; rather, the lease grants the lessee the right to use the leased area to develop its plans. *See* 30 CFR 585.600 and 585.601.

The next stage of the process is the submission of a site assessment plan (SAP), which contains the lessee’s detailed proposal for the construction of a meteorological tower and/or the installation of meteorological buoys on the leasehold. *See* 30 CFR 585.605 - 585.618. The lessee’s SAP must be approved by BOEM before it conducts these “site assessment” activities on the leasehold. BOEM may approve, approve with modification, or disapprove a lessee’s SAP. *See* 30 CFR 585.613.

The final stage of the process is the submission of a construction and operations plan (COP), a detailed plan for the construction and operation of a wind energy project on the lease. *See* 30 CFR 585.620-585.638. BOEM approval of a COP is a precondition to the construction of any wind energy facility on the OCS. *See* 30 CFR 585.628. As with a

SAP, BOEM may approve, approve with modification, or disapprove a lessee's COP. See 30 CFR 585.628.

The regulations also require that a lessee provide the results of surveys with its SAP and COP for the areas affected by the activities proposed in each plan (see 30 CFR 585.610(b) and 585.626, respectively), including the results of a shallow hazards survey, geological survey, geotechnical survey, and archaeological resource identification survey. BOEM refers to these surveys as "site characterization" activities and provides guidelines for the submission of the results of these activities. See also *Guidelines for Providing Geological and Geophysical, Hazards, and Archaeological Information Pursuant to 30 CFR Part 585* at: <http://www.boem.gov/Renewable-Energy-Program/Regulatory-Information/GGARCH4-11-2011-pdf.aspx>, which advise lessees to survey the entirety of the area they propose to impact.

On November 23, 2010, Secretary of the Interior Ken Salazar announced the "Smart from the Start" Atlantic wind energy initiative to facilitate the responsible development of wind energy on the Atlantic OCS. This initiative calls for the identification of areas of the Atlantic OCS that appear most suitable for commercial wind energy activities, while presenting the fewest apparent environmental and user conflicts. These areas are known as Wind Energy Areas (WEAs). In consultation with other Federal agencies, federally-recognized tribes, and state and local governments, through BOEM's intergovernmental renewable energy task forces, BOEM identified WEAs offshore New Jersey, Delaware, Maryland and Virginia. BOEM prepared a single environmental assessment (EA) for the next two stages of its wind energy program (the issuance of leases and the approval of SAPs) for these four WEAs, pursuant to the National Environmental Policy Act (NEPA) (42 USC § 4321 et seq.), and published a Finding of No Significant Impact (FONSI) as a result (USDOJ, BOEM, 2012). Regarding impacts to cultural resources, the EA concluded that "the information generated from the lessee's initial site characterization activities, the unanticipated discoveries requirement, and existing regulatory measures would make the potential for seafloor/bottom-disturbing activities (e.g. core samples, anchorages...) to cause damage to historic resources very low."

During the preparation of the EA, BOEM determined that the proposed action within the WEAs constitute multiple undertakings subject to Section 106 of the National Historic Preservation Act (16 USC § 470f), and its implementing regulations (36 CFR § 800):

- (1) Lease issuance (including reasonably foreseeable consequences associated with shallow hazards, geological, geotechnical, and archaeological resource surveys); and,
- (2) Approval of a SAP (including reasonably foreseeable consequences associated with the installation and operation of meteorological towers and/or meteorological buoys).

Because the decisions to issue leases and approve SAPs are complex (staged) and multiple, and because BOEM will not have the results of archaeological surveys prior to the issuance of leases and as such will be conducting its historic properties identification and evaluation effort in phases (36 CFR 800.4(b)(2)), BOEM drafted and implemented a Programmatic Agreement (Agreement) pursuant to 36 CFR 800.14(b) with its consulting

parties, including the Advisory Council on Historic Preservation (ACHP) (Appendix A). This Agreement provides for Section 106 consultation to continue through both the leasing process and BOEM's decision-making process regarding the approval, approval with modification, or disapproval of lessees' SAPs and will also allow for a phased identification and evaluation of historic properties (36 CFR 800.4(b)(2)). Furthermore, the Agreement establishes the process to determine and document the area of potential effects (APE) for each undertaking; to further identify historic properties located within each undertaking's APE that are listed in or eligible for listing in the National Register of Historic Places (National Register); to assess the potential adverse effects; and to avoid, reduce, or resolve any such effects through the process set forth in the Agreement.

Bluewater Wind Delaware, LLC (BWW) submitted the only valid expression of commercial interest in response to the April 26, 2010, Request For Interest (RFI) and BOEM received no additional expressions of interest in response to the January 26, 2011, Request For Competitive Interest (RFCI). BWW also currently holds the only interim policy (IP) lease located within the Delaware (DE) WEA. On April 12, 2011, BOEM published in the *Federal Register* a Determination of No Competitive Interest (DNCI) for the purpose of providing notice that no competitive interest exists in the area identified in the RFCI and Notice of Intent (see 76 FR 20367).

This document outlines BOEM's compliance with Section 106 and documents the agency's *Finding of No Historic Properties Affected* (Finding) for the proposed undertaking of issuing leases under 36 CFR 800.4 (d)(1). BOEM has prepared this documentation in support of the Finding following the standards outlined at 36 CFR 800.11(d) and as fulfillment of Stipulation II.K of the Agreement (see above and Appendix A). This Finding and supporting documentation are being provided to the DE State Historic Preservation Officer (SHPO), the Narragansett Indian Tribe, the Shinnecock Indian Nation, the Lenape Indian Tribe, and the ACHP as consulting parties under the Agreement. The Finding and supporting documentation will be made available for public inspection by placement on BOEM's public website prior to BOEM approving the undertaking.

Project Location and Description

The proposed lease includes the entirety of the DE WEA, the area offshore DE situated between the incoming and outgoing shipping routes for Delaware Bay, and is made up of 11 whole OCS blocks and 16 partial blocks (Figure 1). The closest point to shore is approximately 11.0 nautical miles (nmi) (17.7 kilometers km) due east from Rehoboth Beach, DE. The entire area is approximately 122 square nmi (103,323 acres [41,813 hectares]). The proposed commercial lease would grant the proposed lessee, BWW, the right, subject to the terms and conditions of the lease, to submit a plan for commercial development of wind energy on the leasehold. BWW's existing IP lease comprises lease block Salisbury NJ 18-05 Block 6325, and is located within the DE WEA.

Delaware Wind Energy Area and Interim Policy Lease

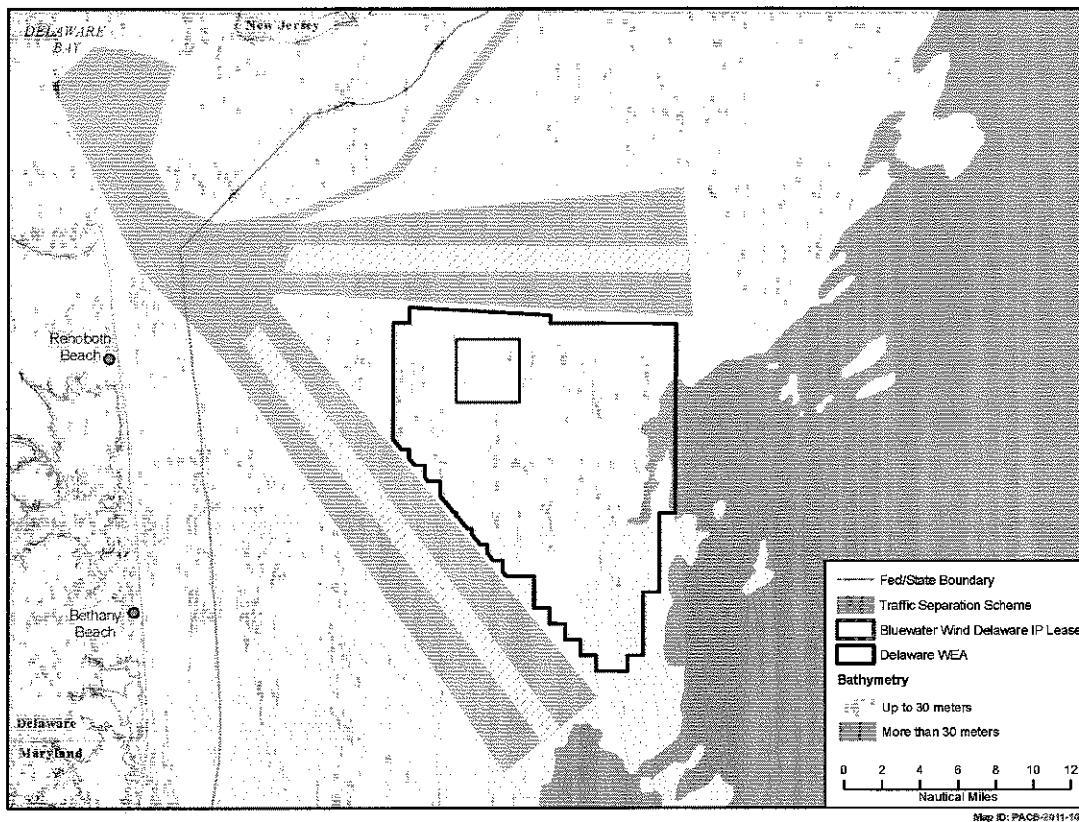


Figure 1. Location of the proposed lease area: Delaware Wind Energy Area and Interim Policy Lease Block

The proposed undertaking includes only the issuance of a commercial lease and considers only the execution of associated site characterization activities on the commercial leasehold. Site characterization activities include both high resolution geophysical (HRG) surveys as well as geotechnical (sub-bottom) sampling. Although BOEM does not issue permits or approvals for these site characterization activities, it will not consider approving a lessee’s COP if the required survey information is not included. As it is unlikely that any applicant would invest in undertaking these potentially expensive site characterizations prior to acquiring a lease (which would convey the exclusive right to apply for further approvals), and since the survey information must be submitted to BOEM before any SAP or COP could be approved, BOEM considers site characterization activities as actions connected to the issuance of leases.

The proposed undertaking does not, however, include cabling or connection to shore-based facilities, nor does it include consideration of commercial-scale facilities or construction or placement of any site assessment structures. Should BWW propose to deploy site assessment structure(s) in any portion of the commercial lease area *outside* of the IP lease block Salisbury NJ 18-05 Block 6325, it would submit a SAP to BOEM, which BOEM would consider under Section 106 pursuant to Stipulation IV of the Agreement. Should BWW propose to construct and operate commercial-scale facilities

within the DE WEA, it would submit a COP to BOEM, which BOEM would consider under a separate Section 106 consultation.

The lessee must submit the results of site characterization surveys with their SAP (30 CFR 585.610 and 585.611) and COP (30 CFR 585.626(a) and 585.627). The purpose of the HRG survey would be to acquire geophysical shallow hazards data, information pertaining to the presence or absence of archaeological resources, and to conduct bathymetric charting. BOEM anticipates that the HRG surveys would be conducted using the following equipment: depth sounder, magnetometer, side-scan sonar, and sub-bottom profiler. This equipment is typically towed from a moving survey vessel and does not require anchoring or come in contact with the seafloor.

Geotechnical (sub-bottom) sampling is conducted to assess the suitability of shallow foundation soils to support a structure or transmission cable under any operational and environmental conditions that might be encountered (including extreme events), and to document soil characteristics necessary for the design and installation of all structures and cables. Sub-bottom sampling obtains physical and chemical data on surface sediments to provide BOEM with a detailed geotechnical evaluation of the structure's foundation(s) based on analysis of soil borings from the site (e.g., 30 CFR 585.626(4)). The results allow for a thorough investigation of the stratigraphic and geoengineering properties of the sediment that may affect the foundations or anchoring systems of a wind energy project, which would be necessary for BOEM to consider a COP. The renewable energy regulations require sediment testing at the proposed site of any proposed bottom-founded structure. *See* 30 CFR 585.610(b) (SAP) and 585.626(a) (COP). BOEM assumes that one sub-bottom sample would be taken at the foundation location for each anticipated meteorological tower and/or buoy that would later be proposed in a SAP or COP.

Area of Potential Effects

As defined at 36 CFR § 800.16(d), the APE is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

Specific to the undertaking under discussion in this Finding (the issuance of a lease and subsequent site characterization activities) the APE is considered as the depth and breadth of the seabed that could potentially be impacted by any proposed seafloor/bottom-disturbing activities. Included under these site characterization activities are HRG remote sensing surveys and geotechnical (sub-bottom) sampling. HRG surveys have no ability to impact historic properties because they do not contact the seafloor and because they do not require anchoring. However, geotechnical (sub-bottom) sampling may include the collection of core samples or soil borings and anchorages that could directly impact historic properties on the seafloor, if present.

Based on the distance from shore and the manner in which site characterization studies will likely occur, BOEM has concluded that the equipment and vessels performing these activities will be indistinguishable from existing lighted vessel traffic. Therefore, BOEM has not defined as part of the APE onshore areas from which the site characterization activities would be visible. In addition, there is no indication that the issuance of a lease and subsequent site characterization studies will involve expansion of existing port infrastructure. Therefore, onshore staging activities are not considered as part of the APE for this specific undertaking.

Consultation

BOEM initiated consultation in 2011 through letters of invitation, telephone calls, emails, meetings, webinars, and the circulation and discussion of the Agreement, in draft, that guides the Section 106 consultations for multiple undertakings, including the one forming the subject of this Finding. This outreach and notification included contacting over 85 individuals and entities, including federally-recognized tribes, local governments, SHPOs, state-recognized tribes, and the public (Table 1). Additionally, BOEM has conducted formal government-to-government consultation with the Narragansett Indian Tribe and the Shinnecock Indian Nation, both of whom chose to consult with BOEM and participate in the development of the Agreement. Furthermore, BOEM has identified and contacted 16 state-recognized tribes, one of whom, the Lenape Tribe of Delaware, chose to consult with BOEM and participate in the development of the Agreement.

On February 9, 2011, BOEM formally notified the public through the *Federal Register* (pages 7226-7228), that it was initiating the “Smart from the Start” wind energy initiative and that it would involve Federal agencies, states, tribes, local governments, wind power developers and the public as BOEM conducted the NEPA process and engaged in consultation, including consultation under Section 106 of the National Historic Preservation Act.

On March 11, 2011, BOEM’s Federal Preservation Officer, Dr. Brian Jordan, sent letters to potential consulting parties notifying them that BOEM had selected a WEA offshore DE and intended to prepare a regional EA that would consider the environmental consequences of: (1) issuing leases; (2) site characterization activities that lessees may undertake on those leases (e.g., geophysical, geotechnical, archaeological and biological surveys); and (3) the subsequent approval of site assessment activities on the leaseholds (e.g., installation and operation of meteorological towers and buoys) in specific WEAs identified offshore Delaware, Maryland, New Jersey, and Virginia (see Appendix B). BOEM notified the potential consulting parties that it had determined that issuing leases and subsequently approving site assessment activities in these WEAs constituted undertakings subject to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f), and its implementing regulations (36 CFR § 800).

Table 1.

Entities Solicited for Information and Concerns Regarding Historic Properties
and the Proposed Undertaking

Federally-recognized Tribes	State-recognized Tribes	Local Governments	Local Governments
Absentee Shawnee Tribe of Oklahoma	Cheroenhaka (Nottoway) Indian Tribe	Accomack-Northampton Planning District Commission	Town of Fenwick
Aroostook Band of Micmacs	Chickahominy Tribe	Atlantic City	Town of Ocean City
Catawba Indian Nation	Eastern Chickahominy Tribe	Berlin, MD	Town of Ocean City Council
Delaware Nation (Anadarko)	Lenape Indian Tribe of Delaware	Board of Supervisors Accomack County	Town of Ocean View
Delaware Nation (Bartlesville)	Mattaponi Tribe	City of Chesapeake	Town of South Bethany
Delaware Nation (Emporia)	Monacan Indian Nation	City of Hampton	Worcester County Commission
Eastern Band of Cherokee Indians	Nansemond Tribe	City of Lewes	
Eastern Shawnee Tribe of Oklahoma	Nanticoke Indian Association, Inc.	City of Millville	Additional Organizations
Houlton Band of Maliseet Indians	Nanticoke Lenni-Lenape Indians	City of Newport News	Lower Eastern Shore Heritage Council, Inc.
Mashpee Wampanoag Tribe	Nottoway Indian Tribe	City of Norfolk	Maryland Commission on Indian Affairs
Miccosukee Tribe	Pamunkey Tribe	City of Portsmouth	Preservation Maryland
Narragansett Indian Tribe	Patawomeck Indian Tribe	City of Rehoboth	
Oneida Indian Nation	Powhatan Renape Nation	City of Suffolk	
Onondaga Nation	Rampanough Mountain Indians	City of Virginia Beach	
Passamaquoddy Tribe (Indian Township)	Rappahannock Tribe	Dennis Township	
Passamaquoddy Tribe (Pleasant Point)	Upper Mattaponi Tribe	Egg Harbor City	
Penobscot Nation		Egg Harbor Township	
Saint Regis Mohawk Tribe		Hampton Roads Planning District Commission	
Seminole Tribe		James City County	
Shinnecock Indian Nation		Northampton/Accomack City	
Stockbridge-Munsee Community of Mohican Indians		Ocean City	
Tuscarora Nation		Office of Congressman Michael N. Castle	
Wampanoag Tribe of Gay Head (Acquinnah)		Ship Bottom Borough	
		Stafford Township	
		Sussex County	
		Sussex County Council	
		Town of Bethany	
		Town of Dewey Beach	

On April 1, 2011, DE SHPO and Director Timothy A. Slavin replied to Dr. Jordan, concurring that the development of the WEAs offshore DE will have the potential to affect historic properties and recommended an archaeological identification survey be conducted, including an underwater survey to determine the presence or absence of “submerged archaeological and shipwrecks sites within the APE” (see Appendix C). Director Slavin’s reply also included a copy of two historic contexts: *Historic Archaeological Context on the Maritime theme with the Sub-theme Shipwrecks, Coastal Zone (1495-1940 +/-)* and *Historic Context for Aids to Navigation in Delaware*.

Additional responses to BOEM’s March 11, 2011 letters were received in the following months. A response from the Narragansett Indian Tribe detailed the need for better protocols for identifying ancestral submerged paleolandscapes and recommended an inter-tribal panel to inform the protocol. The letter refers to recent archaeological evidence of ancestral relatives of the Narragansett inhabiting the continental shelf and coastal lands in the WEAs offshore New Jersey, Delaware, Maryland, and Virginia. The Narragansett recommended that, for the purpose of gathering oral history indicators of the presence or absence of submerged settlements, BOEM should form a panel of Federally-recognized Tribal historic preservation advisors comprised of Atlantic coastal Tribal Historic Preservation Officers (THPOs) and augmented by state-recognized coastal tribes. The Narragansett suggested that the panel would provide data to BOEM that could be incorporated into a database of likely areas that should be investigated by sub-bottom profiling in search of scientific evidence of submerged settlements. The results of these surveys would provide known areas of cultural sensitivity, guiding planning activities and avoidance areas for development activities.

One response was received from a state-recognized tribe. The Nanticoke Lenni-Lenape Tribal Nation of New Jersey responded that “the area[s] delineated on the map involve the traditional offshore areas of our tribe.” BOEM will continue outreach to the Nanticoke Lenni-Lenape Tribal Nation and other tribes that may be affected by the proposed undertaking, and will continue to consult on relevant issues to ensure that their concerns are taken into consideration before any leasing decisions are made.

During the preparation of the EA, BOEM recognized that the agency had limited information regarding the presence of historic properties within the WEAs and would not have obtained or conducted an archaeological identification survey, as recommended by the DE SHPO, prior to the issuance of leases or the completion of the EA. Because the complete identification of historic properties would not take place until after leases were issued, BOEM drafted a PA to establish the process through which consultation would continue regarding all information generated as a result of ongoing site characterization activities (see above, and Appendix A). This could then inform BOEM’s future decisions regarding the approval, approval with modification, or disapproval of lessees’ SAPs and COPs (30 CFR 585). Using a phased approach set out in a PA would allow the consulting parties to participate in determining how potential adverse effects to newly identified historic properties would be addressed when BOEM considered lessees’ plans, either by avoidance or mitigation.

On October 20, 2011, BOEM solicited public comments on the proposed undertakings as they pertain to historic properties. BOEM received three comments in response to this solicitation. These comments from Mainstream Renewable Power (United Kingdom [UK]); the Offshore Wind Development Coalition and American Wind Energy Association; and the National Trust for Historic Preservation can be viewed as originals at regulations.gov by searching for Docket ID BOEM-2011- 0111; a summary of each follows.

Ms. Cathryn Hooper of Mainstream Renewable Power (UK) wrote that potential impacts to individual properties can only be properly assessed on a case-by-case basis; therefore, it will not be possible to fully assess these issues prior to the submission of the COP. Early consultation and study, she continued, will provide developers and regulators with a better understanding of the sensitivity of different properties. Additionally, she opined that issues relating to historic properties are not sufficiently significant to delay the issue of a FONSI in the NEPA process. Finally, Ms. Hooper suggested four other issues that BOEM should take into account as part of the current consultation process: (1) visual impact of turbines; (2) onshore infrastructure including grid connection and design quality; (3) reviewing lessons learned by UK developers and regulatory authorities; and (4) benefits to the historic environment of offshore wind.

Mr. Jim Lanard of Offshore Wind Development Coalition and Mr. Tom Vinson of American Wind Energy Association (Washington, DC) wrote that the agency is in the process of satisfying its obligations under Section 106. They opined that the effects on historic properties from leases that do not authorize the construction or operation of offshore wind farms until BOEM approves a COP are negligible. Finally, they suggested that BOEM should issue a finding of “no adverse effect” under 36 CFR § 800 and proceed with issuing leases and approving SAPs in the Mid-Atlantic WEAs.

Ms. Betsy Merritt of the National Trust for Historic Preservation (Washington, DC) wrote with concern that the guidelines used by the Draft EA to identify archaeological resources may be inadequate. She expressed concern that BOEM had not adequately identified all Indian tribes with cultural ties to the areas encompassed by the Draft EA. “Even for the tribes that have been identified,” she continued, “the EA indicates only that a form letter has been sent, and therefore, meaningful consultation has likely not occurred.” Finally, Ms. Merritt requested that the Department of the Interior prepare a full Environmental Impact Statement (EIS) prior to the approval of any COP, in order to ensure adequate consideration of significant impacts.

BOEM, with the consulting parties, will continue to involve the public through outreach, notifications, and request for comment throughout the Section 106 consultation process for both the issuance of renewable energy leases and consideration of subsequent SAPs. This includes publications in the *Federal Register* and on its website requesting information on historic properties and concerns regarding the undertakings.

In September through November 2011, BOEM sent letters to all potential consulting parties, including those suggested by the SHPOs, notifying them that BOEM had

prepared the draft regional EA mentioned above and wanted to consult on the matter (see Appendix D for a copy of the version sent to DE SHPO, noting that a similar letter was sent to all parties listed in Table 1). BOEM requested that the parties review the EA and offer any information not previously shared related to known historic sites or cultural properties within the areas that may be affected by leasing, site characterization activities, and the placement of meteorological structures in the WEAs. Additionally, on October 11, 2011, BOEM invited the ACHP to participate in the Section 106 consultations and preparation of the Agreement (see Appendix E). On October 24, 2011, the Advisory Council replied to Mr. Tommy Beaudreau, BOEM's Director, that it would participate in the consultations and preparation of the Agreement (see Appendix F).

BOEM held multiple consultation meetings regarding this undertaking, including:

- September 15, 2011, to meet with the Narragansett Indian Tribe in government-to-government consultation (in person);
- October 11, 2011, to initiate Section 106 with all consulting parties and to present the draft Agreement (via webinar);
- November 9, 2011, to discuss revisions to and comments received on the draft Agreement with all consulting parties (via webinar);
- November 30, 2011, to meet with the Shinnecock Indian Nation in government-to-government consultation (in person);
- December 15, 2011, to discuss revisions to and comments received on the draft Agreement with all consulting parties (via webinar);
- February 21, 2012, to implement the finalized and executed Agreement and to meet the provisions of Stipulation I (via webinar); and
- March 21, 2012, to fulfill Stipulation II of the Agreement for lease issuance offshore DE (in person).

The March 21, 2012, Section 106 consultation meeting was held in Dover, DE for the purpose of consulting on the scope of identification efforts and to consider lease stipulations relating to historic properties. This consultation meeting served as fulfillment of Stipulations II.A, -B, -E, -F, -H, -I, -J, and -K of the Agreement (see Appendix A) for lease issuance offshore DE. As a result of this consultation, various items were recommended by the parties, including the Narragansett Indian Tribe, the Shinnecock Indian Nation, the Lenape Tribe of Delaware, and the Delaware SHPO for inclusion in DE leases. Final lease stipulation language, including any changes to BOEM's existing post-review discoveries clause found at 30 CFR 585 (see below), will be negotiated between BOEM and the lessee.

Items Recommended by the Consulting Parties for Inclusion in DE Leases

- The lessee should notify BOEM by phone within 24 hours of any post-review discovery.
- BOEM should notify the appropriate parties within 48 hours of any post-review discovery, in accordance with 36 CFR 800.13(3).
- The person(s) conducting the archaeological survey and preparing the archaeological report should meet the *Secretary of the Interior's Professional Qualifications Standards* (48 FR 44738- 44739) and exhibit experience in conducting high-resolution marine geophysical surveys, and processing and interpretation of the HRG data for archaeological potential.
- The lessee should prepare two versions of the archaeological report for BOEM, including one without sensitive site location and religious use information that is appropriate for public dissemination.
- Proposed modifications to the lessee's SAP or COP, and any additional information requested by BOEM should be incorporated into a revised report.
- In addition to BOEM's Guidelines for Providing Geological and Geophysical, Hazards, and Archaeological Information Pursuant to 30 CFR Part 585, reports should be prepared in accordance with DE SHPO's *Guidelines for Architectural and Archaeological Surveys in Delaware* with appropriate site forms.
- A marine archaeologist should be on board the survey vessel during data collection, for quality control purposes.
- A single Native American representative acceptable to the leadership of the Narragansett Indian Tribe, the Shinnecock Indian Nation, and the Lenape Tribe of Delaware should be allowed to monitor archaeological survey and geotechnical testing.
- The lessee should hold pre-survey meetings to discuss the survey plan with BOEM and with the single Native American representative.
- The lessee and its marine archaeologist should certify in its archaeological reports submitted with its SAP and COP that geotechnical sampling activities did not impact historic properties identified in the HRG surveys.

Post-Review Discoveries Clause

Under Stipulation II.G, the Agreement requires that a post-review discoveries clause be included in the lease. BOEM has an existing post-review discoveries clause, found at 30 CFR § 585, and presented below. This clause may be altered by inclusion of items recommended by the consulting parties, such as reducing the 72-hour notification window to 24 hours (see above, first bullet). Final lease stipulation language, including any changes to BOEM's existing post-review discoveries clause found at 30 CFR 585 (see below), will be negotiated between BOEM and the lessee.

BOEM's existing post-review discoveries clause:

If the lessee, while conducting activities, discovers a potential archaeological resource such as the presence of a shipwreck (e.g., a sonar image or visual confirmation of an iron, steel, or wooden hull, wooden timbers, anchors, concentrations of historic objects, piles of ballast rock), prehistoric artifacts, and/or relict landforms, etc. within the project area the lessee is to:

- 1) Immediately halt seafloor/bottom-disturbing activities within the area of discovery;
- 2) Notify the appropriate BOEM/Office of Renewable Energy Programs Environment Branch Chief within 72 hours of its discovery; and
- 3) Keep the location of the discovery confidential and take no action that may adversely affect the archaeological resource until BOEM has made an evaluation and instructs the applicant on how to proceed (30 CFR § 585.802(a)(1)-(3), § 585.902(e)).

BOEM may require the lessee to conduct additional investigations to determine if the resource is eligible for listing in the National Register of Historic Places (§ 585.802(b)). BOEM will do this if: (1) the site has been impacted by the lessee's project activities; or (2) impacts to the site or to the area of potential effect cannot be avoided. If investigations indicate that the resources is potentially eligible for listing in the National Register of Historic Places, BOEM will tell the lessee how to protect the resources or how to mitigate adverse effects to the site. If BOEM incurs costs in protecting the resource, under Section 110(g) of the National Historic Preservation Act, BOEM may charge the lessee reasonable costs for carrying out preservation responsibilities under the OCS Lands Act (§ 585.802(c-d)).

II. Description of the Steps Taken to Identify Historic Properties

BOEM has reviewed existing and available information regarding historic properties that may be present within the OCS lease blocks associated with this undertaking. Sources of this information include consulting with the appropriate parties and the public, gathering information shared by the DE SHPO's office, and accessing information gathered by BOEM for an updated study of archaeological resource potential on the Atlantic OCS, known as the Atlantic Shipwreck Database, or ASD. The study compiles information on historic shipwrecks and models the potential for pre-European contact sites based on reconstruction of past landscapes, human settlement patterns, and site formation and preservation conditions (TRC 2011).

Existing governmental databases formed the core of the data for BOEM's ASD, which was then supplemented by commercial databases. The National Oceanic and Atmospheric Administration (NOAA) maintains the Automated Wreck and Obstructions Information System (AWOIS), a database of wrecks and obstructions compiled from hydrographic surveys and field reports. The U.S. Navy created the Non-Submarine Contact List (NSC) for military use in distinguishing shipwrecks from submarines hiding on the ocean floor. The U.S. Navy also maintains a database entitled Partial List of Foundered U.S. Navy Craft. Ships from this source were added to the database as well.

Three commercial databases were also obtained and included: The Global Maritime Wrecks Database, the International Registry of Sunken Ships, and the Northern Shipwrecks database (TRC 2011). The inherent expectation for utilizing multiple sources of information for the same area, however, is that these databases often include redundant listings for the same shipwrecks. Where listings are reasonably close geographically, and/or contain similar enough information to be understood to be one shipwreck location or obstruction, they were analyzed for the purposes of the Finding to contain only one probable locus.

The accuracy of location information is quantified in the ASD by a ranking between 1 and 4. Shipwrecks that have been positively located through recent survey are given a location reliability rank of 1. Those shipwrecks with specific locations provided by informants, reported in literature, or marked on a map are considered a 2. A location reliability of 3 indicates that the location is given generally rather than specifically by an informant, in the literature, or on a map. Those locations that are unreliable or vague, such as “off the coast of North Carolina” or “at sea” are ranked at 4.

BOEM’s known information on historic shipwrecks and obstructions located within the DE WEA consist of thirteen probable loci in the database, which include known vessels (n=3), unknown vessels (n=4), sub-bottom features (n=3, no other information available), and other obstructions (n=3) (Table 2; TRC 2011). These are comprised of 12 entries from AWOIS, 24 entries from the Global Maritime Wrecks Database, and 8 entries from IRSS. Known vessels in the database are the commercial fishing vessel *Ocean Quest*, the barge *Marie Beasley*, and the navy tug *USS Cherokee*. Of the three listed shipwrecks, only the *USS Cherokee* has readily available historical data; the other two known shipwrecks contain limited information. The remaining four vessels are unknown, with varying reliability on locational information listed.

Table 2.

Probable loci listed in BOEM’s Atlantic Shipwreck Database (TRC 2011).

Vessel Name	Reliability
<i>Ocean Quest</i>	1
<i>USS Cherokee</i>	1
<i>Marie Beasley</i>	2
Unknown Vessel	1
Unknown Vessel	1
Unknown Vessel	3
Unknown Vessel	3

The *USS Cherokee* was a tugboat built in 1891 in Camden, New Jersey as the *Edgar F. Luckenbach* (TRC 2011; Figure 2). Rechristened in 1917, the *Cherokee* is a 36.6 x 7.6-meter (m; 120.0 x 25.0-foot [ft]) vessel of 276.4 metric tons (272.0 gross tons) fit to carry 20 crew. Heading to Washington, D.C. out of Newport Rhode Island on Tuesday, July 26, 1918, she foundered in a storm, and currently sits at a depth of approximately

27.4 m (90 ft). The shipwreck was recorded into AWOIS by one “BTTHOMAS” on July 6, 2009. Diver reports indicate that the hull is intact and the vessel is sitting upright with boilers visible and artifacts of pottery, brass, and munitions present.

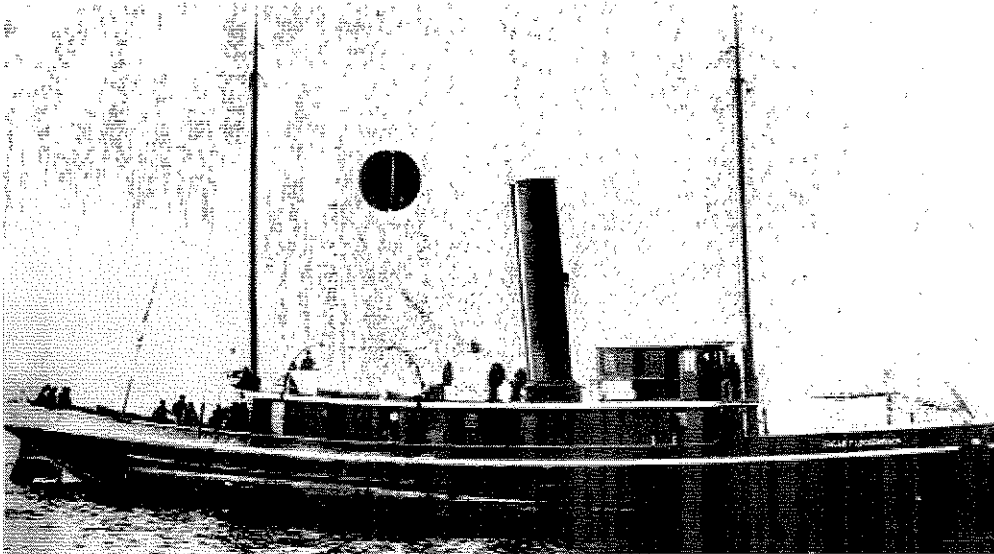


Figure 2. USS Cherokee (Galiano 2008)

Offshore archaeological resources also include submerged pre-contact sites. Although there are no known paleochannels or submerged prehistoric sites, the DE WEA is located within a region of the OCS that formerly may have been exposed above sea level and available to human occupation during the last ice age. Sea level data provides a guide to where drowned archaeological sites may be present on the OCS. The highest rate of sea level rise occurred during a period of known occupation along the Middle Atlantic, which archaeologists currently place at approximately 11,600–11,100 years before present day (B.P.). This period was followed by a much slower rate of sea level rise (approximately 0.8 cm per year) until ca. 7000 B.P., after which the rate of sea level rise slowed even further (0.2 cm per year or less). After 7,000 B.P., archaeological sites would have been subject to a higher frequency of erosion or destruction by the process of marine transgression. This suggests that earlier sites would have been exposed to higher rates of erosion and destruction and are less likely to survive intact, whereas later sites would have a greater likelihood of surviving.

Although no site-specific archaeological identification surveys have been conducted within the DE WEA, several archaeological resources associated with shipwrecks have been previously identified therein. Based on available information, the lease blocks are located in a region that is considered to have the potential to contain both post-contact historic period archaeological resources in the form of shipwrecks and have the potential to contain submerged pre-contact sites. Because of the location of the proposed lease blocks in proximity to historic shipping routes, and because it has been demonstrated that archaeological sites have been identified in this general region and in similar settings, there is the potential for the presence of additional, unidentified cultural resources within the OCS lease blocks associated with the proposed undertaking.

Required Elements in the Lease

As discussed herein, BOEM has determined that geotechnical (sub-bottom) sampling may impact historic properties. If the lessee conducts HRG surveys prior to conducting geotechnical (sub-bottom) sampling, the lessee will be able to avoid impacts to historic properties. Therefore, BOEM will require the lessee to conduct HRG surveys prior to conducting geotechnical (sub-bottom) sampling and when a potential historic property is identified, the lessee will be required to avoid it. Inclusion of the following elements in the lease will ensure avoidance of historic properties and is a requirement of this Finding.

The lessee may only conduct geotechnical (sub-bottom) sampling activities in areas of the leasehold in which an analysis of the results of geophysical surveys has been completed for that area. The geophysical surveys must meet BOEM's minimum standards (see *Guidelines for Providing Geological and Geophysical, Hazards, and Archaeological Information Pursuant to 30 CFR Part 585*), and the analysis must be completed by a qualified marine archaeologist who both meets the *Secretary of the Interior's Professional Qualifications Standards* (48 FR 44738- 44739) and has experience analyzing marine geophysical data. This analysis must include a determination whether any potential archaeological resources are present in the area and the geotechnical (sub-bottom) sampling activities must avoid potential archaeological resources by a minimum of 50.0 m (164.0 ft). The avoidance distance must be calculated from the maximum discernable extent of the archaeological resource. In no case may the lessee's actions impact a potential archaeological resource without BOEM's prior approval.

Therefore, *No historic properties will be affected* for this lease issuance undertaking, consistent with 36 CFR 800.4(d).

III. The Basis for the Determination of No Historic Properties Affected

This finding is based on the review conducted by BOEM of existing and available information, consultation with interested and affected parties, and the conclusions drawn from this information. The mandatory avoidance measures that will be included in the lease will ensure that the proposed undertaking will not affect historic properties.

REFERENCES

- Galiano, Rich. 2008. Scuba Diving New Jersey, Long Island, & New York. Website: http://njscuba.net/sites/chart_deep_sea.html#Cherokee. Accessed March 2012.
- TRC Environmental Corporation (TRC). 2011. Draft: Prehistoric Site Potential and Historic Shipwrecks on the Atlantic Outer Continental Shelf. BOEM Study GM-09-10. Pending Publication. Prepared under BOEM contract GS-10F-0401M M09PD00024, TRC Environmental Corporation, Norcross, GA. Accessed March 2012.
- U.S. Department of the Interior, Bureau of Ocean Energy Management (BOEM). 2012. Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New Jersey, Delaware, Maryland, and Virginia; Final Environmental Assessment. Office of Renewable Energy Programs, Herndon, Virginia. January 2012.

APPENDICES

Appendix A: Programmatic Agreement

Appendix B: Correspondence from BOEM to the DE SHPO, March 11, 2011

Appendix C: Correspondence from DE SHPO to BOEM, April 11, 2011

Appendix D: Correspondence from BOEM to DE SHPO, September 16, 2011; a similar letter was sent to all potential consulting parties between September and November 2011

Appendix E: Correspondence from BOEM to the Advisory Council on Historic Preservation, October 11, 2011

Appendix F: Correspondence from the Advisory Council on Historic Preservation to BOEM, October 24, 2011