11.0 INCIDENTAL TAKE STATEMENT (Amended July 7, 2015)

Section 9 of the ESA prohibits the take of endangered species of fish and wildlife. "Fish and wildlife" is defined in the ESA "as any member of the animal kingdom, including without limitation any mammal, fish, bird (including any migratory, non-migratory, or endangered bird for which protection is also afforded by treaty or other international agreement), amphibian, reptile, mollusk, crustacean, arthropod or other invertebrate, and includes any part, product, egg, or offspring thereof, or the dead body or parts thereof" 16 U.S.C. 1532(8). "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by us to include any act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation that actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns including breeding, spawning, rearing, migrating, feeding, or sheltering (50 C.F.R. 222.102). Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity (50 C.F.R. 402.02). "Otherwise lawful activities" are those actions that meet all State and Federal legal requirements except for the prohibition against taking in ESA Section 9 (51 FR 19936, June 3, 1986), which would include any State endangered species laws or regulations. Section 9(g) makes it unlawful for any person "to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in [section 9 of the ESA.]" 16 U.S.C. 1538(g). A "person" is defined in part as any entity subject to the jurisdiction of the United States, including an individual; corporation; or officer, employee, department or instrument of State or Federal government (see 16 U.S.C. 1532(13)). Under the terms of section 7(b)(4) and section 7(o)(2), taking that results from, but is not the purpose of the agency action, is not considered to be prohibited under the ESA provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the USACE and Deepwater Wind, for the exemption in section 7(o)(2) to apply. The USACE has a continuing duty to regulate the activity covered by this Incidental Take Statement. If the USACE (1) fails to assume and implement the terms and conditions consistent with its authority or (2) fails to require Deepwater Wind to adhere to the terms and conditions of the Incidental Take Statement, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the USACE must report the progress of the action and its impact on the species to us as specified in the Incidental Take Statement [50 CFR §402.14(i)(3)] (See U.S. Fish and Wildlife Service and National Marine Fisheries Service's Joint Endangered Species Act Section 7 Consultation Handbook (1998) at 4-49).

11.1 Anticipated Amount or Extent of Incidental Take

Sea Turtles

We do not anticipate any injury or mortality of any loggerhead, leatherback, Kemp's ridley or green sea turtles to result from the proposed action. We anticipate the behavioral disturbance (harassment) of no more than 576 loggerhead, 64 leatherback, 64 Kemp's ridley and 64 green sea turtles due to exposure to disturbing levels of noise during impact pile driving. We do not anticipate any impacts to the health, survival or reproductive success of any individual loggerhead, leatherback, Kemp's ridley or green sea turtles. All other effects to sea turtles, including increased vessel traffic and impacts to benthic resources, will be insignificant and discountable.

As explained in the Opinion, the calculated number of sea turtles that we anticipate to be behaviorally disturbed represents a reasonable worst case scenario of the number of individuals expected to be exposed.

For impact pile driving operations, we consider this a worst-case estimate because: (1) it assumes that sea turtle density will be at the maximum reported level throughout the action area; (2) it uses the maximum distances modeled for noise attenuation; and, (3) it assumes that sea turtles will be present at every location that a pile is installed.

Despite these assumptions, this is the best available estimate of the number of sea turtles that are expected to be exposed to disturbing levels of noise from impact pile driving. Because both the distribution and numbers of sea turtles in the action area during pile driving is highly variable and a function of the behavior of individual turtles, the distribution of prey, and other environmental variables such as water temperature and ocean currents, the amount of take resulting from harassment is difficult, if not impossible, to estimate. In addition, because of the large size of ensonified area, we do not expect that USACE or Deepwater Wind will be able to monitor the behavior of all sea turtles in the action area in a manner that would detect responses to pile driving; therefore, the likelihood of discovering take attributable to exposure to increased underwater noise is very limited. In such circumstances, we use a surrogate to estimate the extent of take. The surrogate must be rationally connected to the taking and provide a threshold of exempted take which, if exceeded, provides a basis for reinitiating consultation. For this proposed action, the spatial and temporal extent of the area where underwater noise is elevated above 166 dB re 1uPa RMS will serve as a surrogate for estimating the amount of incidental take from harassment. This is because it allows us to determine the area and time when loggerhead, leatherback, Kemp's ridley and green sea turtles will be exposed to noise would result in behaviors consistent with harassment. Deepwater Wind will verify the extent in which behavioral disturbance thresholds are attained during the installation of each WTG foundation.

Atlantic Sturgeon

We do not anticipate any injury or mortality of any Atlantic sturgeon to result from the proposed action. Temporary, short-term behavioral effects during exposure to underwater noise above 150 dB re 1uPa RMS resulting from the impulsive noise of the impact hammer, such as disruption of feeding, resting, migration, or other activities are likely, although these effects are not likely to affect an individual's likelihood of survival or reproduction. We do not anticipate any impacts to the health, survival or reproductive success of any individual Atlantic sturgeon, from any DPS. All other effects to Atlantic sturgeon, including increased vessel traffic and impacts to benthic resources, will be insignificant and discountable. Because there are no available estimates of Atlantic sturgeon density in the action area, we are not able to estimate the number of Atlantic sturgeon of any DPS that are likely to be taken by harassment. Because both the distribution and numbers of Atlantic sturgeon in the action area during impact pile driving is highly variable and a function of the behavior of individual fish, the distribution of prey and other environmental variables such as water temperature, the amount of take resulting from harassment is difficult, if not impossible, to estimate. In addition, because there are no known means to detect the presence of Atlantic sturgeon during impact pile driving activities, it would be extremely difficult, if not impossible, to monitor the behavior of all Atlantic sturgeon in the action area in a manner which

would detect responses to impact pile driving, and thus the likelihood of discovering take attributable to exposure to increased underwater noise is very limited. In such circumstances, we use a surrogate to estimate the extent of take. The surrogate must be rationally connected to the taking and provide a threshold of exempted take which, if exceeded, provides a basis for reinitiating consultation. For this proposed action, the spatial and temporal extent of the area where impact pile driving underwater noise is elevated above 150 dB_{RMS} will serve as a surrogate for estimating the amount of incidental take from harassment as it allows us to determine the area and time when sturgeon will be exposed to noise that would result in behaviors consistent with harassment. Deepwater Wind will verify the extent in which behavioral disturbance thresholds are attained during the installation of the each WTG foundation.

Whales

We have concluded that the construction of the BIWF and the BITS in the coastal and marine environment east of Block Island and in Rhode Island Sound is likely to result in incidental take of North Atlantic right (*Eubalaena glacialis*), humpback (*Megaptera novaeaengliae*), and fin (*Balaenoptera physalus*) whales in the form of acoustic harassment. The exposure to underwater noise between 120 and 180 dB re 1uPa RMS resulting from the DP thrusters and vibratory hammer, and between 160 and 180 dB re 1uPa RMS for the impulsive noise of the impact hammer is expected to cause behavioral effects, such as disruption of feeding, resting, or other activities or alterations in breathing, vocalizing, or diving rates. The project-related acoustic effects from the impact hammer, vibratory hammer, and DP thrusters will be temporary, short-term, and geographically limited to a very small portion of the overall species' range.

The NMFS Office of Protected Resources (OPR) Permits, Conservation, and Education Division has issued two Incidental Harassment Authorizations (IHA) to Deepwater Wind Block Island, LLC and Deepwater Wind Block Transmission, LLC ("Deepwater Wind") for the harassment of a small number of marine mammals incidental to the construction activity for the Block Island Wind Farm (BIWF) and the Block Island Transmission System (BITS). The IHA for the BIWF is effective October 31, 2014 through October 30, 2015 (79 FR 53409; September 9, 2014). The IHA for the BITS is effective November 1, 2014 through October 31, 2015 and was issued on August 22, 2014 (79 FR 51314; August 28, 2014).

Each IHA is effective for a period of one year, during which the maximum take authorized for both facilities combined is up to 236 fin whales (83 BIWF, 153 BITS), 22 humpback whales (5 BIWF, 17 BITS), and 11 North Atlantic right whales (3 BIWF, 8 BITS). Each of these exposures will be considered a take by harassment.

The amount of exempted take will be exceeded if any right, humpback, or fin whales are harmed, injured, or killed as a result of the construction of the BITS or BIWF, or if the number of such whales taken by acoustic harassment as defined above exceeds the estimate of 83 fin whales, 5 humpback whales, and 3 North Atlantic right whales for the BIWF and 153 fin whales, 17 humpback whales, and 8 North Atlantic right whales for the BITS. For fin, humpback, and right whales, this ITS is only valid from October 31, 2014-October 30, 2015 for the BIWF and November 1, 2014-October 31, 2015 for BITS. Through acoustic monitoring, Deepwater Wind

will verify the extent in which behavioral disturbance thresholds are attained during the installation of each WTG foundation.

11.2 Reasonable and Prudent Measures

Reasonable and prudent measures (RPMs) are those measures necessary and appropriate to minimize and monitor incidental take of a listed species. Section 3.8 of this Opinion identifies a number of mitigation measures included in the project description, which are designed to avoid and minimize impacts to listed species. The applicant, Deepwater Wind, has committed to implementing these measures and they will be included as Special Conditions of permits issued by the USACE. Because they are part of the proposed action, we are not repeating them as Reasonable and Prudent Measures or Terms and Conditions. The most significant impacts from this project are from noise. The exclusion areas are established to avoid the exposure of listed species to levels of noise that cause injury. This is an important project component and the amount and type of take is minimized as a result of this measure. Additionally, the monitoring of the zone with noise levels that are expected to cause harassment of listed species provides an opportunity to cease operations when marine mammals or sea turtles are detected in this area, which also avoids or minimizes impacts to listed species. The RPMs below are in addition to the measures established by Deepwater Wind. These RPMs must be adhered to throughout all phases of the project and will be included as special conditions of the USACE permits.

Failure to implement the listed species mitigation measures that were already considered part of the proposed action would trigger reinitiation of consultation under 50 CFR 402.16, and this ITS would not apply given that the action would be different than the action for which this ITS exempts take. The listed species mitigation measures outlined as part of this proposed action must be implemented in order for this ITS to exempt incidental take. We believe the following reasonable and prudent measures are necessary and appropriate to minimize and monitor impacts of incidental take of fin, humpback, and North Atlantic right whales; Kemp's ridley, green, loggerhead, and leatherback sea turtles; and Atlantic sturgeon. As noted above, these are in addition to the measures already being implemented as part of the proposed action.

1. The USACE must ensure that any endangered species observers contracted by Deepwater Wind are approved by NMFS.

2. The USACE must ensure that designated exclusion zones for all noise producing activities are monitored by NMFS-approved observers. The exclusion zone is considered that area ensonified by injurious levels (i.e., underwater noise levels greater than or equal to 180 re 1 μPa RMS).

3. The USACE must ensure that designated monitoring zones for all noise producing activities are monitored by NMFS-approved observers. The monitoring zone is considered that area ensonified by noise levels that may cause behavioral disturbance (160 re 1 μPa RMS).

4. The USACE must ensure that field verification of modeled noise levels for injury or mortality are undertaken and that monitoring is conducted throughout the work period to confirm modeled sound levels. This needs to be conducted for (1)

impact pile driving operations; (2) installation and removal of cofferdams with vibratory pile driving; and, (3) DP thruster use.

5. The USACE must ensure that field verification of modeled noise levels for behavioral disturbance are undertaken and that monitoring is conducted throughout the work period to confirm modeled sound levels. This needs to be conducted for (1) impact pile driving operations; (2) installation and removal of cofferdams with vibratory pile driving; and, (3) DP thruster use. This RPM functions as a surrogate for monitoring incidental take.

6. Any sea turtle or Atlantic sturgeon observed during activities considered in this Opinion must be recorded, with information submitted to NMFS within 30 days. Any dead or injured sea turtle or Atlantic sturgeon must be reported to NMFS within 24 hours via email to incidental.take@noaa.gov.

7. Reasonable attempts should be made to collect any dead sea turtles or sturgeon. These individuals must be held in cold storage until disposition can be discussed with NMFS.

8. Any whale taken in a manner not authorized by the Incidental Harassment Authorizations issued August 22, 2014 and September 3, 2014 (e.g., injury, serious injury, or mortality) must be reported immediately to NMFS Greater Atlantic Region (978-281-9328) and NMFS Office of Protected Resources (301-427-8401) and via email to incidental.take@noaa.gov, Jolie.Harrison@noaa.gov, John.Fiorentino@noaa.gov, and Mendy.Garron@noaa.gov. If a specified activity clearly causes an unauthorized take, the specified activity must cease immediately. Specified activity may not resume until NMFS has reviewed the circumstances of the prohibited take and the applicant is notified by NMFS that activities may resume. If an injured or dead whale is discovered, and the cause of injury is unknown or not associated with authorized activities, the incident must be reported immediately, as above, but activities may continue while NMFS reviews the circumstances.

9. Deepwater Wind must provide the following notifications to NMFS during construction activities:

    a. Beginning of construction activities (within 24 hours) and completion of construction of activities (within 24 hours)
    b. Within 24 hours of receiving information that exclusion or monitoring zones should be changed
    c. Within 24 hours of seeing behavioral responses by ESA-listed species

11.3 Terms and Conditions

In order to be exempt from prohibitions of section 9 of the ESA, USACE and Deepwater Wind must comply with the following terms and conditions, which implement the reasonable and

prudent measures described above and which outline required minimization and monitoring requirements. These terms and conditions are non-discretionary.

1. To implement RPM #1, the USACE shall provide NMFS with the names and resumes of all endangered species monitors to be employed at the project site at least 30 days prior to the start of WTG construction. No observer shall work at the project site without written approval of NMFS. If during project construction or DP vessel operations, additional endangered species monitors are necessary, the USACE will provide those names and resumes to NMFS for approval at least 10 days prior to the date that they are expected to start work at the site.

2. To implement RPMs #2 and #3, during impact or vibratory pile driving operations, observers must begin monitoring the exclusion and monitoring zones at least 60 minutes prior to the initiation of soft start pile driving. Full energy pile driving must not begin until the zone is clear of all ESA-listed whales and sea turtles for at least 60 minutes. Monitoring will continue through the pile driving period and end approximately 60 minutes after pile driving is completed. Observers must notify operators if any ESA-listed whales or sea turtles appear to be moving toward the exclusion or monitoring zones, so that operations can be adjusted (i.e., pile driving energy reduced) to minimize the size of the exclusion and monitoring zones. If the latter occurs, the observer must monitor the area within and near the exclusion and monitoring zones for 60 minutes, and if clear after 60 minutes after the last sighting of an ESA-listed whale or sea turtle, notify the operator that full energy pile driving may resume.

3. To implement RPM#3, during DP vessel operations, observers will begin monitoring the monitoring zone as soon as the vessel leaves the dock and will continue throughout the construction activity. Observers must notify the vessel operator if any whales or sea turtles appear to be moving toward the monitoring zone, so that operations can be adjusted (i.e., reduced DP thruster energy) to minimize the size of the monitoring zone (i.e., underwater noise levels greater than or equal to 160 re 1 µPa RMS) If the latter occurs, the observer must monitor the area within and near the monitoring zone for 60 minutes, and if clear after 60 minutes of the last sighting of an ESA-listed whale or sea turtle, notify the vessel operator that full energy thruster use may resume. As DP vessels will be operational for 24 hours, at least two observers should be onboard the vessel, working a 12 hour on, 12 hour off schedule. That observer working the night shift must be provided night-vision binoculars.

4. To implement RPM #4, acoustic verification and monitoring must be conducted during impact pile driving (for the installation of the first WTG foundation pile), DP thruster use, and vibratory pile driving (for cofferdam installation and removal) to ensure the exclusion zone is appropriately defined and thus, monitored by the observer required in RPM #2. Acoustic monitoring must be sufficient to determine apparent source levels (i.e., dB re 1 µPa at 1 m) as well as the radius of the following isopleths:

    a. Atlantic sturgeon acoustic injury thresholds: Distance to the 206 dB re 1 µPa Peak and 187 dB re 1μPa^2-s cSEL isopleths.

b. Sea turtle acoustic injury threshold: Distance to the 207 dB re 1 µPa RMS isopleth.
c. Whale acoustic injury threshold: 180 dB re 1 µPa RMS isopleth

Results of this monitoring must be reported to NMFS at incidental.take@noaa.gov. For pile driving operations, results must be provided to NMFS prior to the installation of the next pile or within 24 hours of installation, whichever is sooner. For DP vessel operation, results must be provided every 24 hours. If there is any indication that injury thresholds have been attained in a manner not considered in this Opinion (i.e., extent of 206 dB re 1 µPa PEAK or 187 dB re 1µPa^2-s cSEL (Atlantic sturgeon); 207 dB re 1 µPa RMS (sea turtles) 180 dB re 1 µPa RMS (whales)), the following NMFS contacts must be notified immediately: NMFS Greater Atlantic Region (978-281-9328) and NMFS Office of Protected Resources (301-427-8401) and incidental.take@noaa.gov, Jolie.Harrison@noaa.gov, John.Fiorentino@noaa.gov, and Mendy.Garron@noaa.gov..

5. To implement RPM #5, acoustic verification and monitoring must be conducted during impact pile driving for the installation of the first WTG foundation pile, DP thruster use, and vibratory pile driving (for cofferdam installation and removal). Acoustic monitoring must be sufficient to determine apparent source levels (i.e., dB re 1 µPa at 1 m) as well as the following:
    a. Atlantic sturgeon acoustic behavioral disturbance thresholds: Distance to the 150 dB re 1 µPa RMS isopleth.
    b. Sea turtle acoustic behavioral disturbance threshold: Distance to the 166 dB re 1 µPa RMS isopleth.
    c. Whale acoustic behavioral disturbance threshold: Distance to the 160 dB re 1 µPa RMS isopleth for both impulsive and continuous noise.

    Results of this monitoring must be reported, via email to NMFS at incidental.take@noaa.gov. For pile driving operations, results must be provided to NMFS prior to the installation of the next pile or within 24 hours of installation, whichever is sooner.

6. To implement RPM #6, in the event of any observations of dead sea turtles or Atlantic sturgeon, dead specimens should be collected with a net and preserved (refrigerate or freeze) until disposal procedures are discussed with NMFS.

7. To implement RPM #7, USACE or Deepwater Wind must contact NMFS within 24 hours of any observations of dead or injured sea turtles or sturgeon. The take must be reported to NMFS Greater Atlantic Region Fisheries Office via email to incidental.take@noaa.gov.

8. To implement RPM #8, USACE or Deepwater Wind must contact NMFS immediately upon observing any dead or injured whale and cease all activity if authorized activities caused or may have caused the death or injury. The take must be reported to NMFS Office of Protected Resources (301-427-8401) and via email to incidental.take@noaa.gov, Jolie.Harrison@noaa.gov, John.Fiorentino@noaa.gov, and Mendy.Garron@noaa.gov.

9. To implement RPM #9, Deepwater Wind must notify NMFS (Jennifer Goebel, 978-281-9373 or jennifer.goebel@noaa.gov) within 24 hours of the beginning and completion of construction activities, within 24 hours of receiving information that exclusion or monitoring zones should be changed, and within 24 hours of seeing any behavioral responses by any ESA-listed species.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize and monitor the impact of incidental take resulting from the proposed action. Specifically, these RPMs and Terms and Conditions will ensure that no listed species are exposed to injurious levels of sound and will verify the modeling results provided by the USACE based on which NMFS has made conclusions regarding take.

RPM and Term and Condition #1 is necessary and appropriate because it is specifically designed to ensure that all endangered species monitors employed by Deepwater Wind are qualified to conduct the necessary duties. Including this review of endangered species monitors by NMFS staff is only a minor change because it is not expected to result in any delay to the project and will merely ensure endangered species monitors have the qualifications that are already required by the USACE.

RPMs #2 and #3 and Terms and Conditions # 2, 3, and 4 are necessary and appropriate to ensure listed species are not exposed to injurious levels of noise throughout the proposed action and that project operations are adjusted accordingly to further avoid this exposure. These RPMs and their Terms and Conditions are not expected to result in any delay to the project and will merely enforce the qualifications and duties of the endangered species monitors that are already required by the USACE.

RPM #4 and 5 and Terms and Conditions #4 and 5 are necessary and appropriate because they are designed to verify that the sound levels modeled by for Deepwater Wind are valid and that the estimated areas where sound levels are expected to be greater than the threshold levels for effects to listed species are accurate. Any increases in cost or time are expected to be minor and thus, it is not expected to result in any delay to the project or a significant change to the project.

RPMs #6, 7 and 8 and Terms and Conditions #6, 7, and 8 are necessary and appropriate to ensure the proper handling and documentation of any interactions with listed species as well as requiring that these interactions are reported to us in a timely manner with all of the necessary information. This is essential for monitoring the level of incidental take associated with the proposed action.

RPM #9 and Terms and Conditions #9 are necessary and appropriate to ensure that NMFS is aware of the timing of construction activities, any changes in exclusion and monitoring zones, and any behavioral responses by ESA-listed species the activities. This is not expected to cause any delay or change to the project, and will allow NMFS to gather information on the effects of this activity on ESA-listed species for future actions.

These RPMs and Terms and Conditions represent only minor changes as compliance will not result in any increased cost, delay of the project (unless unanticipated take occurs), or decrease in the efficiency of any activity.