



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores IHA testimony due May 1. 2023

1 message

Elizabeth Quattrochi <eequat@gmail.com>

Fri, Apr 14, 2023 at 8:24 AM

To: ITP.Potlock@noaa.gov

Cc: Elizabeth Quattrochi <eequat@gmail.com>

To: Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service: ITP.Potlock@noaa.gov



Atlantic Shores IHA, Comments to Jolie Harrison.docx

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To: Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources,
National Marine Fisheries Service: ITP.Potlock@noaa.gov

RE: Atlantic Shores Offshore Wind, LLC (Atlantic Shores) request for authorization to take marine mammals incidental to marine site characterization offshore of New Jersey and New York in the Bureau of Ocean Energy Management (BOEM) Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS) Lease Area OCS-A 0499 and OCS-A 0549 and associated export cable route (ECR) area. [2023-06594.pdf \(govinfo.gov\)](#)

MARINE MAMMAL PROTECTION ACT

The primary objective of this management must be to maintain the health and stability of the marine ecosystem; this in theory indicates that animals must be managed for their benefit and not for the benefit of commercial exploitation. The effect of this set of requirements is to insist that the management of animal populations be carried out with the interest of the animals as the prime consideration.

- *House of Representatives, NO. 707, 92nd Congress, 1st Session, 18,22 [December 4, 1971]*

THE NEW POLLUTANT- ACOUSTIC SOUND

I oppose more "takes" of marine mammals. NO!

The government of the USA has abandoned the Marine Mammal Protection Act. The primary policy objective of the MMPA is the **health and stability of the marine ecosystem**. The introduction of hundreds of wind turbines is detrimental to this purpose on a scale never before imagined. These so-called "farms" are being located in the migration and feeding paths of whales and sea life on our incredibly biodiverse continental shelf.

Wind turbines are neither clean nor green. It's a new pollutant - acoustic sound. Why do our leaders pretend not to understand whale hearing? Whales use echolocation to navigate, find food and communicate. The humpback whale can hear its songs over hundreds of miles and mothers "whisper" to their calves to keep them nearby safe.

Each stage of Wind development deforms the sounds of the ocean - from geological surveys, to the construction booms, to the engine noise of boat traffic and finally to the perpetual swish of pressure waves produced during the turbine's operating life.

95% of the humpback whale population was killed by whaling. With fewer than 1,400 left in the North Atlantic, this endangered species cannot be sacrificed for an intermittent electric energy source. All deaths from human interaction, whether by boat strike, entanglement, plastic or acoustic trauma, are attributed to mankind. Counting them independently is a shell game to make the numbers look smaller. NOAA's memorandum on offshore wind interactions is littered with the need for more research, but study "time is limited," a warning that speaks above all else to the unpredictable and irreversible harm ahead.

The North Atlantic Right Whale (NARW) is even more threatened than the humpback, with only 70 females. NARW will be the first great whale in modern history to go extinct as a consequence of the USA government's environmental failures to protect them. A pittance of funds is available to assist with protecting them using new technology; why not satellites to track their location instead of using primitive sightings and acoustic buoys? Much more can be done to improve "dynamic management based on the whales' location" and make the ocean safer for them, but it is not being timely done.

The IWC Science Committee warned that recovery of whales, notably the NARW, must be based on a policy of building population resilience (<https://archive.iwc.int/?r=19528&k=ee6d3b4b0e>.) We need to go beyond "sustainability" when considering the variables or we will not save this species. For heaven's sake we should not be authorizing harassment of marine mammals when our knowledge is defined in so many words by NOAA as "unknown" or "more research is needed."

Incidental Harassment Authorizations are being wrongfully issued. Unusual numbers of whales are dying (UME) on the NY/NJ coast, coinciding with the start of ocean floor surveying. No further IHA should be granted until the cause is determined and stopped.

The USA Government has leased our sea to foreign nations and betrayed the MMPA. When whales die, so does the food chain (The Krill Paradox). If this continues, the oceans will die. The oceans produce 60-80% of this planet's oxygen. If the oceans die, then WE DIE. And that will be environmental justice.

Beware: Renewables don't equal clean. Wind Turbines require carbon energy to mine and manufacture; offsetting the carbon savings it provides during its short lifespan. Turbines cannot be recycled; it costs too much to separate the metals and rare earth minerals. No landfill can accommodate junk of this magnitude. We are paving our coastline with junk. Focus on the health of our oceans, hydrogen fuel, geothermal, nuclear energy, solar and other technology to lead the reduction of carbon emissions.



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Comment on proposed Atlantic Shores IHA

1 message

Jan Grönstrand <jan.gronstrand@aland.net>

Tue, Apr 11, 2023 at 6:55 AM

To: ITP.Potlock@noaa.gov

Cc: kodaisl@rogers.com

Hello!

Some comments on windpower, sent from the Baltic Sea.

Best regards,

Jan Grönstrand



Windpower-NOOA.pdf

1142K

Electricity:

Power: Kilowatt kW Megawatt MW = 1000 kW Gigawatt GW = 1000 MW
Terawatt TW = 1000 GW

Energy: = power x time, h = hour. Kwh, MWh, GWh, TWh

Electric grid

The electric grid in most of the world works with AC, alternating current. Polarity change from + to - 50 or 60 times/second, the **frequency** is 50 or 60 Herz (Hz). Production and consumption must be equal every moment. It is of utmost importance for the stability of the grid that frequency stays within +/-0.1 Hz. Greater deviations must immediately be corrected. Both too high and too low frequency is a serious deviation, that could make the grid collapse! If the frequency drops, the consumption is too high or production too low, some consumers must be shut off or the grid will collapse. Well known problem in California! A collapsed major grid could take days to restart. Too high frequency is just as bad, consumption must be increased or production cut down.

Thousands of generators are running in parallel and must turn at exactly the same rate. There are constant variations in the consumption, a lamp is switched on, an electric motor is started, another is shut down. To take care of such small variations, the rotational energy of heavy generators will take care of it like a flywheel evens out the rotational speed of a combustion engine. Such heavy generators will be found in nuclear plants, big coal/oil/gas fired power plants and big hydro power plants. All interconnected grids must be in phase. A disturbance in one grid will affect all other connected grids. Corrections must be done in a few seconds. Wind and solar power doesn't provide any rotational energy.

The variation in power production from windpower destabilize the grid. In practice there is a need for a complete back up system to provide electricity when there is no or little wind. Windpower shuts down also in too high wind. Transmission capacity of the grid is critical for the power, that can be connected to the grid. The maximum power from a big windfarm can be huge, many GW, while the average power delivered is only a fraction of the peak power. To build a grid adapted to the windfarms cost a lot of money, about the same as the windpower itself.

Windpower

The power given for windturbines is the maximum the generator can produce. In practice only about 35 % of installed power is reached as an average, the capacity factor, because of the variations in wind speed. Due to increased maintenance demand and erosion of the blades, this factor usually drops during the lifetime of the turbine and can go down to about 20%.

Windpower is a terribly inefficient way of producing electricity. The space requirement is huge as it only produce about 3 MW/km². (1 km² = 0.386 sq mile) It is also claimed that building windpower is the fastest way to meet the demand for more electricity. That is not true. South Korea has built several nuclear plants of their APR-1400 type with an average building time of 5 years. A Swedish onshore windfarm intended to produce 12 Twh/year, corresponding to APR-1400, has been under construction since 2012 and will not be completed before 2031!

The cost of windpower is given for the production and building of the farms and usually doesn't cover the cost of connection to the grid. Especially with offshore wind, this is a substantial part of the cost. The cost of offshore wind is much higher than for onshore wind, up to 3.5 times according to US Energy Information Administration (EIA). The common belief is, that the cost of windpower has decreased over time, but professor Gordon Hughes from University of Edinburgh, has shown that it is not true, and it will not decrease in the future. (***The Costs of Offshore Wind Power: Blindness and Insight.***) The big manufacturers Vestas, Siemens Gamesa and GE are all losing money!

Erosion and microplastic

Windpower has serious effects on the environment. The blades are manufactured from fibre reinforced epoxy, usually built on a core of balsa wood. Due to the very high speed of the blades, the leading edge erodes when it hits raindrops and small particles in the air. The erosion reduces the efficiency of the turbine and small plastic particles are released into the air and the environment.



The erosion is a major concern for the wind industry. Repairs are made regularly but finally the blades must be replaced. Onshore windturbines only 9 years old, have had their blades replaced and offshore there are cases when 5 year old turbines got new blades. The erosion is much more severe offshore due to salt in the air. Epoxy contains 30 – 40 % Bisphenol A, a toxic chemical, and also PFAS in the protective coating on the blades, another toxic non-degradable chemical plus a lot of other material. The micro and nano particles also contain glass- and carbon fibers with asbestosis-like effects.

The problem is so big, that recently a robot has been developed to do the repair job. This job includes the grinding down of the leading edge of the blades before repair work. This process increase the amount of particles released into the environment.

https://usercontent.one/wp/roperobotics.com/wp-content/uploads/2020/06/Rope_Robotics_process_07_720p_5Mbit.mp4?media=1665771456

Studies from the University of Strathclyde indicates a loss of 0.2 % of the weight of the leading edge of blade in 500 mm of rain. This doesn't sound very much, but due to the big size of the blades, 20 tonnes/blade for a medium sized turbine and about 80-90 tonnes/blade for the 15 MW turbines, 60 -250 kg of plastics might be released from a single turbine! Due to salt it could be more for offshore wind turbines. The release of plastic nano- and micro particles containing above mentioned chemicals, presents a serious health problem: [Green-Warriors-of-Norway-ECHA_REACH-Bisphenol-comments-and-evidence.pdf \(wind-watch.org\)](#) From the next picture it can be seen that a huge amount of plastic has been released into the sea. Plastic in the sea is among the greatest threat to marine life. Plankton will consume the poisonous nano particles and via the

chain of predators these particles will reach all animals including humans eating seafood.



This picture is from the Youtube video: <https://www.youtube.com/watch?v=pPeuHepz-J0>



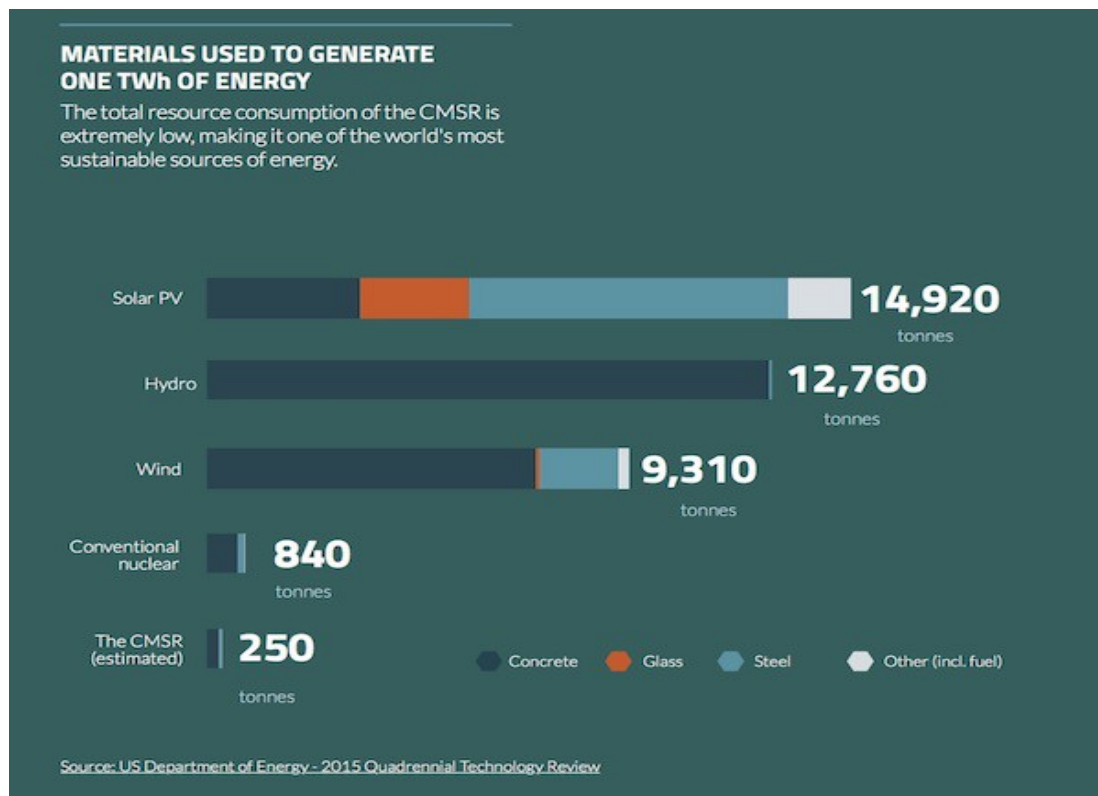
Severe leading edge erosion, reducing efficiency and polluting the environment.

Old blades

The life time for windturbines is maximum 20 - 25 years onshore and less offshore. Blades have normally been replaced at least once before the turbine is scrapped. Unfortunately, there is no established and known method of recycling old blades, they are classified as hazardous waste. In USA the amount of blades is said to be two million tonnes! Vestas has recently announced that they have developed a method for recycling by dissolving the epoxy using chemicals! We do not know yet if that is good or bad. <https://energyeducation.se/massive-toxic-wastes-from-wind-power-plants/> The size and weight of blades has increased dramatiacly since the video was published. The weight of blades for a 15 MW turbine is abt 3 x 80 tonnes.

Birds and bats

Birds are very exposed to the threat from windturbines. The fast turning blades hit and kill a great amount of birds. It is usually said that cats kill more birds than wind turbines but that is no excuse. The greatest threat to eagles and other birds of prey, is windpower. Offshore windfarms not only threatens seabirds. All migrating birds, bats and insects are at risk. All towers from 150 m height and upwards, must have a strong blinking white light in addition to the fixed red lights. This light attracts birds and insects. It is known that birds often are killed when flying into lighthouses. The blueish white light is similar to the light used in insect traps.



CMSR = Compact Molten Salt Reactor. Nuclear reactor of Generation IV type, can use thorium and old nuclear waste as fuel.

Natural resources

Windpower requires a hughe amount of material. To build windpower that produce 1 TWh electricity, 9310 tonnes of material is required, mainly steel and concrete. That is 11 times the amount needed for a conventional nuclear plant. The need for copper is also extremely high due to all cables needed to connect the turbines, roughly 9 times that of nuclear. Globally for an "all renewable" system the amount of copper needed is five times more than the total amount known to exist! The generator is equipped with permanent magnets as they provide the highest efficiency. To make permanent magnets the rare earth metals Neodymium and Dysprosium are needed and today only China is delivering these materials. For every tonne of these materials one tonne of radioactive

waste is produced. China is also the main provider of solar cells. It should be noted that solar power is the most material demanding source of energy. However, it produces about three times more energy/m² than wind!

Effects on the climate

Windmills contain SF₆, sulfur hexafluoride, a gas that is 22800 times stronger greenhouse gas than CO₂. The gas is used as an electrical insulator in transformers. Windturbines emit SF₆ and companies using the gas are obliged to report all emissions, but there is no control and there are twice as much gas in the air in Germany than what is reported. (Tagesschau 18.8.2022).

<https://www.tagesschau.de/wirtschaft/technologie/erneuerbare-energien-windkraft-treibhausgas-sf6-101.html>.

According to studies made by Professor David Keith and Lee Miller from Harvard, the disturbed windflow behind the windmills results in increased temperatures. If the need for electricity in USA was supplied by windpower only, the rise in temperature could be as high as 0.54° C. In nighttime it could be up to 3.5° C. Same information comes from Germany.

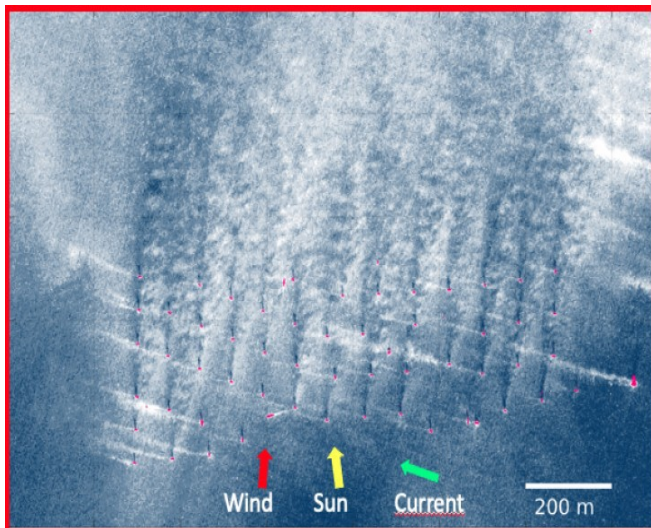
[https://www.cell.com/joule/fulltext/S2542-4351\(18\)30446-X?_returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS254243511830446X%3Fshowall%3Dtrue](https://www.cell.com/joule/fulltext/S2542-4351(18)30446-X?_returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS254243511830446X%3Fshowall%3Dtrue)

The Canadian scientist C L Archer has also shown, that big offshore windfarms affect the local climate. The high windturbines force damp air upwards, where it condensate and fall as rain in the sea. Nearby land gets drought. Generally windpower seems to reduce the amount of rainfall and also the dew. This is believed to explain many years of drought in Germany.

<https://www.tandfonline.com/doi/full/10.1080/14685248.2019.1572161>

Now Danish meteorologists are giving the same warning. Is it only a coincidence that areas with very high number of windturbines like California and Germany suffer from severe drought?

The scientists Akhtar et al have shown that large offshore windfarms impede wind and sea currents. (*Acceleration deployment of offshore wind energy alter wind climate and reduce future power generation potentials*, 2021).



The pictures show turbulence from wind farm Horns Rev in the North Sea.

Noise

There is a marked and disturbing noise from windturbines. People and animals in the vicinity suffer from disturbed sleep and noise day and night when it is not a flat calm. The noise level from the largest windturbines today of 15 MW is given as 118 dBA. Measurement in dBA is, however, not relevant when it comes to noise from windturbines. Measurement according to dBA filters out the low frequency noise, which is most dominant and disturbing. Infrasound, which is below the frequency humans can hear, affects humans and other living creatures. It has been shown, that it has

medical-physiological impacts, which, among other things causes cell changes in the body and affects the brain! Infrasound can, among other things, give rise to dementia.

<https://www.nature.com/articles/s41598-021-97107-8>

The above survey only covers low-frequency sound, not infrasound.

Infrasound

Infrasound, frequency <20 Hz, spreads very far via atmospheric layers and bounces far over water.

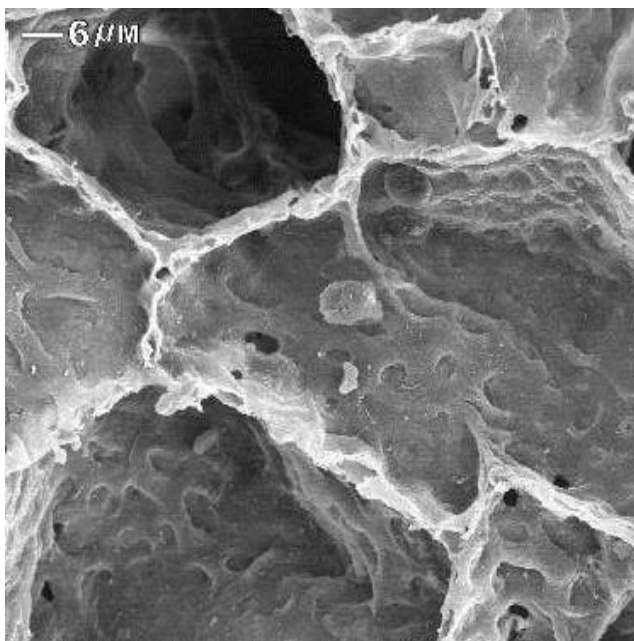
In both cases the air waves change to cylindrical propagation, where the attenuation is only 3 dB/twice the distance compared to 6 dB/ twice the distance at normal spherical propagation.

Scientific reports show propagation of high infrasound levels over 90 km.

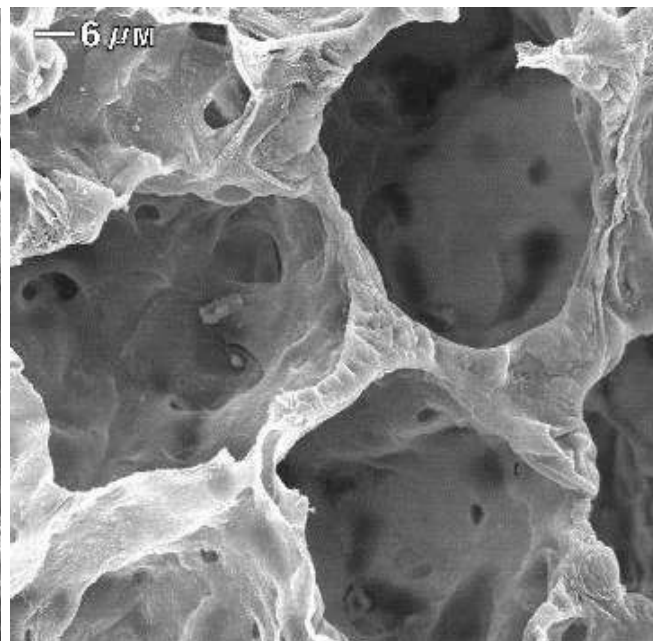
<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2014JD022821>

Infrasound is also emitted from offshore turbines into the sea. Whales are using infrasound for communication over huge distances. **The sound from windmills will interfere with this communication.** Floating wind farms are probably much worse in this respect as the platform acts as a loudspeaker into the sea. Most marine animals are sensitive to noise, not only mammals but many fish species such as cod, herring, salmon and flat fish.

Mariana Alves-Pereira, et al, a Portuguese scientist has studied infrasound for a long time and she has found, that people who have been exposed to infrasound from various technical sources, get thickenings in the pericardium, lung tissue and blood vessels and also changes in the brain that normally occur in the elderly. <http://epaw.org/documents/Dr-Pereira-%20ISBF-Glasgow-2017.pdf>
Below some pictures showing human tissue affected by infrasound.



Normal lung tissue



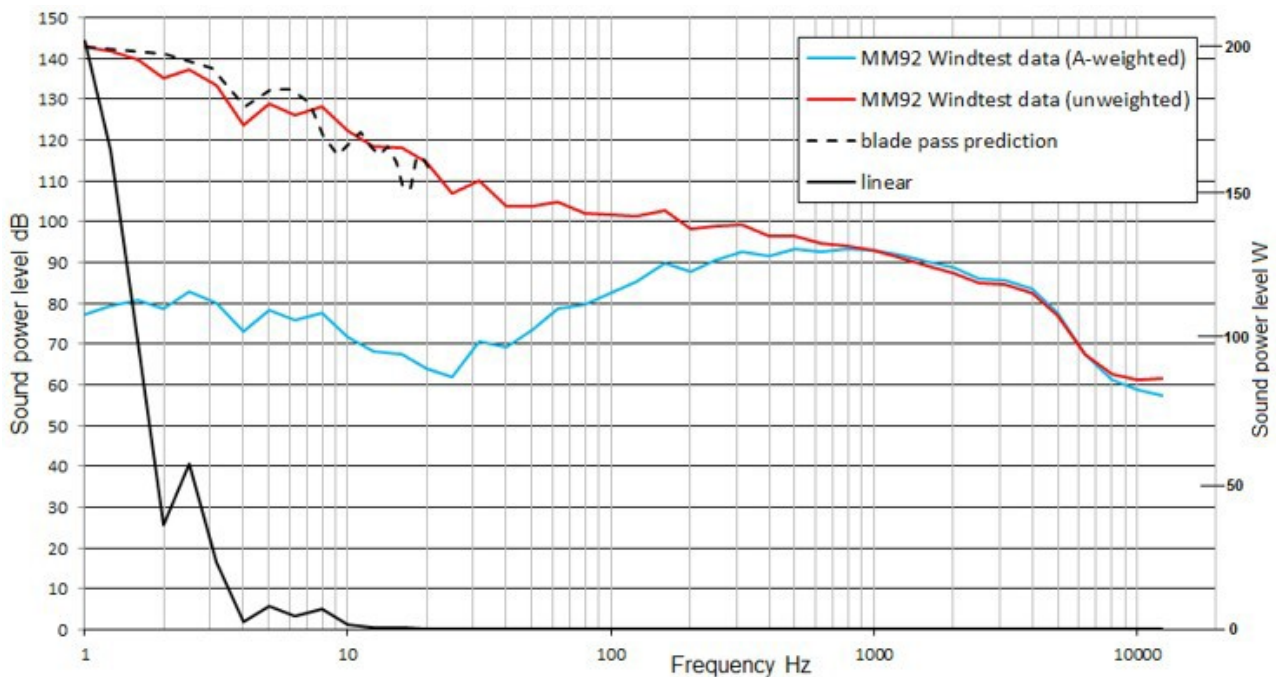
Lung tissue thickened by infrasound

Most probably this effect will be found on other living creatures also.

The Wind Turbine “Noise” Problem - Is it Infrasound, Low Frequency Noise, or Amplitude Modulation? John Yelland MA DPhil (Oxon) MInstP FIET MIOA AMASA. Glasgow 2017.

Below: Test Data. Vindturbine Servnion MM92. **2 MW power**

The figure below shows unfiltered sound above 140 dB at 1 Hz.



Acoustician John Yelland says: It is POWER and ENERGY that matter. The windpower industry denies that modern windturbines emit infrasound but they know it very well. However, the diagram shows that the main part of the energy is below 3 Hz. (Black line). This image shows the misleading interpretation that occurs when using the logarithmic dBA value, blue line, compared to unfiltered sound, red line. Measuring should be done without filter, dBZ. The real load must be described with physical values for force and energy per unit area. It then appears that all relevant energy development takes place as strong pulses below 3 Hz and which have medical and pathological effects on the pericardium, lungs, brain and blood vessels. **Note! This is a small turbine, new turbines will be up to 10 times ths size and certainly much higher noise level.**

From offshore windturbines the sound is transmitted through the tower or pontoons into the sea and the bottom. Marine mammals, salmon and cod as well as many other fishes are disturbed by noise and leave areas with high noise. United Nations Maritime Organization IMO has paid attention to the problem of underwater noise and has initited actions to reduce the noise from ships. Windpower on the contrary, will increase underwater noise.

Light

Windturbines must be fitted with warning lights. They shall all have a fixed red light and if the total height is 150 m or more, there must also be an intense wite blinking light. The light has a great influence on insects, birds and bats, who generally move at night. They are attracted by the light and lose their bearings. In cloudy weather the light is reflected from the clouds back to earth and the ground is lit up. Nocturnal animals on the ground are disturbed and many of them are extremely sensitive to light. Some plankton species are also nocturnal and rise to the surface only at night. With a disturbing light they will stay in the deep, the effect of which is unknown. The blinking light is even more disturbing than a fixed light.

Accidents

Windturbines in the 3 – 4 MW size contains abt 800 liters of gearbox oil, 2000 liters of transformer oil and also hydraulic oil. When a windmill collapses, which is not uncommon, this is all spread in the environment. In the new big 15 MW turbines the amount of oil is much greater. Accidents are not uncommon, in Sweden 4 turbines lost blades and one collapsed entirely within just 12 months.



Accidents are just as common in offshore windfarms. The difference is there is no way of saving any debris so it will all pollute the sea.

Carbondioxide (CO₂)

Windpower is said to be carbon free but is that true? According to Swedish company Vattenfall, operating both windpower and nuclear plants, CO₂ emissions from windpower is 12gr/kWh and 3 gr/kWh from nuclear. That is probably an underestimate of CO₂ from windturbines. Side effects as the need for large new grids are not included. All infrastructure work cost CO₂.

Navigation and shipping

Offshore windfarms present a hazard to navigation. In case of an engine failure in bad weather close to a windfarm, the ship might crash into a tower. In 2018 there was an accident in Sweden, when a RoRo vessel suffered engine failure and collided with a lighthouse, breaking the lighthouse off. At the end of 2022 a big passenger ferry was drifting uncontrollably for many hours with fire onboard. Some time later a cargo ship drifted with engine trouble for many hours before they got the engine running again. These situations were resolved, but had there been a windfarm nearby it could have ended in disaster.

SAR operations

Offshore windfarms present a problem for aerial reconnaissance in sea rescue operations. Search operations with aircraft and helicopter can usually be performed also in cloudy weather with low cloud base. This could be prohibited by windfarms. Sea rescue operations inside a windfarm may be hampered. If a ship has crashed into a windturbine it might be too dangerous or impossible for a helicopter to rescue the crew. It might be possible with a lifeboat, but rough seas will make it very difficult or even impossible. A simple incident might end in a disaster.

Building process

Offshore windfarms with hundreds of turbines will have a big effect on the bottom during building. Sediments will be moved and swirl up. Building of the foundation is only part of the impact, all cables might cause even larger intervention in the bottom. Cables must be buried for protection. The bottom will be destroyed as a habitat for plants and animals for a long time.

Operation

During operation there will be a constant demand for maintenance and repair. This requires intensive boat traffic in the area. The Baltic Sea and many other areas intended for windfarms, are already heavily affected by ship traffic with major noise disturbances. The windturbines and the service vessels will now add to the noise.

The windturbines are emitting noise, as explained above, and this noise is transmitted into the sea. But there are also vibrations propagating through the tower into the bottom. This could affect the bottom structure. The same problem occurs on land with soil compaction. The electric cables will generate heat, that will spread in the bottom. They will also create magnetic fields. This could change the environment for all life on the bottom. This effect has not been studied.

Decommissioning

Decommissioning of the turbines will take place after 20 – 25 years onshore and probably much earlier offshore according to studies by professor Gordon Hughes, University of Edinburgh, although windpower companies claim 40 – 45 years. How will this be financed? There is no money funded as has been done in the nuclear industry.

Decommission will again result in an increased ship traffic for many years. The seabed will again be disturbed affecting any life that is still there.

Taking care of the blades

<https://energyeducation.se/massive-toxic-wastes-from-wind-power-plants/>

The blades are classified as hazardous waste. It amounts to some million tonnes. In USA there are about 2 million tonnes of windturbine blades already. Today there is no established method for recycling reinforced plastic. Vestas claims they have developed a method using chemicals to dissolve the plastic material. This has not been tested in scale yet. In the report **Road to EU Climate Neutrality by 2050** this is pointed out as a problem and is **compared to handling of nuclear waste**. This report also concludes that: *While nuclear requires a tiny bit of land to provide a whole lot of power at a low cost, wind and solar require a whole lot of land to provide a tiny bit of power at a high cost.*

Military aspects

An offshore winfarm emits a lot of noise in all frequencies. That means it is not possible to detect a submarine within a windfarm. A passive sonar (hydrophone) cannot detect any noise from a submarine due to all other noise. An active sonar will not find it because there will be hundreds of echoes from all the towers and a submarine cannot be singled out. **Will it be nice to have a Russian sub hiding somewhere along the coast?**

(The author of this document worked for many years with the design, building and testing of the Swedish Gotland class submarines)

Jan Grönstrand, M.Sc.

Mariehamn,

Aland Islands (in the Baltic Sea)



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Comment on proposed Atlantic Shores IHA

1 message

wellbeingawareness@comcast.net <wellbeingawareness@comcast.net>

Mon, Apr 10, 2023 at 9:39 AM

To: ITP.Potlock@noaa.gov

Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

Ms. Harrison,

Thank you for choosing to work in a profession which strives to protect our natural resources. It is no doubt a challenging and rewarding calling and I applaud your efforts in such a great service to others.

Although I have no formal training in environmental sciences, I have supported conservation and preservation of the wellbeing of our environment since I can remember. Since becoming aware of the offshore wind development taking place off the East coast a few weeks ago, I have been researching and struggling to understand the myriad facets of this challenging endeavor. What I am struggling with is that I have found countless contradictions in information regarding activities and the protection of marine mammals and other marine life. They are protected, especially if they are endangered, yet if requested, harm is permitted. The critically endangered NARW needs urgent help from the US and Canada to survive, but massive offshore wind developments are approved along their habitat. A plethora of IHA's have been issued, including ones specifically for the marine characterization surveys yet government agencies claim there is no connection to marine mammal deaths.

The NOAA report [Fisheries and Offshore Wind Interactions: Synthesis of Science \(noaa.gov\)](https://www.noaa.gov/fisheries-and-offshore-wind-interactions-synthesis-of-science) if nothing else, confirms there is not enough evidence on impacts of offshore wind development to the environment. I've found report after report, worldwide, of the damaging effects of wind turbines, on land and sea, and no doubt others are slowly becoming aware as well. Here is one example <https://www.taipeitimes.com/News/taiwan/archives/2019/05/12/2003714999>

I've attached the World Wildlife Fund position paper because it emphasizes a balanced approach to addressing climate change while conserving our natural resources. May you please put your passion for the environment into taking action now as EVERY DAY marine mammals are, at the very least, potentially suffering and we are one step closer to damaging the food chain of our oceans and the world.

Sincerely,

Sylvia Lockwood

Cape May Court House, NJ



WWF position paper highlighted.pdf
15392K



NATURE PROTECTION AND OFFSHORE RENEWABLE ENERGY IN THE EUROPEAN UNION

Position Paper

WWF European Policy Office

May, 2021

CONTENT

EXECUTIVE SUMMARY	3
THE ROLE OF OFFSHORE RENEWABLES IN MEETING CLIMATE & ENERGY TARGETS	5
Regulations and investment	6
Across borders: regional cooperation and transdisciplinary frameworks	7
Offshore renewable energy and a just transition	8
Technical considerations for energy efficiency of offshore wind turbines	9
Spotlight on hydrogen: an energy carrier receiving a lot of attention	10
OFFSHORE RENEWABLES IN THE MARINE ENVIRONMENT	12
Understanding the risks posed to the marine environment	13
Upstream concession site designation, avoiding rather than mitigating impacts	16
Conceiving sustainable infrastructure: Building in, with or for nature	23
Before construction, making sure the “Green light” really is green: the need for effective EIAs	27
Circular Design	29

EXECUTIVE SUMMARY

Climate change and biodiversity collapse are the two greatest threats facing both humans and nature today. These crises are intertwined, and must be addressed jointly. In parallel, solutions put forward to address one of these crises should not contribute to worsening the other one.

To limit global temperature increase to 1.5°C as set in the Paris Agreement, the EU must achieve climate neutrality by 2040, thereby eliminating fossil fuels and achieving a 100% renewables-based energy supply as soon as possible. Alongside energy sobriety, offshore renewable energy constitutes an essential part of the energy transition towards a resilient and fully decarbonized economy, and is indispensable in achieving a climate neutral Europe. Tremendous efforts at EU level are now needed to provide the enabling conditions for substantially increasing renewable energy capacity by 2030. The development of the EU's offshore renewable energy sector will generate employment opportunities, contributing to the EU's sustainable blue economy and supporting economic recovery following the Covid-19 pandemic.¹

At the same time, development of offshore renewables adds to the already numerous other economic at-sea activities, which add their own pressures to marine ecosystems. Thus, offshore renewable energy projects must be considered within the broader context of our ocean's degrading health due to overexploitation of resources, pollution, acidification and habitat destruction, to name a few causes. Beyond implications for biodiversity, this trend is problematic from a climate perspective, as the ocean plays a vital role in regulating our planet's climate.

Offshore renewable infrastructure is still infrastructure. It needs to be subject to best-practice planning and design, and requires rigorous evaluation using both environmental impacts assessments (EIA) and strategic environmental assessments (SEA). When developing offshore renewable projects, it is therefore crucial to adopt an ecosystem-based approach, use marine space carefully and support ocean resilience by staying within ecosystem boundaries.

Offshore renewable energy development will only achieve its objective of supporting the EU's transition towards truly sustainable societies if it offers solutions for the climate crisis that are fully compatible with marine biodiversity recovery, ocean resilience and a just energy transition. This paper primarily refers to offshore renewable wind energy in examples as it is the most mature offshore renewable energy to date, however the principles outlined also apply to tidal, floating solar, wave and indeed, any future renewable energy in the maritime space.

¹ High Level Panel for a Sustainable Ocean Economy, Transformations for a Sustainable Ocean Economy, <https://oceanpanel.org/ocean-action/files/transformations-sustainable-ocean-economy-eng.pdf>

Key policy recommendations

- The increased deployment of offshore renewable energy needed to meet the EU's climate and energy targets **must not be done at the expense of environmental protection in European seas and should not compromise existing biodiversity targets in the EU.**
- Regional cooperation, between Member States and neighbouring states, should be fostered through joint planning and acting on regulatory barriers, and also by **creating regional marine spatial usage maps** that are accessible to all stakeholders and regularly revised via a robust common monitoring framework.
- Investments in offshore energy projects should align with the Paris Agreement, actively support the UN Sustainable Development Goals and should be consistent with both the 'energy efficiency first' principle and Do No Significant Harm criteria set out under the EU Taxonomy.
- Transparent and inclusive participatory processes and stakeholder involvement will be crucial in preventing and solving conflicts with other sea space users and uses. Offshore renewable energy projects should be developed in **full respect of the Partnership Principle**, as enshrined by the European Code of Conduct on Partnership, and should be included under development plans created at the local and regional level which aim to develop **secure supply chains and decent jobs.**
- The development of offshore renewable energy should be integrated with other relevant EU policies. It should be aligned with a coherent and accelerated action plan for marine **conservation and restoration**. Offshore renewable energy projects' site location should be based on ecosystem-based and forward-looking **Maritime Spatial Planning** and effective **Strategic Environmental Assessments**. Offshore renewable development also needs to be aligned with the requirements set up by the **MSFD** for Sustainable Blue Economy planning and implementation.
- As a first principle, **renewable energy developments should not be placed within Marine Protected Areas (MPAs) and other ecologically valuable areas for sensitive species and habitats.** In particular, they must not be allowed in EU strictly protected areas designated as such under the EU Biodiversity Strategy.
- Member States should always subject offshore renewable energy projects to inclusive, transparent and effective **Environmental Impact Assessments (EIAs)**, including outside of protected areas.

THE ROLE OF OFFSHORE RENEWABLES IN MEETING CLIMATE & ENERGY TARGETS

We are in a race against time. We have less than a decade to limit global temperature increase to 1.5°C and avoid the most catastrophic impacts of climate change. Under current policy scenarios, the world is still heading for a temperature rise just under 2.9°C this century².

According to the UN Emissions Gap Report 2019, **the EU must cut greenhouse gas (GHG) emissions by at least 65% compared to 1990 levels by 2030** if it is to do its share to stay below the 1.5°C, and that is without taking into account equity-related issues such as the EU's wealth and responsibility for historical emissions. This would translate into a yearly GHG emissions reduction rate of 7.6% per year.³

In the longer term, the IPCC projects that the world would need to become carbon neutral by 2050 for a 50% chance of staying below the 1.5°C temperature goal.⁴ At EU level, **it is both feasible and necessary that the EU achieves climate neutrality by 2040**. According to various studies⁵, this can be done through a **complete phase out of fossil fuels - including gas - and a switch to a 100%-renewables based energy system by 2040**. At the same time, individual and collective solutions must be applied across all sectors, through a more efficient use of our energy, behavioural change and generalised public participation, and dedication to environmental and biodiversity protection.

Huge efforts are needed if we are to create the enabling conditions at EU level for substantially increasing renewable energy capacity during this decade. The EU's target of at least 32% of renewable energy by 2030 has been an important driver of climate action, but it is insufficient to achieve a fully decarbonised economy by 2040, and it should be increased to **at least 50% by 2030**.

Whereas most of the renewable energy capacity is expected to be covered by onshore wind and solar energy, deployment rates of offshore wind energy are also predicted to grow substantially. As the European Commission stated, *"Europe's seas will be at the forefront of the EU's efforts to go carbon-free: offshore wind will be the fastest growing technology"*⁶. Commitments have been made at EU-level to massively deploy offshore wind energy during this decade, from 12 GW today⁷ to 3 to 5 times this amount in 2030.

² See: <https://climateactiontracker.org/global/temperatures/>

³ UNEP, "Emissions Gap Report 2019", 26 November 2019.

⁴ IPCC, "Global Warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty", December 2018, p. 96.

⁵ See for example: Climate Action Network (CAN) Europe and European Environment Bureau, "Building a Paris Agreement Compatible (PAC) energy scenario", June 2020; DIW Berlin, "Make the European Green Deal Real – Combining Climate Neutrality and Economic Recovery", June 2020; Climact, "Increasing the EU's 2030 emissions reduction target", June 2020; LUT University, "100% renewable Europe. Leadership scenario", May 2020.

⁶ European Commission, "Impact Assessment: Stepping up Europe's 2030 climate ambition", September 2020, p. 59.

⁷ WindEurope, "Offshore Wind in Europe: Key trends and statistics 2019", February 2020.

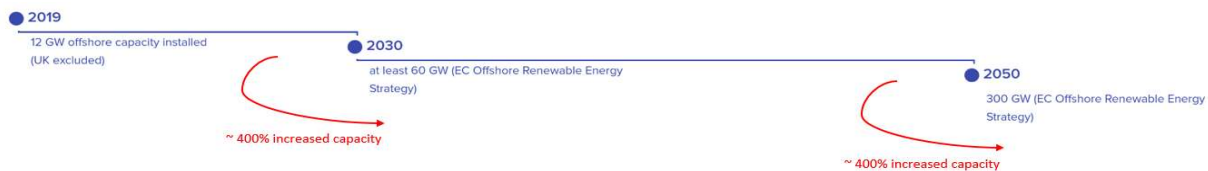


Figure 1: Timeline of offshore renewable energy deployment, according to milestones outlined the European Commission's Offshore Renewable Energy Strategy

In our race to decarbonise our energy systems, we must not forget the underlying objective of this climate transition, which is to stop the degradation of the planet's natural environment, for the benefit of nature and people. Since 1980, the ocean has absorbed up to 30% of human-induced CO₂ emissions⁸, and this is just one of the many invaluable services it provides to our societies - however, to fulfill this task, marine environments have to be healthy and resilient. Yet today, our ocean ecosystems are under increasing pressure and it is crucial to adopt an integrated approach and respect ecosystem boundaries when rolling out offshore energy. Ignoring the carrying capacity of marine ecosystems means contributing to altering the ocean's natural capacity to regulate climate, ultimately defeating the purpose of the clean transition.

Good governance is essential to ensure that deployment of offshore renewable energy occurs in a nature-friendly manner and supports a just energy transition that leaves no one behind. It is important to recognize that realizing offshore renewable energy's full potential in Europe should not compromise the achievement of both Good Environmental Status and Favourable Conservation Status in EU Waters, as well as the marine protection targets embedded in the EU Biodiversity Strategy. While technological innovation may permit ramping up of offshore renewable energy production in the future, through e.g. cost reduction or more efficient use of space, such increase in production must not be done at the expense of environmental protection in EU seas. Wise spatial planning outside of sensitive areas, using marine space in a careful and considered manner while preserving ocean resilience, and working in a nature-based way while adhering to precautionary principles are all considerations that need to be taken into account when meeting energy targets. In other words, reaching energy production targets is an equation within which environmental requirements are a constant, and technological innovation is a variable that will evolve positively over time.

Regulations and investment

The various forms of offshore energy production, such as offshore floating wind and solar power, wave and tidal energy require different regulatory approaches adapted to both their different environmental impacts and their financial support needs in terms of innovation and deployment.

Public procurement rules and investment incentives should ensure that companies across the supply chain commit to upholding the principles of decent jobs⁹, while crucially driving sustainable investment and renewable supply chain development. This means that investments should be incentivised in a consistent manner with the 'energy efficiency first' principle and should not harm biodiversity and environment goals as set out by the EU Taxonomy. For instance, the United Nations Environment Programme's Finance Initiative (UNEP-FI) recently published guidelines for investors in offshore renewables, based on an analysis of the various policy, regulatory and reputational risks associated with the impacts of those projects.¹⁰ Public procurement rules should therefore

⁸ IPCC, Special Report on the Ocean and Cryosphere in a Changing Climate, 2019.

⁹ See ETUC's definition of quality jobs as having good wages, access to social protection, lifelong learning opportunities, safe and healthy working conditions, reasonable working hours and trade union representation:

<https://www.etuc.org/en/document/etuc-resolution-defining-quality-work-etuc-action-plan-more-and-better-jobs#:~:text=the%20following%20features%3A-,Good%20wages,with%20good%20work%20life%20balance>

¹⁰ United Nations Environment Programme Finance Initiative (2021) Turning the Tide: How to finance a sustainable ocean recovery—A practical guide for financial institutions, <https://www.unepfi.org/publications/turning-the-tide/>

also align with the Paris Agreement and ensure that investments are consistent with and actively support the UN Sustainable Development Goals.

Many of the issues arising with regards to the deployment of renewable energy sources - in particular in Eastern Europe - relate to investor risk and policy uncertainty. It would be relevant to dedicate EU funding for regulatory and capacity support for local municipalities wishing to develop projects. One such project is France Nature Environnement's 'Éoloscope offshore'¹¹, a planning tool for territorial dialogue that allows organisations to better understand their own and others' positioning on offshore wind projects, allowing for informed positions on the feasibility and acceptability of an offshore wind project and identification of contentious issues early on.

Across borders: regional cooperation and transdisciplinary frameworks

It is important to recognise the added value of cross-border offshore renewables development as a tool for increasing domestic renewable energy sources and reducing costs through economies of scale and space. Furthermore, ecosystems do not follow man-made borders, and can be connected beyond frontiers. Regional cooperation and planning at a sea-basin scale is therefore vital.

The EU constitutes an appropriate level to design an enabling framework and provide adequate funding to foster regional cooperation between Member States and better integrate offshore renewable energy in their energy systems. However, regional cooperation cannot be restricted to EU Member States. EU Member States should also cooperate with bordering third parties, for instance in complex sea basins such as the Mediterranean, or with neighbouring countries such as the UK and Norway in the North Sea or Russia in the Baltic Sea.

Regional cooperation should be the guiding principle for planning and developing offshore renewable energy sources. The EC shall foster regional cooperation between Member States and neighbouring States through an enabling framework and funding. High Level Groups based on the North Sea Energy Cooperation (NSEC) example for the North Sea or the Pomeranian Offshore Wind Conference for the Baltic Sea should be established for the Black Sea and the Mediterranean Sea. In addition to carrying out joint planning and acting on regulatory barriers, it offers the opportunity for creating regional marine spatial usage maps, which enable centrally storing data and maps for all stakeholders to access.¹²

Nevertheless, storing data and maps and sharing them through common platforms only constitute a first step, which must be complemented by a review mechanism of the general transdisciplinary framework that integrates socio-economic, governance and environmental dynamics in space and time, including across borders. Offshore renewable projects must be taken into account holistically, both as part of a national MSP process and through a regional coherent process. In order to adapt to changing conditions, it will be critical to deepen the analysis on adaptive governance and understand the key socio-ecological relationships on which governance depends at national, regional and EU levels. To do so, a regular revision mechanism for both MSP plans and processes should be coupled with a robust monitoring framework to help countries ensure their plans are effective, feasible and relevant, as well as to allow them to put into practice the precautionary principle when in doubt. To ensure cross-border consistency and effectiveness, countries should work on common monitoring frameworks.

¹¹ For more information see France Nature Environnement, *Éoloscope offshore*, 2020, final version expected second semester 2021, current working version available at: https://ged.fne.asso.fr/silverpeas/LinkFile/Key/fa8009ab-0cfa-4dd8-b954-2c9a05948d12/%C3%89oloscope_offshore_v0_web.pdf

¹² For instance see Helcom, Map and Data Service, <https://helcom.fi/baltic-sea-trends/data-maps/>

Offshore renewable energy and a just transition

The clean energy transition is expected to be positive for overall job creation¹³. Yet, offshore renewable energy development can have different local impacts, as well as offer opportunities, and should therefore be developed in a transparent, open and inclusive way to ensure positive effects are optimised, negative impacts mitigated, policy resilience and community buy-in. Offshore renewable energy projects should be developed in full respect of the Partnership Principle as enshrined by the European Code of Conduct on Partnership and in line with best community led local development practices¹⁴.

Renewable value chains will need to grow to meet offshore renewable energy goals. The jobs created in manufacturing, maintenance and decommissioning activities of offshore renewable infrastructure, as well as indirect activities linked to the value chain, must first and foremost benefit regions which have been negatively impacted by the transition. The EU must look to develop value chains in Europe to maximise the social and environmental value of the transition.

Efforts to foster a just transition should be particularly implemented in regions negatively affected by the transition to ensure that jobs lost in fossil sectors are replaced by sustainable ones. These jobs should contribute to an economy that is sustainable, circular and consistent with the Paris Agreement commitment to limit global average temperature rise to 1.5°C. Furthermore, to be sustainable in the long-term and to be consistent with a just transition, the jobs created in the offshore renewable value chain must also be decent, ensured through commitment to social dialogue and collective bargaining.

Clear, comprehensive and inclusive development plans are needed, at the territorial level to develop and maintain secure supply chains and service provision, including through targeted reskilling and upskilling of existing and future offshore workers. They should be backed up by national and EU commitments and strategies over the long-term, including through long-term financial frameworks. In addition, minimum time-bound targets for reskilling existing workers in the oil and gas industries within the local area, with a clear plan to achieve this, would also be helpful and contribute to delivering a just transition for workers.

Local-level capacity building and administrative support for municipalities are vital to ensure good local plan development. This will enable these important stakeholders to engage in the development of renewable projects and also to ensure they truly benefit communities and lead to a redistributive and just transition. Local-level engagement should also ensure that strategies are developed in a holistic way, aiming to unlock sustainable synergies with fishing communities and sustainable tourism, while natural resources and biodiversity are protected and ecosystem functions vital for people's wellbeing are preserved.

Finally, offshore renewables projects should always benefit local communities and contribute to a redistributive transformation of the energy system. As an example, support to the development of offshore renewables may require regulatory measures to improve the access for community energy schemes, which can in turn reduce energy poverty and redistribute the costs and benefits of the transition fairly.

¹³ Offshore wind is estimated to generate approximately 4.9 direct jobs and 4.2 indirect jobs for every 1 million euros invested, while oil and gas generate 0.8 direct and 1.8 indirect jobs (figures taken from "UK export finance and domestic jobs" (2020) by Vivid Economics based on "Garett-Peltier "Green versus brown: Comparing the employment impacts of energy efficiency, renewable energy, and fossil fuels using an input-output model" (2017)")


¹⁴ An example of pioneering practices is illustrated in the "People's Transition:Community-led Development for Climate Justice" report (2020) by TASC and FEPS. Available here: https://www.feps-europe.eu/attachments/publications/feps-tasc_the_peoples_transition_-_2020.pdf (accessed 05/03/2021). Other examples and guidelines of good practices exist, for examples, the Europe Beyond Coal "Seven Golden Rules for Open and Inclusive Just Transition Planning", available here: <https://beyond-coal.eu/2019/07/15/seven-golden-rules-for-open-and-inclusive-just-transition-planning-at-the-regional-level/>

Technical considerations for energy efficiency of offshore wind turbines

Energy production optimisation is a key consideration when constructing an offshore wind farm. From an energy perspective, the wind density equation in the figure below is central to decisions concerning location of turbines, spacing between turbines, blade size and tower height. As can be seen from the formula below, wind speed is the most influential factor in achieving maximum energy production. At higher tower heights, the wind is stronger and more stable and larger blades can capture more wind. A larger swept area and higher wind speeds mean more mechanical power and thus, more electrical power from the generator. This optimisation of energy output is why engineers and developers increasingly favour higher turbines with larger blades.

Another consideration for maximizing the energy capacity of wind turbines is spacing between turbines. Interference, when turbines reduce the wind available to any turbines downwind of them, increases the closer wind turbines are to one another and results in decreased energy production. Wind speeds being reduced around and downstream of wind turbines as they convert kinetic energy to electricity, is often referred to as the 'wake effect'.¹⁵ This can also lead to increased drag and turbulence, as turbines too close together allow turbulent air leaving the blades of one to pass on to turbines downstream. This stresses internal components, shortening the lifespan of the turbine, and can also worsen noise issues in the surrounding environment.

At sea, wind turbines have more space and the farther they are placed from buildings and topography, which increase turbulence, the stronger and more stable the wind is. Spacing is a delicate calculation as the farther apart turbines are the more costly the wind farm becomes. Furthermore, the Betz theory states that no horizontal axis wind turbine can extract more than 59.3% of kinetic energy from wind, this is known as the 'Betz limit'. Optimal functioning of wind turbines is impacted by a number of environmental factors meaning that one cannot rely on them to function at constant peak capacity, resulting in developers needing to compensate with a higher number of wind turbines in order to meet energy targets. From a policy and developer perspective, detailed analyses are undertaken to find the correct balance between efficiency in terms of spacing, energy targets, size and number of wind turbines, and the corresponding costs of space and materials.


$$= \frac{1}{2} p A v^3$$

Wind density
(power available)

A = swept area **v** = wind speed
p = impact of air density (power)

Figure 2: Wind density equation, used to calculate the theoretical maximum power available to a wind turbine.

¹⁵ See Agora-Energiewende's study 'Making the Most of Offshore Wind': https://static.agora-energiewende.de/fileadmin/Projekte/2019/Offshore_Potentials/176_A-EW_A-VW_Offshore-Potentials_Publication_WEB.pdf

Spotlight on hydrogen: an energy carrier receiving a lot of attention

Achieving decarbonisation of the economy will require integrating significant amounts of renewable energy sources into all sectors (e.g. industry, buildings, transport) and having recourse to high levels of direct electrification in the heating and cooling, and transport sector. A circular economy and a steep reduction in energy demand will also be essential to meeting our climate and energy goals. In some sectors however (e.g. aviation, shipping and heavy freight, production of steel, and basic chemicals), direct electrification will not be sufficient to meet energy demand and thus renewable hydrogen will play an important role. This has led to strong interest in hydrogen at the EU level, particularly regarding its production via offshore wind, and it is important to highlight here the disadvantages of hydrogen in the energy transition and also where it could, in specific circumstances, be used.

Contrary to the hype surrounding it, hydrogen is not a magic wand for instant decarbonisation. It is not an energy source but an energy carrier (like electricity), and it is only considered a clean energy source insofar as the energy that was used to produce it emanates from 100% renewable energy sources. Renewable hydrogen refers to the reliance on renewable energy sources (solar and wind) to provide an electric current for electrolysis. Yet today, over 95% of all hydrogen production is fossil-fuel based¹⁶ and is mostly used for industrial chemical purposes.

Producing hydrogen entails significant energy losses, and also has a major impact on the environment through considerable water usage coupled with land and sea use. Current uses of hydrogen are mostly unsustainable and directed towards industrial applications which are expected to decrease in the coming decades (e.g. oil refining providing car fuels, ammonia for fertilizers, methanol), and so are not compatible with climate targets. A major shift in the production and use of hydrogen in Europe is needed before it can hold any promise to help decarbonise our economy, starting with producing only renewable hydrogen.

In addition to the aforementioned environmental and sustainability issues of current hydrogen production, the problem of energy inefficiency is also associated with hydrogen as it is an energy carrier. The European sea space is limited, in addition to the environmental conservation imperative, by a vast number of uses (military, fisheries, maritime routes, etc) and so space for new activities must be allocated through careful and coordinated planning. The potential proliferation of hydrogen energy clashes with its poor energy-efficiency record: around 60% of the original electrical energy is lost during the conversion of electricity into hydrogen through electrolysis and then of hydrogen back into electricity. Hydrogen production in this instance would lead to multiplication of windfarms in an already-crowded and pressured seaspace, with inefficient energy returns.

Taking all of these issues into account, we recommend that both onshore and offshore renewable hydrogen should only be produced from a surplus of renewables capacity. Within this scope, hydrogen will constitute a valuable asset to the clean transition, balancing the electricity grid by decreasing pressure on the electricity grid during peaks in demand and providing seasonal storage.¹⁷

¹⁶ IRENA, Hydrogen from renewable power: Technology outlook for the energy transition, (2018), p. 13, <https://www.irena.org/publications/2018/Sep/Hydrogen-from-renewable-power>.

¹⁷You can read more about our hydrogen position ' WWF European Policy Office 'Climate neutrality by 2040: can hydrogen help?', available at: https://wwwfeu.awsassets.panda.org/downloads/hydrogen_wwf_eu_position_summary_april_2021_final.pdf

Box 1: Recommendations on the use of offshore renewables in meeting climate and energy targets

- The increased deployment of offshore renewable energy needed to meet the EU's climate and energy targets must **not be done at the expense of environmental protection in EU seas**.
- Regional cooperation, between Member States and neighbouring states, should be fostered through joint planning and acting on regulatory barriers, and also by **creating regional marine spatial usage maps** that are accessible to all stakeholders and regularly revised via a robust common monitoring framework.
- Hydrogen acquired using offshore renewable energy should only be produced from **surplus renewables capacity**.

Box 2: Recommendations to ensure a fair deployment of offshore renewables

- Investments in offshore energy projects should align with the Paris Agreement, actively support the UN Sustainable Development Goals and should be consistent with both the 'energy efficiency first' principle and Do No Significant Harm criteria set out under the EU Taxonomy.
- Offshore renewable energy projects should be developed in **full respect of the Partnership Principle**, as enshrined by the European Code of Conduct on Partnership, and should be included under development plans created at the local and regional level which aim to develop **secure supply chains and decent jobs**.

OFFSHORE RENEWABLES IN THE MARINE ENVIRONMENT

Offshore renewable energies are vital to the energy transition. However, the United Nations Environment Programme Finance Initiative acknowledged in 2021 that “as *marine renewables grow in prominence, there is also a clear need for greater clarity on their impacts on society and the environment as well as how they interact with other users of the marine environment*”.¹⁸ WWF promotes a transformational change to a sustainable, “blue” economy that provides social and economic benefits for current and future generations; restores, protects and maintains the diversity, productivity and resilience of marine ecosystems; and is based on clean technologies, renewable energy, and circular material flows.¹⁹

It is imperative to acknowledge that offshore renewable energy projects are industrial infrastructure projects. Throughout their development cycle, their environmental impacts must be understood so as to best be avoided and to be addressed to avoid further degradation of our marine ecosystems. The example of offshore wind energy is illustrated below.



Figure 3. Overview of an offshore wind energy project broad development cycle. WWF, 2021.

¹⁸ de Vos, K., Smith, J., Bruneau, N., Fritsch, D., Wilson, C., Garfunkel, A., Rising Tide: Mapping Ocean Finance for a New Decade, The United Nations Environment Programme Finance Initiative, 2021, https://www.unepfi.org/wordpress/wp-content/uploads/2021/02/The_Rising_Tide-Mapping_Ocean_Finance_for_a_New_Decade.pdf

¹⁹ WWF, Deep seabed mining is an avoidable environmental disaster, 2021, https://wwf.panda.org/wwf_news/press_releases/?1416441/Deep-seabed-mining-is-an-avoidable-environmental-disaster

Understanding the risks posed to the marine environment

Offshore renewable energy projects are vital to implement the energy transition. However, their potentially significant negative impacts on marine and coastal environments must also be acknowledged, so that they are best avoided and managed.

Currently, the most prominent form of offshore renewables is offshore wind farms. Hence, they are the renewable energy infrastructures with the most data available regarding their environmental impacts. Pressure resulting from offshore wind farms typically consists of construction and operational noise, for instance from ship traffic for service and maintenance, shifts in hydrodynamics and sedimentation dynamics, habitat change, degradation or loss, potential reef or fish aggregating device (FAD) effect, electromagnetic fields and increased water temperature due to cables, various forms of pollution and waste such as chemical releases due to sacrificial anodes and anti-corrosion coatings, artificial lights, risks of collision, migration barriers^{20,21,22,23,24}.

Due to these impacts, offshore wind farms affect all surrounding ecosystems below and above water, including benthic species and communities, phytoplankton, fish, marine mammals, turtles, as well as birds and bats.

Furthermore, the effects of offshore wind farms on the marine environment also have a temporal dimension. As such, their importance may vary according to migration seasons for birds or cetaceans, spawning seasons for fish, or based on other seasonal pressures of human origins such as fishing seasons.

Lastly, it is worth noting that the impacts and risks vary depending on the technology used, as well as the scale and location of projects. Assessments of risks and impacts should always be case specific.

²⁰ Defingou M, Bils F, Horchler B, Liesenjohann T & Nehls G (2019): PHAROS4MPAs- A Review of Solutions to Avoid and Mitigate Environmental Impacts of Offshore Windfarms, BioConsult SH on behalf of WWF France, https://tethys.pnnl.gov/sites/default/files/publications/PHAROS4MPAs_OffshoreWindFarm_CapitalizationReport.pdf

²¹ WWF-France (2019), Safeguarding marine protected areas in the growing Mediterranean blue economy.

Recommendations for the offshore wind energy sector. PHAROS4MPAs project, <https://pharos4mpas.interreg-med.eu/>

²² Piante, C., et al, 2019, Safeguarding Marine Protected Areas in the Mediterranean Blue Economy: Recommendations for Offshore Wind Energy Sector, Pharos4MPAs, Online

https://pharos4mpas.interreg-med.eu/fileadmin/user_upload/Sites/Biodiversity_Protection/Projects/PHAROS4MPAs/OWF_POLICYBRIEF_17june_singl_e_page.pdf

²³ Draget, E., Environmental Impacts of Offshore Wind Power Production in the North Sea: A Literature Overview, WWF Norway, 2014, https://www.wwf.no/assets/attachments/84-wwf_a4_report_havvindrapport.pdf

²⁴ Pellow, M. R. (ed.), Wildlife and Wind Farms, Conflicts and Solutions, Volume 3 (Offshore: Potential Effects), 290 pages, 2019, ISBN: 9781784271275; Volume 4 (Offshore: Monitoring and Mitigation), 330 pages, 2019, ISBN: 9781784271312.

PRESSURES, INTENSITY AND OCCURRENCE OF IMPACTS ON MARINE HABITATS AND ANIMAL GROUP

PRESSURE	IMPACT	TAXONOMIC GROUP / HABITATS	IMPACT INTENSITY DURING:			
			Siting phase	Construction	Operation	Decommissioning
Cable laying	Habitat loss	Habitats/ benthic communities	—	MEDIUM/HIGH	LOW	LOW/UNKNOWN
Cable laying	Physical damage, disturbance		—	MEDIUM/HIGH	LOW	UNKNOWN
Foundations occupation	Habitat loss/ Physical damage, disturbance		—	MEDIUM/HIGH	LOW	—
Submerged structures	Reef effect		—	—	UNKNOWN	UNKNOWN
Underwater operating cables	Electromagnetic fields/Temperature increase	Fish	—	—	UNKNOWN	—
Piling noise	Physical damage, disturbance		—	HIGH	—	—
Underwater operating cables	Electromagnetic fields		—	—	UNKNOWN	UNKNOWN
Submerged structures	Reef effect		—	—	UNKNOWN	UNKNOWN
Foundations occupation	Habitat loss	Marine mammals	—	MEDIUM/HIGH	LOW	—
Piling noise	Physical damage, disturbance		—	HIGH	—	—
Ship traffic / Ship presence	Collision / displacement		UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Ship traffic - noise	Displacement		LOW/MEDIUM	MEDIUM/HIGH	MEDIUM/HIGH	MEDIUM/HIGH
Ship traffic	Displacement	Birds	LOW/MEDIUM	—	LOW/MEDIUM/HIGH depending on species	—
Light	Collision		LOW	—	LOW/MEDIUM/HIGH depending on species	—
Operating wind turbines	Collision		—	—	LOW/MEDIUM/HIGH depending on species	—
Operating wind turbines	Barrier effect		—	—	LOW/UNKNOWN	—
Operating wind turbines	Collision	Bats	—	—	UNKNOWN	—
Ship traffic	Collision	Sea turtles	LOW/MEDIUM	MEDIUM/HIGH	LOW/MEDIUM	LOW/MEDIUM
Piling noise	Physical damage, disturbance		—	HIGH	—	—
Light	Disorientation		UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Underwater operating cables	Disorientation due to EMF		—	—	UNKNOWN	—
Waste and pollution	Habitat degradation, disturbance, physical damage	All taxonomic groups and habitats	LOW	LOW	LOW	LOW
Sacrificial anodes	Habitat degradation, disturbance, physical damage		—	UNKNOWN	UNKNOWN	UNKNOWN

Figure 4. Pressures, intensity and occurrence of offshore wind energy impacts on marine habitats and animal groups, Pharos4MPAs, 2019.²⁵

Offshore renewable energy projects and their associated infrastructures, such as transmission cables²⁶, can constitute new sources of cumulative impacts on marine and coastal environments, while our European seas are already in a dire situation. It is of note that the objective to reach Good Environmental Status in all EU waters by 2020, as required by the Marine Strategy Framework Directive (2008/56/EC), has failed.²⁷ The development of offshore renewable energy should be aligned with a coherent and accelerated action plan for marine conservation and restoration, delivering on existing European and international conservation objectives and creating further carrying capacity for marine ecosystems.

Focus 1 - Noise, an invisible pollution

Offshore renewable energy projects have been associated with noise impact issues. Monopile bottom-fixed wind turbines particularly result in piling noise during the construction phase, which disturbs and injures fish, marine mammals, turtles ... For instance, pile driving can lead to the displacement of dolphins by up to 50 km.²⁸ Likewise, a study observed that 40% of the cods in a 400 meter perimeter around a pile driving operation were injured by the resulting noise.²⁹ It has also been demonstrated that the diameter of the pile is interrelated with the noise produced: the bigger the pile, the louder the noise.³⁰ With offshore wind turbines constantly increasing in size, this must be fully acknowledged.

²⁵ Piante, C., et al, *Safeguarding Marine Protected Areas in the Mediterranean Blue Economy: Recommendations for Offshore Wind Energy Sector*, Pharos4MPAs, 2019, Online

https://pharos4mpas.interreg-med.eu/fileadmin/user_upload/Sites/Biodiversity_Protection/Projects/PHAROS4MPAs/OWF_POLICYBRIEF_17june_single_page.pdf

²⁶ For instance, see European Commission, Guidance on Energy Transmission Infrastructure and EU nature legislation, 91, 2018,

https://ec.europa.eu/environment/nature/natura2000/management/pdf/guidance_on_energy_transmission_infrastructure_and_eu_nature_legislation_en.pdf

²⁷ European Environmental Agency, Marine Message II, EEA Report No 17/2019,

<https://www.eea.europa.eu/highlights/europes-seas-face-uncertain-future>

²⁸ Piante, C., et al, 2019, *Safeguarding Marine Protected Areas in the Mediterranean Blue Economy: Recommendations for Offshore Wind Energy Sector*, Pharos4MPAs, Online

https://pharos4mpas.interreg-med.eu/fileadmin/user_upload/Sites/Biodiversity_Protection/Projects/PHAROS4MPAs/OWF_POLICYBRIEF_17june_single_page.pdf

²⁹ Defingou M; Bils F, Horchler B, Liesenjohann T & Nehls G (2019): PHAROS4MPAs- A Review of Solutions to Avoid and Mitigate Environmental Impacts of Offshore Windfarms, BioConsult SH on behalf of WWF France, https://tethys.pnnl.gov/sites/default/files/publications/PHAROS4MPAs_OffshoreWindFarm_CapitalizationReport.pdf

³⁰ Koschinski S., Lüdemann K., Noise mitigation for the construction of increasingly large offshore wind turbines: Technical options for complying with noise limits, Report commissioned by the Federal Agency for Nature Conservation, Isle of Vilm,

Operating the wind turbines also creates noise impacts. For instance, continuous noise emissions resulting from the shipping traffic due to maintenance work can pose a risk for certain species. Likewise, the turbine's gearbox and generator vibrate while being used. The vibrations are then conducted and diffused underwater by the turbine's tower, which is likely to affect the behaviour of species in its vicinity.³¹ As an example, noise from operation activities are equivalent to a symphonic orchestra³² and could be heard as far as 18 kilometers away by certain whale species.³³ Lastly, the issue of cumulated noise pollution must also be taken into account. For instance, a study for an offshore wind farm in the North Sea showed that while the predicted noise from cable laying was not considered significant, *"when considered together with other activities on site and another nearby offshore renewables scheme, simultaneous construction noise was assessed as potentially having a cumulative effect"* on multiple marine species.³⁴

Solutions exist that are capable of effectively reducing those negative noise impacts. They can be divided into primary and secondary noise mitigation methods.³⁵ Primary mitigation methods are related to the production of noise. For instance, it is possible to choose foundation types that limit or prevent the use of pile driving, such as gravity based or jacket foundations. Secondary noise mitigation reduces the diffusion of noise. As an example, when pile driving is necessary, technologies such as bubble curtains also help decrease the noise produced. In the North Sea, a study showed how mitigation measures could help decrease the risk of population decline of harbour porpoises due to the cumulative impacts of wind farm construction.³⁶

Broadly speaking, some EU countries such as Germany, Belgium, the Netherlands, and Denmark have legally restricted underwater noise to protect marine ecosystems. In Germany for instance, a maximum sound exposure level of 160 dB (SEL) and 190 dB (peak-to-peak) at a distance of 750 m during pile driving was established in 2008.^{37,38} Despite all those measures, it is important to acknowledge that many uncertainties remain with regards to underwater noise pollution, namely those relating to the operational phase.³⁹

Germany, Online: <https://www.bfn.de/fileadmin/BfN/meeresundkuestenschutz/Dokumente/Noise-mitigation-for-the-construction-of-increasingly-large-offshore-wind-turbines.pdf>

³¹ Betke K., Schultz von Glahn M., Matuschek R., Underwater noise emissions from offshore wind turbines, 2004, Online, <https://tethys.pnnl.gov/sites/default/files/publications/Betke-2004.pdf>

³² S. Chauvaud, L. Chauvaud, A. Jolivet, coord. (2018) Impacts des sons anthropiques sur la faune Marine, Quae Edition

³³ Piante, C., et al, 2019, Safeguarding Marine Protected Areas in the Mediterranean Blue Economy: Recommendations for Offshore Wind Energy Sector, Pharos4MPAs, Online https://pharos4mpas.interreg-med.eu/fileadmin/user_upload/Sites/Biodiversity_Protection/Projects/PHAROS4MPAs/OWF_POLICYBRIEF_17june_single_page.pdf

³⁴ For instance, see European Commission, Guidance on Energy Transmission Infrastructure and EU nature legislation, 91, 2018, https://ec.europa.eu/environment/nature/natura2000/management/pdf/guidance_on_energy_transmission_infrastructure_and_eu_nature_legislation_en.pdf

³⁵ Koschinski S., Lüdemann K., Noise mitigation for the construction of increasingly large offshore wind turbines: Technical options for complying with noise limits, Report commissioned by the Federal Agency for Nature Conservation, Isle of Vilm, Germany, Online: <https://www.bfn.de/fileadmin/BfN/meeresundkuestenschutz/Dokumente/Noise-mitigation-for-the-construction-of-increasingly-large-offshore-wind-turbines.pdf>

³⁶ Verfuss, U.K., Plunkett, R., Booth, C.G. & Harwood, J.: Assessing the benefit of Noise Reduction Measures During Offshore Wind Farm Construction on Harbour Porpoises, Report Number SMRUC-WWF-2016-008 provided to WWF UK, June, 2016, https://www.wwf.org.uk/sites/default/files/2016-10/15_11_24_wwf_finalreport%5B1%5D.pdf

³⁷ Koschinski S., Lüdemann K., Noise mitigation for the construction of increasingly large offshore wind turbines: Technical options for complying with noise limits, Report commissioned by the Federal Agency for Nature Conservation, Isle of Vilm, Germany, Online: <https://www.bfn.de/fileadmin/BfN/meeresundkuestenschutz/Dokumente/Noise-mitigation-for-the-construction-of-increasingly-large-offshore-wind-turbines.pdf>

³⁸ German Federal Agency for Nature Conservation, Impulse sound, <https://www.bfn.de/en/activities/marine-nature-conservation/pressures-on-the-marine-environment/underwater-noise/impulse-sound.html>

³⁹ Lena Bergström et al., 2014, Environmental Research, Letters. 9 034012, <https://iopscience.iop.org/article/10.1088/1748-9326/9/3/034012/pdf>

Upstream concession site designation, avoiding rather than mitigating impacts

Getting the location right begins with MSP and SEAs

Limiting the environmental impacts of offshore renewable energy infrastructure starts with getting their location right. This allows avoiding sensitive or protected areas, and fosters discussions with other sectors, also facilitating socio-economic acceptability of the projects. This phase takes place before an offshore wind concession, i.e. its location, is designated. While MSP and SEAs are led by public authorities, it is important that all sectors, including offshore energy, are associated in the discussion and designation of sea uses. Ultimately, MSP and SEAs must lead to designating concession areas for offshore renewable energy sites that are optimum both for nature and developers.

From an environmental perspective, **it is not enough to assess the environmental impacts of projects on an individual basis**. It is possible that a project is positively assessed by the EIA, but that it **may still not be sustainable due to its cumulative impacts on the environment when it is added to other projects**, including at a cross-border level.

That is why systematic, strategic and smart site selection needs to be mandatory for all activities at sea, including renewable energy, getting beyond individual projects' analysis to allocate space for offshore renewable energy development only in areas which are considered suitable from an ecological point of view. The site-selection process must align with international standards, clear environmental criteria, and current knowledge of cumulative impacts and life-cycle assessments.⁴⁰⁴¹

Sound site-selection must be facilitated through ecosystem-based maritime spatial planning (EB MSP).⁴²⁴³ To guide the sustainable development of new activities such as offshore renewables, these plans should be based on sensitivity mappings, most of which are still lacking in Europe, and provide final localizations based on a set of ecological constraints that excludes key areas such as major ecological corridors, important nurseries and feeding grounds. Whenever identified, data gaps must also be addressed and the precautionary principle applied to ensure offshore renewable energy projects are not developed in unidentified sensitive areas. Research should dedicate significant efforts to the identification of areas suitable for offshore renewable energy development where the impacts to nature will be minimal, as well as to the assessment of cumulative impacts from multiplying large scale projects.

Furthermore, offshore renewable energy projects are being developed in increasingly used marine spaces. They are, as a result, also increasingly likely to come into conflict with other sea activities and uses. Those conflicts, in turn, could significantly hamper the development of offshore energy projects, resulting in stranded assets, financial uncertainty for investors, reputational risks, etc.⁴⁴

In a joint report with the European Commission and the European Investment Bank, the United Nations Environment Programme Finance Initiative actually recommends to blue finance investors “*not to finance projects [...] until a stakeholder engagement process is in place*” and to “*encourage developers to be proactive*”

⁴⁰ WWF, Offshore wind farms and marine protection in the North Sea, 2020, https://d2ouvy59p0dg6k.cloudfront.net/downloads/2020jan28_offshore_mpa_wwf_position_paper.pdf

⁴¹ For instance, see Convention on Migratory Species, Renewable Energy Technologies and Migratory Species: Guidelines for Sustainable Deployment, 2014, https://www.cms.int/sites/default/files/document/Doc_10_2_2_Guidelines_Renewable_Energy_E.pdf

⁴² WWF, Achieving ecosystem-based marine spatial plans, 2020, https://wwwfeu.awsassets.panda.org/downloads/wwf_position_paper_ecosystem_based_approach_in_msp_feb2020.pdf

⁴³ WWF, Guidance Paper, *Ecosystem-based Maritime Spatial Planning in Europe and how to assess it*, 2021, https://wwwfeu.awsassets.panda.org/downloads/wwf_eb_maritime_spatial_planning_guidance_paper_march_2021.pdf

⁴⁴ United Nations Environment Programme Finance Initiative (2021) Turning the Tide: How to finance a sustainable ocean recovery—A practical guide for financial institutions, <https://www.unepfi.org/publications/turning-the-tide/>

*in engagement with stakeholder groups from the outset, both to manage reputational impacts and to ensure healthy working relationships that minimise potential for operational impacts down the line”.*⁴⁵

Maritime spatial planning multi-stakeholder dialogues that are forward-looking and inclusive will be key in avoiding such situations, as they allow for better understanding of the interconnections between those projects and other maritime sectors and sea uses. In doing so, it will help ensure that offshore renewable energy projects are developed in areas where they won't negatively affect other sectors or sea uses as well as the environment. Whenever possible, such multi-stakeholder dialogues should also facilitate multi-uses of the sea space. The relevant data should also be collected and transparently shared with all relevant stakeholders.

In turn, the MSP process must be open to stakeholders' inputs, for instance through meaningful public consultations and engagement workshops with local community representatives.⁴⁶ Especially, Indigenous peoples⁴⁷ have the right to be heard and participate in decision-making, planning and implementation of projects that may affect their rights to self-determination, to participation, their human rights, and / or legal, customary or traditional use of land and natural resources and/or their culture. Free, Prior and Informed Consent (FPIC) by the rights holders (or the organization they might nominate to represent them), is an UN-principle that should be followed in all cases where indigenous peoples are affected. According to WWF, an important requirement of FPIC is consent/approval from rights holders should be required in order for a license to be granted. Inputs from stakeholders must be used through a meaningful governance structure, which should be able to reflect their views, facilitate negotiations, and modify planning accordingly where appropriate.

Site-selection must also be based on Strategic Environmental Assessments (SEA), as required both by the Maritime Spatial Planning Directive (2014/89/EU) and the SEA Directive (2001/42/EC), which says that all plans and programmes likely to have significant environmental effects should be subject to an SEA, including those related to energy.⁴⁸

Focus 2: Grid connection

Just as power generation infrastructure, grid connections are likely to have negative impacts on marine and coastal environments.⁴⁹ As a first principle, grid networks should also avoid MPAs. When grid connections are bound to lie within MPAs, they should reduce their environmental impacts as much as possible and favour the least impactful routes.

Another example for how difficult and relevant proper decisions are is linked to the many cables which are already crossing the protected area of the Wadden Sea, and more are to come. The Wadden Sea is also a World Heritage Site. Crossing the sensitive area by cables from offshore wind farms can hardly be avoided, but to minimize the impact as much as possible both a bundling of cables in just a few routes would be required and – in order to save valuable space – to use only cables with a very high high-voltage direct current (HVDC) capacity, thus usually combining several offshore wind farms in one cable.

⁴⁵ United Nations Environment Programme Finance Initiative (2021) Turning the Tide: How to finance a sustainable ocean recovery—A practical guide for financial institutions, <https://www.unepfi.org/publications/turning-the-tide/>

⁴⁶ To learn more, for instance see Foundation For European Progressive Studies, The People's Transition: Community-led development for Climate Justice, https://www.feps-europe.eu/resources/publications/762-com_publications.publications.html The Europe Beyond Coal “Seven Golden Rules for Open and Inclusive Just Transition Planning” provide further guidance on the specific timelines and practices for meaningful consultation and engagement of stakeholders, available here: <https://beyond-coal.eu/2019/07/15/seven-golden-rules-for-open-and-inclusive-just-transition-planning-at-the-regional-level/>

⁴⁷ In Europe, for Sweden and Finland in the EU, as well as Norway, this for instance applies to the Sami people. The Sami council, or one of the three Sami Parliaments, might be stakeholders in this context.

⁴⁸ Article 3, Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment

⁴⁹ For instance, see European Commission, Guidance on Energy Transmission Infrastructure and EU nature legislation, 2018, https://ec.europa.eu/environment/nature/natura2000/management/pdf/guidance_on_energy_transmission_infrastructure_and_eu_nature_legislation_en.pdf

One good practice example of a grid operator is Eirgrid, a state-owned electric power transmission operator in Ireland. Meeting a target of 70% of electricity from renewables by 2030 requires significant changes to the grid, and Eirgrid opened up a three month public consultation to hear from a broad range of stakeholders on how to design the grid for a greatly increased renewables supply. They provided information prior to the consultation in an accessible manner, through plain language and videos, and made a concerted effort to make the consultation inclusive and representative of the Irish population by hosting individual consultations with youth groups, rural communities and civil society. The proposal will be developed at the end of 2021 based upon the responses received during the consultation and, if submissions are adequately taken into account, will be an excellent example of public participation of citizens in designing their national grid.⁵⁰

Both ecosystem-based MSP and SEAs should adopt a long-term perspective, anticipating the possible shifts in ecosystems, for instance in the face of climate change. They should be used to ensure that offshore renewables are not deployed in future climate refugia areas. They should also take into account the cumulative impacts of offshore renewable energy projects across the regional sea basins. As part of the maritime spatial planning exercise, planning for offshore renewable energy projects should also consider socio-economic factors.⁵¹ Based on the MSP and SEA directives, offshore energy SEAs should be based on a participatory approach and public consultations.^{52,53}

Avoiding sensitive marine ecosystems and areas as a first principle

A key strategy to limit the footprint of offshore renewable energy projects consists in avoiding those areas within which their environmental impacts would be negatively multiplied, e.g. sensitive and protected areas. It is all the more important that those areas also are vital to mitigating and alleviating the impacts of climate change.^{54,55}

The EU Biodiversity Strategy says that by 2030, a minimum of 30% of EU seas should be protected, including at least 10% of the seas as strictly protected areas. All protected areas should be effectively managed, monitored appropriately, and associated with clear conservation objectives and measures. They should also be integrated in ecological corridors, as part of a true Trans-European Nature Network.⁵⁶

As a first principle, renewable energy developments should not be placed within Marine Protected Areas (MPAs) and other ecologically valuable areas for sensitive species and habitats. In particular, they must not be allowed in EU strictly protected areas designated as such under the EU Biodiversity Strategy. Offshore renewable projects should only be considered on an exceptional case by case basis in MPAs, under strict conditions, provided that they have been subject to the relevant mandatory assessments and proven that there are no other alternative sites outside of the considered MPA. In such instances, the pre-installation reference

⁵⁰ See: <https://consult.eirgrid.ie/consultation/public-consultation-shaping-our-electricity-future>

⁵¹ Article 6(c), Directive 2014/89/EU

⁵² Article 6, Directive 2001/42/EC

⁵³ Article 9, Directive 2014/89/EU

⁵⁴ Roberts, C., et al., Marine reserves can mitigate and promote adaptation to climate change, *PNAS* 114 (24), 2017, <https://www.pnas.org/content/pnas/114/24/6167.full.pdf>

⁵⁵ WWF, *Marine Protected Areas: Delivering ocean resilience to alleviate the effects of climate change*, 2020, https://www.feu.awsassets.panda.org/downloads/mpa_fact_sheet_the_role_of_mpas.pdf

⁵⁶ European Commission, EU Biodiversity Strategy for 2030 Bringing nature back into our lives COM/2020/380, 2020, <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590574123338&uri=CELEX%3A52020DC0380>

situation should first be properly defined. Furthermore, sensitive areas within MPAs should be mapped in order to define possible exclusion areas due to impacts on biodiversity.

In addition, projects developed in protected areas should be robustly assessed according to the relevant nature conservation legislation and with a focus on the precautionary principle, to ensure that site conservation objectives are fully met. Scientific evidence must demonstrate that the offshore renewable facilities, throughout their life cycle, are not detrimental to the conservation objectives of the MPA. Where needed, measures must be implemented to reduce the environmental impacts of the projects based on the site objectives of the impacted MPAs. Lastly, projects should be monitored by scientific experts tasked with impact assessments review and should bring enough evidence of a low negative impact at the ecosystem scale before any further decision on the projects' extensions.

Offshore renewable projects should also not be considered within MPAs lacking in management plans, keeping in mind that, in 2019, only 1.8% of the EU's marine area were covered by MPAs with management plans, despite 12.4% of the EU marine area being designated for protection.⁵⁷

In countries where renewable energy projects already lie within MPAs or are at the stage of having an environmental impact and appropriate assessment carried out, the environmental impacts of these projects should be robustly assessed for the full life cycle of the project, on a case-by-case basis according to the relevant nature conservation legislation, science-based and subject to the precautionary principle. It is very important that countries which have the preferable policy of not allowing any renewable energy projects within MPAs are continuing this policy.

IUCN guidelines also state that renewable energy generation activities may not be appropriate for IUCN Categories I to III because they are habitat altering with potentially detrimental impacts. WWF is of the opinion that they should also be avoided in any OECMs that would contribute to the EU's 30% target of protecting the sea. IUCN guidelines already state that environmentally-damaging industrial activities and infrastructure development should not occur in OECMs.⁵⁸

Focus 3 - The Natura 2000 network: a pan-European marine life haven that must be safeguarded

The Habitats and Birds directives provide for the creation of an ecological network of protected areas within the EU, this is known as the Natura 2000 (N2K) network. Member States are required to designate specific areas within their jurisdiction as part of the N2K network based on ecological criteria for the protection of listed habitats and species, and establish the appropriate conservation objectives and necessary measures for their protection. N2K, in addition to OECMs and other marine protected area designations, will play an important role in the EU's 30% target of European seas being effectively protected with one-third of the target (10%) being strictly protected. **In all instances, those N2K areas considered as strictly protected areas in the sense of the 2030 Biodiversity Strategy should not be deemed suitable to any derogation.**⁵⁹ In the vast majority of instances the N2K network constitutes the most effective way to safeguard marine and coastal ecosystems in the EU.⁶⁰ It is the cornerstone for

⁵⁷ Borg, J., Burgess, S., Milo-Dale, L., Protecting our Ocean: Europe's challenges to meet the 2020 deadlines, WWF, 2019, https://www.eu.awsassets.panda.org/downloads/protecting_our_ocean.pdf

⁵⁸ IUCN, 2019, Recognising and reporting other effective area-based conservation measures <https://portals.iucn.org/library/sites/library/files/documents/PATRS-003-En.pdf>, p.5

⁵⁹ While Natura 2000 sites, having been designated for the protection of nature and biodiversity and having a legal requirement for conservation objectives and measures, count towards the 30% target for protected areas, other nationally protected areas and OECMs should be counted towards the 30% target only if they comply with a minimum set of criteria.

⁶⁰ O'Leary and al., 2016, Effective Coverage Targets for Ocean Protection, Conservation letters, <https://conbio.onlinelibrary.wiley.com/doi/epdf/10.1111/conl.12247>

the protection of European biodiversity, recognised by the Commission as a “*haven to Europe's most valuable and threatened species and habitats*”.⁶¹

In order to safeguard nature conservation in N2K areas, the Habitats Directive stipulates that an appropriate assessment (AA) of plans or projects likely to have a significant effect on the N2K sites and the protected habitats and species must be carried out, which brings us to the next point.^{62 63}

As a first principle, offshore renewable energy projects, including wind farms, should not be placed within marine protected areas, and other ecologically valuable areas for sensitive species and habitats, such as marine Natura 2000 sites. This also concerns projects of relevance outside Natura 2000 sites that may significantly affect the integrity of the N2K areas as according to Article 6 (3) of the Habitats Directive. Such an approach would also help ensure consistency across the coordinated N2K network in Europe, limiting the scope for arbitral discrepancies in effective protection from one Member State to the other, thereby improving the coherence and the effectiveness of this network.

Article 6 of the Habitats Directive obligates Member States to assess and ensure environmental protection as follows:⁶⁴

Article 6(1): Member States must establish the necessary conservation measures for “*special areas of conservation*” (SACs) which should be in line with the conservation objectives and should correspond to the ecological requirements of the protected habitats and species. These may include appropriate management plans.⁶⁵

Article 6(2): Member States must establish the appropriate measures to ensure that there will be no deterioration of protected habitats and no disturbance of protected species.

Article 6(3): AA should be conducted for any project likely to have “*significant effects*” on a Natura 2000 site, either individually or in combination with other plans or projects, taking into account its conservation objectives. The competent authorities can only authorise a project or plan if they can ascertain, following the AA, that the plan or project will not adversely affect the integrity of the site.

Article 6(4): In spite of a negative assessment following the application of Article 6(3), a project can still be carried out for ‘*imperative reasons of overriding public interest*’, provided that there are no alternative solutions and that the State takes compensatory measures to ensure that the coherence of N2K is protected. However, where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

Alongside the publication of the offshore renewable energy Strategy in 2020, the European Commission released a non legally binding and revised “*Guidance document on wind energy developments and EU*

⁶¹ European Commission, Natura 2000, https://ec.europa.eu/environment/nature/natura2000/index_en.htm

⁶² Defingou M; Bils F, Horchler B, Liesenjohann T & Nehls G (2019): PHAROS4MPAs- A Review of Solutions to Avoid and Mitigate Environmental Impacts of Offshore Windfarms, BioConsult SH on behalf of WWF France, https://tethys.pnnl.gov/sites/default/files/publications/PHAROS4MPAs_OffshoreWindFarm_CapitalizationReport.pdf

⁶³ The directive also states that competent authorities may authorise plans and projects only when they have ascertained that they will not adversely affect the integrity of the site.

⁶⁴ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, <https://eur-lex.europa.eu/eli/dir/1992/43/oj/eng>

⁶⁵ Article 4(1)(2) of the Birds Directive also states that measures must also be taken for ‘special protection areas’ (SPAs) which are areas designated under the Birds Directives for the conservation of listed wild birds.

nature legislation”.⁶⁶ Based on the provisions of Article 6 of the Habitats Directive, the Commission's guidance document states that “*the Habitats Directive does not, a priori, exclude wind farm developments in or adjacent to Natura 2000 sites*” and that “*these need to be assessed on a case-by-case basis*”. Member States can adopt a stricter national legal framework that is compatible with the Treaty on the Functioning of the European Union (FEU) and notified to the Commission.⁶⁷

However, the following points must be noted:

- Relevant N2K areas must firstly be in a good state of conservation before any prospect of projects in the areas concerned is considered, even if compensatory actions, as referred to in Article 6, is an option.
 - Favourable conservation status (FCS) and/or Good Environmental Status (GES) should be both ideally used as baselines for assessing the good state of conservation in the relevant marine sites concerned. If these baselines are not met then any claim that “*all appropriate steps have been taken to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated*” is invalid⁶⁸.
- The target of at least 30% of effective protection of our seas by 2030 enshrined in the Biodiversity Strategy will likely not be achieved if the N2K network is not enhanced or completed, which is an obligation by virtue of the Habitats directive.
- Conservation must always be the first objective of all protected areas, not economic objectives. The application of the exceptional authorisation of a project based on article 6 (4) of the Directive should be a last resort, and it should be ensured that the conditions for the application of this provision (ie no alternative solutions, imperative reasons of overriding public interest, adoption of compensatory measures) are strictly applied. It should be stressed that article 6 (4) can only be applied following an appropriate assessment of the project in line with article 6 (3).
- The precautionary principle should be respected, and applied in alignment with conservation goals of the Habitats Directive and the Marine Strategy Framework Directive, with a view to achieve GES in all EU waters, especially since the 2020 deadline has been missed.⁶⁹
- Offshore wind farms can help prevent some harmful maritime activities due to the necessary spatial measures to ensure their functioning, but this cannot be a substitute for the specific EU legislation put in place under Union environmental legislations to restore and/or protect sensitive habitats and species from those activities, as this is not the purpose of offshore wind farms. In this regard, it is also not acceptable to install offshore wind farm facilities in protected areas or sensitive marine ecosystems just because such a project may be designated as an OECM.
 - For instance, offshore wind farms are entities that have no official role in sustainable management measures under the Common Fisheries Policy (CFP) and thus do not fall within the scope of it. In this context, offshore wind farms should not be considered to contribute to the legal requirements set up by Article 11 of the CFP, which aims to safeguard protected ecosystems that fall under N2K, from harmful fishing activities by means of dedicated fisheries management conservation measures.
 - In this case, N2K areas should be protected from harmful fishing activities through the implementation of CFP Article 11, not through offshore wind projects, whose environmental impacts on biodiversity remain subject to debate.

⁶⁶ European Commission, Guidance document on wind energy developments and EU nature legislation, C(2020) 7730 final, 2020, https://ec.europa.eu/environment/nature/natura2000/management/docs/wind_farms_en.pdf

⁶⁷ European Commission, Guidance document on wind energy developments and EU nature legislation, C(2020) 7730 final, 2020, https://ec.europa.eu/environment/nature/natura2000/management/docs/wind_farms_en.pdf

⁶⁸ GES falls under the Marine Strategy Framework Directive (MSFD) and provides marine descriptors for GES. It may be considered as another appropriate marker to FCS, which has a more specific focus on certain species and habitats

⁶⁹ Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056>

In all instances, it is important to assert again that those N2K areas considered as strictly protected areas in the sense of the 2030 Biodiversity Strategy should not be deemed suitable to any derogation. Furthermore, the IUCN guidelines state that renewable energy generation activities may not be appropriate for IUCN Categories I to III. In other words, protected areas that would fall under the scheme of the 10% strict protection target of the Biodiversity Strategy..

Status matters: why offshore renewable areas can't be considered as *de facto* MPAs or OECMs

Offshore wind farms may contribute to reducing the overall pressure of certain marine ecosystems as they allow for certain species to recover or reproduce in areas of less physical disturbance. However, **offshore projects inherently have a negative impact which can be minimized but hardly reversed in a positive way**. The introduction of the offshore renewable energy infrastructures in the marine ecosystem results in adding artificial hard substrates, including where there were none previously. Scientific research is still ongoing to assess how far this effect applies and if it can be considered positive i.e. by creating biodiversity hotspots due to a potential reef effect. A recent study concluded that **"earlier reports on offshore wind turbines as biodiversity hotspots should be read with caution"**, as such claims often refers "to the typical species-rich second stage of succession reached after a few years of colonisation **but disappearing in a later stage**".⁷⁰ Likewise, the European Parliamentary Research Service acknowledged that, when wind turbines do attract marine life due to a reef effect, it is also necessary to make sure "this does not lead to species distortion or act as a stepping stone for invasive species".⁷¹ In fact, "a positive reef effect is dependent on the nature and the location of the reef and the characteristics of the native populations".⁷² In addition, restriction of fisheries in wind farm areas alone cannot be necessarily regarded as passive restoration, especially since the development of wind farms may lead to changes in the ecosystems.

Therefore, offshore renewable areas cannot and must not be considered *de facto* MPAs. It must be reminded that the primary objective behind the creation of an MPA is conservation of biodiversity and restoration of ecosystems, not economic growth of maritime industries. A sustainable blue economy and economic opportunities instead are welcome added benefits of MPAs if they do not compromise conservation goals of the sites. MPAs are designated based on science to achieve specific conservation objectives and if managed effectively contribute to reaching Good Environmental Status in EU waters. Their identification and designation follow principles of ecological coherence, they are meant to function as an effective network and are associated with management plans.⁷³ For an area to be saved from some forms of human pressures due to the presence of offshore renewable energy infrastructures does not match those criteria. Contrary to MPAs, the first objective of an area devoted to offshore renewable energy is economics, and nature protection benefits are only considered an added-value.

Offshore renewable energy areas should also not be classified as other effective area-based conservation measures (OECMs) as there is no reliable scientific evidence to lend credence to claims that they contribute to positive and sustained long-term outcomes for the in situ conservation of biodiversity and the associated ecosystem functions and services.

⁷⁰ Degraer, S., Brabant, R., Rumes, B. & Vigin, L. (eds). 2019. Environmental Impacts of Offshore Wind Farms in the Belgian Part of the North Sea: Marking a Decade of Monitoring, Research and Innovation. Brussels: Royal Belgian Institute of Natural Sciences, OD Natural Environment, Marine Ecology and Management, 134 p

⁷¹ Wilson A, B., Offshore wind energy in Europe, Briefing, European Parliamentary Research Service, November 2020, Online: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/659313/EPRS_BRI\(2020\)659313_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/659313/EPRS_BRI(2020)659313_EN.pdf)

⁷² Langhamer O. (2012). Artificial reef effect in relation to offshore renewable energy conversion: state of the art. TheScientificWorldJournal, 386713. Online: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3541568/pdf/TSWJ2012-386713.pdf>

⁷³ Borg, J., Burgess, S., Milo-Dale, L., Protecting our Ocean: Europe's challenges to meet the 2020 deadlines, WWF, 2019, https://wwf.eu.awsassets.panda.org/downloads/protecting_our_ocean.pdf

Conceiving sustainable infrastructure: Building in, with or for nature

After the location of a concession has been established, the conception phase of the offshore renewable energy projects starts. It offers new possibilities to limit the environmental impacts of projects to a negligible residual impact, and sometimes can integrate ecological components for the sake of nature. It is important to clearly understand the ins and outs of the various conception options opened, and their limitations.

For the sake of clarity, it is important to note that the notion of “mitigation measures” can be understood in two specific ways. First, mitigation measures can be understood broadly, thereby including measures spanning from planning and siting e.g. with avoidance measures or design options, to construction with for instance bubble curtains to reduce noise pollution, operation e.g. with temporary shut down for reducing bird collisions and decommissioning for instance with repowering.⁷⁴

But it can also be understood more specifically, in the context of the EIA, as the measures conceived based on the results of the EIA to address the environmental impacts of the technical options chosen for the infrastructure which is to be built. To avoid any confusion, it is therefore important to always specify which type of mitigation measures is being referred to.

Nature-inclusive design is an engineering approach seeking to integrate human constructions as much as possible into the natural environment through the use of appropriate materials and shapes. Where possible, offshore renewable energy infrastructures should be designed in a nature-inclusive way, reducing the impact on the environment as much as possible from the design phase onwards.

More than a life cycle analysis, eco-design is nature inclusive from an ecosystem-specific perspective, and specifically applies to the preliminary research and development or conception phase of the project. Infrastructure engineers tasked with developing the plans of the infrastructure cooperate with marine biologists to improve the integration of the infrastructure in the marine environment. Eco-design might guide engineering decisions so as to best integrate the infrastructure in the environment, potentially using biomimeticism. For instance, proper scour protection can favor a better set of species around the fixed turbine compared to classic rocky use⁷⁵. It might also involve research, for instance to choose construction materials that won't be a source of pollution for the environment.⁷⁶

Due to the complexity of marine ecosystems, eco-design measures can have both positive and negative environmental impacts and thus require pilot tests. For example, the platform's nature-inclusive design can seek to produce a reef effect. It is then however important to ensure that the reef effect is consistent with the surrounding ecosystems and with a compatible marine life settlement. Such a consistency in the reef effect produced can be achieved using an appropriate biosurface to promote proper complex species assemblages and a suitable substrate for improving water pollution control. As technical choices that are made by the developer, eco-design measures are part of the feasibility study requiring physical oceanographic analysis with sediment transport and wave energy models as well as trophic models to test the robustness of the technical solution before a life cycle assessment and economic evaluation. That is why they come at the conception phase

⁷⁴ See Figure 1, Gartman et al., Mitigation Measures for Wildlife in Wind Energy Development, Consolidating the State of Knowledge — Part 1: Planning and Siting, Construction, Journal of Environmental Assessment Policy and Management Vol. 18, No. 3, 2016, <https://tethys.pnnl.gov/sites/default/files/publications/Gartman-et-al-Part%201-Mitigation-Measures.pdf>

⁷⁵ Lengkeek, W., Didden, Karin, Teunis, Malenthe, Driessen, Floor, Coolen, Joop, Bos, Oscar, Vergouwen, Sophie, Raaijmakers, Tim, de Vries, Mindert, van Koningsveld, Mark, Eco-friendly design of scour protection: potential enhancement of ecological functioning in offshore wind farms. Towards an implementation guide and experimental set-up. Technical report, n° 17 - 001, 2017, https://www.researchgate.net/publication/315589657_Eco-friendly_design_of_scour_protection_potential_enhancement_of_ecological_functioning_in_offshore_wind_farms_Towards_an_implementation_guide_and_experimental_set-up

⁷⁶ For an example of eco-design see Lacroix and Pioch, The multi-use in wind farm projects: More conflicts or a win-win opportunity?, Aquatic Living Resources 24(2), 2011, https://www.researchgate.net/publication/277060788_The_multi-use_in_wind_farm_projects_More_conflicts_or_a_win-win_opportunity

and need to be included and assessed in the EIA of the project. Moderate or high risk of failure of nature based solutions for eco-conception implies potential negative and positive impacts that need to be explored in the subsequent EIA. That's also why it does not make sense to conceive eco-design as a mitigation measure when speaking of the specific EIA context.

Focus 4 - Floating technologies, a technological option to explore but no silver bullet for the environment

In the face of the environmental impacts of bottom-fixed offshore wind technologies, as well as to access new potential development areas further off the coast, floating offshore wind technologies are currently being developed. However, it is necessary to carefully assess whether those new technologies can constitute a silver bullet to solving issues associated with bottom-fixed turbines as floating offshore wind turbines are also associated with environmental impacts. For example, mooring chains and anchors used to secure floating turbines can scrape and damage the seafloor, which can also indirectly put sediments from the sea bottom back in suspension.⁷⁷ Besides, it was reported that a risk exists for ghost nets to attach to mooring lines, impacting fish, cetaceans and also diving seabirds.⁷⁸⁷⁹ Furthermore, the movement of floaters in the water also creates noise pollution during the operation phase.⁸⁰ In addition, floating wind farms are associated with issues shared with bottom-fixed turbines, such as being a potential obstacle to migratory routes of birds or bats, or constituting a FAD. Just as bottom-fixed wind turbines, they also require electric cables, which emit electromagnetic fields. It is worth noting that floating wind turbines are also often planned further off the coasts, in locations characterized by bigger depths with little already existing environmental data and knowledge available. When facing knowledge gaps, studies should be conducted to collect the appropriate data and feed into environmental impact assessments.

It is important that **research** further investigate the impacts of new offshore renewable technologies and technical options, e.g. floating turbines, floating solar, wave, or tidal. Broadly speaking, research focusing on offshore renewable energy should adopt a multidisciplinary perspective. Expected results include improved knowledge and evidence regarding the impacted marine environment, based on longer-term monitoring case studies, improved modelling approaches, cumulative impact assessments, the development and testing of mitigation methods as well as adaptive management.

⁷⁷ See page 62, Defingou M, Bils F, Horchler B, Liesenjohann T & Nehls G (2019): PHAROS4MPAs- A Review of Solutions to Avoid and Mitigate Environmental Impacts of Offshore Windfarms, BioConsult SH on behalf of WWF France, https://tethys.pnnl.gov/sites/default/files/publications/PHAROS4MPAs_OffshoreWindFarm__CapitalizationReport.pdf

⁷⁸ Catapult Offshore Renewable Energy, Environmental and Consenting Barriers to Developing Floating Wind Farms Including Innovative Solutions, 2016, <https://ore.catapult.org.uk/app/uploads/2018/02/Floating-Wind-Farms-Workshop-Dec-2016.pdf>

⁷⁹ Benjamins, S., Harnois, V., Smith, H.C.M., Johanning, L., Greenhill, L., Carter, C. and Wilson, B, 2014, Understanding the potential for marine megafauna entanglement risk from renewable marine energy developments. Scottish Natural Heritage Commissioned Report No. 791., <https://tethys.pnnl.gov/sites/default/files/publications/SNH-2014-Report791.pdf>

⁸⁰ See page 109, Defingou M, Bils F, Horchler B, Liesenjohann T & Nehls G (2019): PHAROS4MPAs- A Review of Solutions to Avoid and Mitigate Environmental Impacts of Offshore Windfarms, BioConsult SH on behalf of WWF France, https://tethys.pnnl.gov/sites/default/files/publications/PHAROS4MPAs_OffshoreWindFarm__CapitalizationReport.p

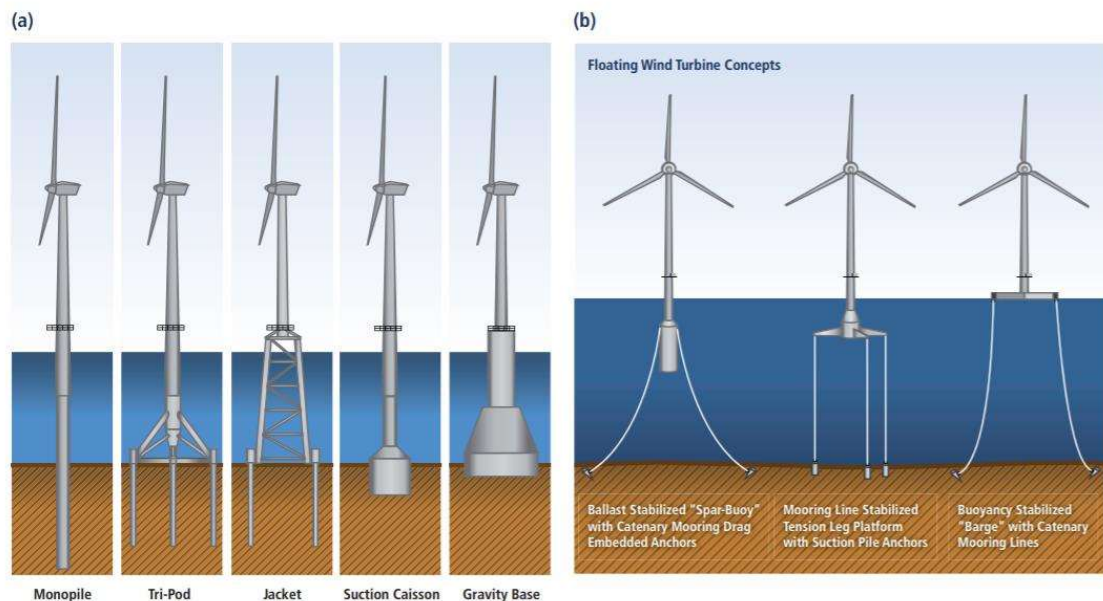


Figure 5. Various types of offshore wind turbine foundation options, IPCC, 2012⁸¹

Furthermore, research on projects at sea is always location specific. As a consequence, it is necessary that results from different projects across EU seas are compared and aggregated to provide solid analysis. This would require furthering coordination of research at a European level.

After the EIA of the project has been conducted, and before permit is granted, additional nature-inclusive design elements can be suggested to address the impacts that have been identified. As such nature-inclusive design elements can be part of mitigation measures as required by law. For instance, eco-friendly riprap can be used to reduce the electromagnetic effects of cables, seeking the best integration of cables within the marine environment in such a way that they form the most natural shelters and habitats for wildlife that occur in the specific areas selected. Those measures however are not likely to lead to fundamental reviews of the projects, which have already been approved, especially in terms of costs, profitability for the developers, geographic scope, etc.

Whether the impact of nature-inclusive design is positive is to be assessed over time. Nature-inclusive design must be accompanied by regular monitoring to ensure that the marine ecosystem reacts normally around an offshore renewable project, while maintaining its trophic characteristics, its ecological functions and its dynamics in terms of connectivity. In this regard, the issues of invasive species and ecological traps are of prime importance and therefore require regular ecological assessment. This makes it possible to develop adaptive and responsible nature-inclusive designs compatible with the protection of biodiversity in human-affected areas.

At the conception stage or during the EIA phase of the projects, nature inclusive design can lead to specific engineering decisions regarding the conception of the turbines and their spatial configuration. However, it is not to be mixed with **ecological engineering**. While nature inclusive design seeks to better integrate infrastructures in ecosystems, ecological engineering aims at modelling ecosystems themselves. For instance, while nature inclusive design would explore how a turbine can act as an artificial reef to avoid a FAD effect, ecological engineering applied to offshore renewables would consist in projects that would also purposively add massive and highly productive artificial reefs systems in the surrounding of the turbines with the creation of a whole new habitat. In practice, some private consultants have already started to introduce such eco-engineering projects, whose potential constitutes a change of the seabed habitat and thus is not inclusive in nature itself even if using

⁸¹ IPCC, *Summary for Policymakers*. In: IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation [O. Edenhofer, R. Pichs-Madruga, Y. Sokona, K. Seyboth, P. Matschoss, S. Kadner, T. Zwickel, P. Eickemeier, G. Hansen, S. Schlömer, C. von Stechow (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2011, https://archive.ipcc.ch/pdf/special-reports/srren/SRREN_FD_SPM_final.pdf

a nature based solution with biomimetic reefs. This can seek to achieve various objectives, including human-centred ones, such as increasing the productivity of the area for fisheries purposes.

Focus 5: Energy islands or hubs

Some EU countries are considering building so-called “energy islands or hubs” to support the development of offshore renewable energy infrastructures and to better connect energy generated from offshore wind and the energy systems. For instance, in Denmark, a 120,000 square metres artificial island is planned 80 kilometers off the coast of the Jutland Peninsula, to support 3 GW of offshore wind production.⁸² Over time the capacity is set to expand from 3 to 10 GW. When the island is enlarged, it is expected to be as large as 64 football fields.

Similar projects are also being considered in Belgium and the Netherlands. Such projects must be subject to the same environmental rules and guidelines outlined in respective legislation and highlighted in this paper for other offshore renewable energy infrastructures. As a first principle, they should be kept out of MPAs and other ecologically valuable areas for sensitive species and habitats, and associated with robust EIAs and cumulative impact assessments factoring in the effects of the wind parks they are associated with. Meaningful stakeholder involvement and close cooperation between developers of energy islands and wind farms, as well as planning and environmental agencies, is needed to ensure comprehensive and coherent planning. It is important that planners explore every available option/scenario in terms of location and design before deciding on the actual building of islands or hubs. Since the needed materials to build such structures dramatically increases the footprint and impacts of these projects, using platforms instead may result in lower impact. In that regard, repurposing of oil/gas infrastructure bound for decommissioning could be a circular and viable alternative with a smaller impact.

Lastly, nature-inclusive design overall is also not to be mixed with **restoration**. Restoration can be defined as “*return of an ecosystem to a close approximation of its condition prior to a disturbance or period of specific management*”⁸³, as well as a process “*illustrating changes that occur as a degraded ecosystem recovers toward its original state*”.⁸⁴ It must be distinguished from rehabilitation, which only leads to partial recovery.⁸⁵ Restoration requires knowledge of the environment before the degradation happened and must lead, with supporting evidence, to the recovery of lost ecological functions and biodiversity. In that perspective, compensating the impacts of an offshore infrastructure or integrating it in the surrounding environment in the best way possible through nature inclusive design does not equate to improving the degraded status of the area it was built in towards its initial state, i.e. restoration.

Claims were made that offshore renewable projects could be considered as delivering restoration, by preventing access to certain areas to harmful activities. However, the mere presence of an offshore renewable energy infrastructure cannot be considered restoration per se. At best, it opens a rehabilitation potential. Contributing to decreasing other pressures can hardly be generally described as 'net positive' since the effects of offshore

⁸² Danish Ministry for Climate, Energy & Utilities, Denmark is getting a new island: The world's first energy island is established 80 km out in the North Sea, 2021, <https://kefm.dk/aktuelt/nyheder/2021/feb/danmark-bliver-en-oe-rigere-verdens-foerste-energie-etableres-80-km-ude-i-nordsoeen>

⁸³ Eggermont et al., Nature-based Solutions: New Influence for Environmental Management and Research in Europe, GAIA - Ecological Perspectives on Science and Society, 2015, https://www.researchgate.net/publication/285176201_Nature-based_Solutions_New_Influence_for_Environmental_Management_and_Research_in_Europe

⁸⁴ Halpern, B., Kendrick, G., Orth, R.J., Upgrading Marine Ecosystem Restoration Using Ecological–Social Concepts, *BioScience* 66 (2), 2015, https://www.researchgate.net/publication/287377533_Upgrading_Marine_Ecosystem_Restoration_Using_Ecological-Social_Concepts

⁸⁵ Ibid.

renewable energy projects can still be very important, not to mention that they're often not fully understood and that it's not given in the long run that other activities will be excluded from these areas.

Then, the possibility to implement restoration operations based on offshore renewable energy infrastructures depends on the nature of the ecosystems that have been altered. **The majority of ecological functions cannot be substituted**, and only a limited number of ecosystems are likely to be suitable for such compensatory actions. Especially, distinction can be made between soft and hard bottom beds:

- Soft bottom beds typically consist of clay, silt, mud (clay and silt together), and sand. The restoration of soft bottom beds requires passive restoration. There are no true restoration measures for soft substrates, other than excluding harmful activities. Because the ecological functions of naturally soft bottom beds cannot be substituted, the introduction of artificial constructions such as wind turbines in such areas cannot be considered as restoration. Instead, measures developed for instance to support benthic communities in such areas can at best be regarded as nature-based solutions and nature-inclusive design, and must then be considered in the EIA.
- Hard bottom beds can be defined as habitats consisting of coral, oyster or mussel reefs, or rocks for instance. Some hard bottom beds can be restored, like oyster reefs, but they remain exceptions. Restoration of these habitats should not lead to modifying the existing ecosystem. They must also compensate for the lost ecological functionality. Lastly, it must respect the principle of proportionality, making sure that the artificial elements added are proportionate to the loss generated. If not, the project is thereby conducted for other purposes than restoring the ecosystems to its prime status, to serve human-related objectives, and can then be regarded as ecological engineering to artificially boost ecological productivity for higher harvest of sea resources and/or to create new ecological structure and new ecological functions within the offshore wind farm area.

Before construction, making sure the “Green light” really is green: the need for effective EIAs

Once the concession has been attributed to a developer based on the project it conceived, the latter still it is vital that the latter undergo an Environmental Impact Assessments (EIA) before the construction can start.

EIA is key to addressing the environmental impacts of offshore energy projects. According to the Environmental Impact Assessment Directive (2014/52/EU), Member States must ensure that “*projects likely to have significant effects on the environment [...] are made subject to [...] an assessment with regard to their effects on the environment*”.⁸⁶

Offshore wind farms are explicitly listed under Annex II of the EIA Directive, leaving it to Member States to decide whether these projects shall be subjected to an assessment. Annex 3 of the directive sets up criteria to determine whether the projects listed in Annex II should be subject to an environmental impact assessment, based on their characteristics, location and the type and characteristics of their potential impact. It mentions that the “*environmental sensitivity of geographical areas likely to be affected by projects must be considered, with particular regard to [...] coastal zones and the marine environment (ii), areas classified or protected under national legislation; Natura 2000 areas (v), areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure (vi)*”. It is here reminded that the MSFD’s objective of achieving good environmental status in EU seas by 2020 has been missed. **Science has also clearly established the potentially significant environmental impacts of offshore wind projects**. Member States should always subject offshore renewable energy projects to EIAs, including outside of protected areas.

⁸⁶ Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02011L0092-20140515&from=EN>

Under the EIA, offshore renewable energy projects must follow the mitigation hierarchy approach: avoid, minimize/reduce (restore and compensate in last resort only).⁸⁷ When avoidance is impossible or very limited, reduction measures need to be adopted during all phases, from site-selection, to exploitation and decommissioning. This includes for instance mandatory mitigation measures against underwater noise in EIA to reduce disturbance of underwater fauna, seabird and bats survey plans in all stages of development. Restoration and compensation measures are more uncertain and complex, and should be considered as a last resort to rebuild or offset what was lost. **In some cases, compensation is impossible and requires sufficient avoidance and reduction to assure a limited effect on marine species both under and above water.** It is difficult to predict whether the application of the mitigation hierarchy will be successful for all impacted ecosystems. It is possible that **a group of species may still face an impact that cannot be reduced to a negligible level after the application of a mitigation hierarchy sequence.** When there is a risk of such a substantial residual impact, **the offshore project should not be granted development consent.**

The natural carbon sequestration function of the seabed must also be considered in the EIA, and licenses for offshore wind turbines and the surrounding infrastructure. Organic carbon that sinks to the seabed is permanently removed from the carbon cycle. As much as 50-70% of this permanent carbon storage occurs in the coastal vegetated habitats, even though these habitats only occupy 0.3% of the oceanic area.⁸⁸ Therefore, all interventions on the seabed must be minimized to avoid the release of carbon. Offshore wind farms, on the other hand, can potentially help to bind more carbon, and boost biodiversity, if kelp production, or similar, is integrated in the farm construction.⁸⁹ Further, the EIA should assess the possibility for, and facilitate, co-location with other marine, renewable industries - for example offshore kelp production.

Clear licensing conditions must be set for how the developer, upon decommissioning, shall restore wind power areas back to their original quality. **Clean-up costs must be included in the assessment of the finances of the project applied for, and it must be ensured that the developer guarantees sufficient funds for this.**

Based on article 7 of the EIA directive, cross-border cooperation on offshore renewable energy projects should be part of the EIA phase where relevant.⁹⁰ Furthermore, the directive also provides for the participation of the 'public concerned', and specifically states that *"non-governmental organisations promoting environmental protection and meeting any requirements under national law shall be deemed to have an interest"*.⁹¹

Once the EIA and the accompanying measures have been approved, the physical life cycle of the project can start. During the construction, operation and decommissioning phases, mitigation measures that have been agreed upon during the EIA must be implemented. It is also important that regular monitoring assess the effects of offshore renewable energy infrastructures over the marine environment throughout their life cycle.

⁸⁷ WWF, First Things First: Avoid, Reduce ... and only after that—Compensate, 2020, https://wwf.panda.org/discover/our_focus/forests_practice/climate_change_and_forest/?362819/First-Things-First-Avoid-Reduce--and-only-after-thatCompensate

⁸⁸ Carbon storage in Norwegian ecosystems, Bartlett, J., Rusch, G.M., Kyrkjeeide, M.O., Sandvik, H. & Nordén, J. 2020. (Page 35). Link: <https://brage.nina.no/nina-xmlui/bitstream/handle/11250/2655580/1774b.pdf?sequence=3&isAllowed=y>

⁸⁹ The impact of offshore wind farms on the marine environment, Steen H. et al. (2008) page 9: https://www.hi.no/resources/publikasjoner/fisken-og-havet/74725/fh_2008-9_til_web.pdf

⁹⁰ See for instance, European Commission, Guidance on the Application of the Environmental Impact Assessment Procedure for Large-scale Transboundary Projects, 2013, <https://ec.europa.eu/environment/eia/pdf/Transboundary%20EIA%20Guide.pdf>

⁹¹ Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02011L0092-20140515&from=EN>

Circular Design

Throughout the full project cycle, it is crucial to design, develop and deploy renewable offshore energy in a circular and renewable way. The infrastructure needs to be designed to disassemble and to refurbish/recycle, while all parts should be repairable, replaceable and completely reusable in one way or another. Repowering should also be used as a way to reduce the environmental impact of new offshore renewable energy deployment. A full life cycle of projects should be conducted before they are considered eligible for any public funding support.

Best available technologies should be used to reduce the impacts at all stages of development to avoid and reduce the impacts of offshore renewable energy projects. Initiatives and research focusing on sustainable circular infrastructure(s) should be supported. For instance, initiatives today emerge that focus on the recycling of wind turbine components.⁹²

The substantial amount of metals and minerals needed to support the growth of renewable technologies⁹³ need to be responsibly and circularly sourced, instead of overexploiting land, (deep-)sea or even space metals and minerals. Failing to address circular design issues could prejudice the reputation of cleantech companies, or even the overall energy transition, which would not only be counterproductive to the energy sector but detrimental to the fight against climate change. Investments in (research) projects and start-ups are needed to support this transition.

⁹² For instance see https://www.lavenir.net/cnt/dmf20210118_01546303/terre-et-pierre-base-a-tournai-semble-avancer-dans-le-recyclage-des-pales, <https://emis.vito.be/nl/artikel/what-happens-when-wind-turbines-get-old-new-industry-guidance-document-dismantling-and>, <http://www.seabiocomp.eu/news/collection/more/?id=25&coll=4&enews=1>, <http://www.seabiocomp.eu/>

⁹³ Weigl, C., An investigation into deep seabed mining and minerals, edited by Jeffries, B., for the WWF, 2020, https://www.fint.awsassets.panda.org/downloads/an_investigation_into_deep_seabed_mining_and_minerals_for_wwf_full_report_2020.pdf

Box 3: Recommendations on the use of offshore renewables in equilibrium with safeguarding the health of the marine environment

- The increased deployment of offshore renewable energy should not compromise the biodiversity targets set up in the EU.
- The development of offshore renewable energy should be **integrated with other relevant EU policies. It should be aligned with a coherent and accelerated action plan for marine conservation and restoration**, the latter aiming at delivering on existing European and international conservation objectives and creating further carrying capacity for marine ecosystems. Offshore renewable energy projects' site location should be based on ecosystem-based and forward looking **Maritime Spatial Planning** and effective **Strategic Environmental Assessments**. Offshore renewable development also needs to be aligned with the requirements set up by the MSFD for Sustainable Blue Economy planning and implementation, such as monitoring, measures to avoid/limit impacts, ecosystem services valuation and the use of the **precautionary principle**.
- **Transparent and inclusive participatory processes and stakeholders involvement** will be keys to preventing and solving conflicts with other sea space users and uses.
- Offshore renewable energy projects must follow the **mitigation hierarchy** approach: avoid, minimize/reduce, restore and compensate in last resort only.
- As a first principle, **renewable energy developments should not be placed within Marine Protected Areas (MPAs) and other ecologically valuable areas for sensitive species and habitats**. In particular, they must not be allowed in EU strictly protected areas designated as such under the EU Biodiversity Strategy.
- Offshore renewable areas should not be considered as de facto MPAs or other effective area-based conservation measures (OECMs).
- Where possible, offshore renewable energy infrastructures should be designed and developed in a **nature-inclusive way**, reducing the impact as much as possible from the design phase onwards. Nature-inclusive design must be accompanied by regular monitoring.
- **Restoration** of marine ecosystems should not be mixed with nature-inclusive design or rehabilitation. The possibility to implement restoration operations based on offshore renewable energy infrastructures depends on the nature of the ecosystems that have been altered and should therefore be assessed on a case by case basis .
- Member States should always subject offshore renewable energy projects to inclusive, transparent and effective **Environmental Impact Assessments** (EIAs), including outside of protected areas.
- Offshore renewable energy projects must be based on **circular design**, especially regarding the sourcing of building materials and the recycling of the infrastructures.
- **More research** is needed to better understand the environmental impacts of offshore renewable energy developments and their various technologies and technical options, especially cumulative impacts when infrastructures are deployed at an industrial scale.



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itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

FAO Jolie Harrison. Comment on proposed Atlantic Shores IHA

1 message

Christine Metcalfe <VCK80@proton.me>

Thu, Apr 6, 2023 at 6:57 PM

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Dear Ms. Harrison,

Please find attached my comment on the proposed Atlantic Shores IHA for your consideration.

Kind regards,

Mrs. V.C.K. Metcalfe.

Sent with [Proton Mail](#) secure email.

 **Dear Ms.pdf**
374K

Dear Ms. Harrison,

Like so many others around the world, I am appalled by the dismissive attitude and actions of NOAA in respect of the proposed survey as described at:

<https://www.federalregister.gov/documents/2023/03/30/2023-06594/takes-of-marine-mammals-incident-to-specified-activities-taking-marine-mammals-incident-to>

To even consider mounting a survey of this dimension (an unbelievable 2,300 sq. miles) when the vast 1.500 MW offshore wind project itself has not yet undergone the planning process, let alone been given approval, is bringing the organisation into disrepute. To ignore the recent deaths of cetaceans which have demonstrated the clear and present danger, will attract justified accusations of willful blindness - as will any wrongful renewal of a prior permit which will undoubtedly result in further deaths and casualties.

Your own NMFS's clearly inadequate EIA nonetheless predicts that the great number of supposedly protected marine mammals, are to be adversely affected by noise produced by the survey. As a quick reminder, your own predictions of numbers of adverse impacts of species by category are (my emphasis):

42 Whales

2,534 Dolphins

142 Porpoises

1,472 Seals

Total = 4,190 adversely impacted marine mammals

To seriously expect any sane person to accept an opinion that a level B harassment is based on anything but wishful thinking is sadly mistaken. **In addition, I strongly condemn the statement that the proposed authorisation is exempt from the EIA assessment requirements of NEPA.** Particularly the claim that there is "no anticipated serious injury or mortality." Such a claim in the face of recent evidence to the contrary is scarcely credible. It remains a fact that NEPA requires assessment if *injury is reasonably likely*. Again recent deaths have more than demonstrated, that injury and deaths of 'protected' marine mammals, including the severely endangered Right Whales, have raised the level of likelihood to be more of a certainty.

Along with experts in this field, I reject the dangerous assumption from the NMFS that noise (both audible & ILNF) *may* cause temporary abandonment by affected animals of their foraging areas. Such an expectation is arrogant and ill advised in these circumstances. We are all surely aware that once at risk or endangered species are lost, that remains the case. It is therefore incumbent upon authorities responsible to avoid any of the catastrophic results which the renewal of this permit would attract.

As will have already been pointed out by others, but important to repeat, the following issues add to the need for rejection of the permit renewal.

1. The site chosen is in a relatively low traffic area for shipping. But crucially, it is surrounded by zones of high traffic *which is one of the busiest ship traffic areas in the world*. Therefore it becomes obvious that being forced to relocate into higher traffic areas cannot avoid increasing the likelihood of fatal impacts with ships.

2. The adverse effects on available food supplies. An overall increase caused by displacement of animals from the survey area over and above the resident similar species, when hunting the same prey, is bound to lead to a crash in that supply.

In respect of the severely endangered North Atlantic Right Whale, the flagrantly inept statements made by NOAA are: "...the size of the survey area (5,868 km²) in comparison with the entire migratory habitat for the North Atlantic right whale (BIA of 269,448 km²) is small, representing 2.11 percent of the entire migratory corridor."

However, as it is known that Right Whales migrate through the area twice a year, going between offshore Georgia and New England, rendering the "corridor" large, this becomes irrelevant. The crucial point is that the survey area is about 35 miles wide *East to West and almost all of the migrating whales presently pass through this space*. Therefore the survey has the potential effect of blocking the migration, or at least seriously disrupting it, far from taking 2.11% of the space required, it is closer to 100%. A totally shameful avoidance of the real potential for harm.

It takes courage to reverse a bad decision, but I remain hopeful that in the light of justified global protests, and a re-examination of the issues raised, you and your colleagues will show exactly the kind leadership needed by refusing to renew this permit.

Yours sincerely,

Mrs. V.C.K. Metcalfe.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Save LBI Comments on the Atlantic Shores Vessel Survey Renewal

1 message

Bob Stern <drbob232@gmail.com>

Sat, Apr 22, 2023 at 6:09 AM

To: itp Potlock - NOAA Service Account <ITP.Potlock@noaa.gov>

Cc: Thomas Stavola <tstavolajr@gmail.com>, "David Hubbard, Esq." <dhubbard@gdandb.com>



Save Long Beach Island, Inc.

www.SaveLBI.org

National Oceanic and Atmospheric Administration [RTID 0648–XC667] Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York.

To: Ms. Jolie Harrison, Chief
Permits and Conservation Division,
Office of Protected Resources,
National Marine Fisheries Service (NMFS)
Submitted via email to ITP.Potlock@noaa.gov.

April 22, 2023

Dear Ms. Harrison,

These comments are offered regarding the proposed renewal of the Atlantic Shores vessel survey activities on behalf of the Save Long Beach Island organization consisting now of over 5000 supporters, many of whom have a deep concern for the well-being of the marine mammals that inhabit or traverse our shores.

It is hard to express our disappointment that the NMFS would consider a simple renewal of this activity with no modifications to the noise devices and noise impact estimation protocols being used, its monitoring requirements or consideration of the cumulative impacts of other survey activities ongoing in the same geographical area.

As you know, we commented extensively on the proposed approval of the previous survey. Since the same problems exist here, those comments are largely repeated in Enclosure 1 with some updates. Also, in that Enclosure we point out- in italics- that the previous responses to our comments do not address the issues raised.

Now, further in the face of evidence that the multiple surveys being approved may in fact be the cause or a cause of the recent unprecedented spate of whale and dolphin deaths along the New Jersey shore, we find this NMFS action particularly arbitrary and disturbing. The responses from NMFS and others to this potential causation have been equally dismissive and disturbing, as explained below.

Claims Being Made Regarding Vessel Surveys and Recent Whale and Dolphin Deaths.

The vessel survey approvals by the federal agency and a government sponsored study at the Woods Hole Oceanographic Institution show elevated noise only close to the vessel.

Response: both the recent approvals and that study use a high scientifically unsupported noise dissipation rate that was not used by the federal agency in other marine mammal Take authorizations. Using reliable, measured noise source levels, mainstream science noise dissipation factors, and baleen whale noise disturbance criteria, the elevated noise from these vessels extends miles, will disturb whale behavior and can lead to serious outcomes. The vessel surveys therefore are a potential cause of the recent spate of whale and dolphin deaths, and the place and time coincidence of recent multiple vessels and whale deaths should be independently investigated.

Claim Made: There Is No Direct Evidence of Whale Deaths from The Vessel Surveys.

Response; "Direct" hearing damage is not the issue, but rather disturbance of the whale's behavior at lesser noise levels compromising its noise-using capability and leading indirectly to serious harm and fatality. The post-mortem examinations do not often look for hearing damage and cannot detect whether noise was a precipitating factor in such outcomes. The agency's reliance only on the examinations and the logic in concluding that there is no evidence of causation when that evidence is not looked for or does not exist frankly escapes us.

The examinations cannot be relied on to determine whether the surveys are a cause, rather, a detailed investigation of the vessel locations, and the noise devices used at the times of the whale deaths, needs to be conducted.

Claim Made: There Have Been No Cases of Whale Deaths Associated with Seismic Surveys.

Response: actually, there have been many documented cases of whale strandings worldwide coincident with nearby seismic surveys using air guns and mid-frequency sonars, which create noise patterns similar to the sparker units used here. There are no cases recorded in the U.S. because the agencies and Stranding Centers here do not investigate the possible correlation of nearby seismic surveys with strandings.

The notion that prior studies of NAVY sonar coincident with whale strandings are totally incomparable to the noise devices used in seabed characterizations is false. The operational bandwidth (that is, the frequency ranges) of the devices used (e.g., Dura-Spark, Geo Source) by the wind energy companies operate in the same frequency ranges as the whales and dolphins at issue, thus destructively interfering with their hearing/communication, resulting in numerous avoidance behaviors which can and do lead to injury and death.

The Agency's avoidance and obfuscation of the issue has forced us to take the matter to Court. Our complaint is included in Enclosure 2, and we request that you review it as well as part of our comments here. We believe it provides more than sufficient evidence and reason that the situation, at a minimum, warrants a thorough, independent investigation. We ask that the agency reconsider its refusal to conduct such an investigation, and to suspend the survey activities while it takes place.

Sincerely,

Bob Stern

Bob Stern, Ph.D., President
Save Long Beach Island Inc.

Enclosures 1 (Detailed Comments) and 2 (Court Complaint) are attached.

2 attachments



OSWITAAtlanticShoresVesselSurveyRenewalEnclosure1PDF.pdf

1614K



WhaleStrandingComplaintFiled.pdf

1302K

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Detailed Comments Regarding the NMFS proposed Renewal of the Atlantic Shores Vessel Survey Activity

Enclosure I

Introduction & Need for Additional Analyses

Last year, the National Marine fisheries Service (NMFS) has approved two high resolution geophysical noise surveys, for the Ocean Wind II and Atlantic Shores companies, and is expected to approve a third for Next Era Energy. These three surveys will take place during similar time periods and similar geographic areas. In total, as shown below in Table 1 they will perform 953 survey days in a year.

Using a realistic, scientifically supported, noise propagation loss formula that the NMFS has used in a number of other incidental take authorizations they will result in 187 level B "takes" i.e., disturbances of the North Atlantic right whale behavior, as it does or attempts to do, a north/south migration that is essential to its survival.

Table 1, Cumulative Level B Takes (Whale Behavior Disruptions)

Survey	Survey Days	Vessel travel per day (km)	Radius to 160 dB (meters) 20 dB loss factor	Radius to 160 dB (meters) 15 dB Loss factor	Level B Takes (20 dB) # of whale disturbances	Level B Takes (15 dB) # of whale disturbances
Atlantic Shores	360	55	141	736	17	95
Ocean Wind	275	70	141	736	9	47
Next ERA	318	62	141	736	8	45
Totals	953				34	187

That number constitutes 53 percent of the right whale population (now adjusted by NMFS to 350 animals) and exceeds even the NMFS high and unsupported "small numbers" criteria of 33 percent of the population (see section B.8). Using the 15 dB factor and a higher noise source level found in the technical literature for the

controlling noise device the Atlantic Shores survey alone would exceed even the high NMFS 33 percent “small numbers” criterion.

Since then, over the past 12 to 16 months, numerous other vessel surveys have been authorized off of the New Jersey and New York coast. In total there are now 11 active ITA’s issued and five pending for the waters off of those coasts.

In total, the 11 active ITA’s permit 182 level B takes of North Atlantic right whales, 169 of humpback whales and 63,820 of total marine mammals. The five pending ITA’s permit 782 takes of humpback whales and 229 of north Atlantic right whales. This is a total of 951 takes of humpback whales out of a population size of 1396 (up to 68.1%) and 411 of north Atlantic right whales out of a population size of less than 350 in the New Jersey New York area (up to 100%). Such high takes likely involve multiple daily xelevated noise exposures to the same animal.

These NMFS approvals, despite numerous examples in the scientific literature (some explained below) of how such disturbances can lead to worse x outcomes, ultimately rely on the supposition that in the case of the critically endangered right whale, not one of those hundreds of disturbances will impair, delay, or block the migration of, or otherwise cause serious harm or death to a single animal, which it is what is required to show. Given the numerous ways such harm could occur (some described below) such a conclusion is unreasonable. It also contradicts the MMPA itself, if such a large number of level B disturbances to a critically endangered species are so innocuous, why do we even have level B criteria in the MMPA and go through the exercise of calculating Level B animal “takes”?

Rather, we suggest the logical alternative, that these approvals are not technically, scientifically or mathematically supportable. In reaching them, the NMFS (a) does not sum up and consider the cumulative impacts of multiple surveys occurring in similar geographical areas and time periods, (b) ignores reliable, measurement data in the technical literature of higher noise source levels for the controlling sparker unit, (c) uses a high scientifically unsupported noise loss factor that significantly underestimates distances to meet criteria and animal takes, and that is inconsistent with factors it has used in other recent authorizations, (d) does not thoroughly analyze the potential for direct noise causing level A takes or the ways that reactions to level B takes can also result in serious harm or fatalities, (e) uses a scientifically and legally unsupported allowed “small numbers” percentage of animal takes that is mathematically inconsistent with other criteria related to potential biological removal, and (f) does not include all measures to achieve the least practical adverse impact such as obvious ones of avoiding survey activities in the North Atlantic right whale’s primary migration corridor during its primary migration months.

In particular, sound science, mathematics and common sense demands that the NMFS consider the cumulative impact of the authorizations it is approving. The MMPA language clearly allows for such a cumulative impact assessment. Spatially, it provides for the review of requests by citizens (in the plural) of the United States

who engage in a specified activity within a specified geographical region (in the singular). It cites "commercial fishing" as a specified activity, which is analogous to vessel surveying. In addition, timewise, it requires consideration of the "total of such taking during each 5-year (or less) period". Therefore, each approval must be supported by such a cumulative assessment.

In addition, NMFS does not find sufficient cause for concern to employ other procedural changes that would shed light on these cumulative problems. In addition to preparing an EIS, it should, because of the extended time period involved with renewals, proceed here through a rule-making and Letters of Authorization, and have up to date Endangered Species Act documentation prepared.

The issues herein have been raised to the NMFS previously and some responded to. Our observations regarding those responses are provided below in *italics*. We continue to believe that the concerns raised are sound. They are presented below in depth along with conclusions and recommendations to correct this unfortunate situation.

Legal Framework. Whales, dolphins, and porpoises have finely tuned senses of hearing, on which they rely to navigate, seek food, avoid danger, and communicate among themselves. Many species of these animals are vulnerable to human activities—a vulnerability that prompted Congress to enact the Marine Mammal Protection Act ("MMPA") in 1972.

The MMPA generally bars actions that kill or injure marine mammals (such as whales, dolphins, and porpoises) or disrupt their behavioral patterns. It allows the authorization of "incidental harassment" of "small numbers" of marine mammals in limited circumstances, however, if such harassment will have only a "negligible impact" on a species or population stock. 16 U.S.C. § 1371(a)(5)(D)(i). Actions that may involve serious injury or fatalities require authorization through rule making per § 1371(a)(5)(A). And when incidental authorizations constitute major federal action, they are subject to the requirements of the National Environmental Policy Act ("NEPA"), 42 U.S.C § 4321 et seq., and its implementing regulations.

For marine mammal species listed and protected under the Endangered Species Act ("ESA"), any authorized harassment or taking may occur only in accordance with an incidental take statement contained in a valid biological opinion, and only if it does not jeopardize any protected species' continued existence. Id. § 1536.

The Incidental Harassment Authorization (IHA) for the Atlantic Shores project survey, allowing for high intensity noise surveys along most of the New Jersey coast, will, at a minimum, impair the migration of the critically endangered North Atlantic right whale. It does not in our view comply with the requirements of the National Environmental Policy Act (NEPA), the Marine Mammal Protection Act (MMPA), the Endangered Species Act (ESA), and potentially the Coastal Zone Management Act (CZMA). It should be rescinded, and survey activity halted, until such compliance is confirmed, as explained below.

Technical Background, Underwater Noise, Marine Mammals, and the “Decibel”. Underwater noise can adversely affect marine mammals, i.e., by causing physiological damage, hearing loss, and changes in behavior, which in turn can affect their ability to communicate, navigate, migrate, detect prey and predator, and reproduce.

The underwater noise energy reaching a marine mammal is measured in decibels(dB), often by the formula 10 times the logarithm of that energy. That means that a 10 dB increase in decibels, say from 130 to 140 dB does not represent an eight percent increase in the noise energy received, but rather a tenfold increase.

Events where noise levels exceed criteria i.e., “takes” are generally calculated as the product of the area around the noise source where criteria levels are exceeded, multiplied by the density of the mammals in that area, multiplied by the time the noise source is present. The area where noise levels are exceeded is called the ensonified area, and is often estimated by another logarithmic formula.

That formula often expresses the reduction in noise level from the noise source to the mammal in terms of a “transmission loss” factor times the logarithm of the distance required for the noise to decrease to the criteria level. So, suppose that loss factor is 15 dB. Then, here again, an increase in the noise source level of 15 dB, from say 160 to 175 dB, doesn’t change the distance required by nine percent but rather tenfold, i.e., it could require going from 100 to 1000 meters or from 1,000 to 10,000 meters.

Therefore, the area affected and the impact on marine mammals, or “takes”, are extremely sensitive to those noise source levels and transmission loss factors, hence a focus on them in this document.

A. National Environmental Policy Act (NEPA) Compliance

1. Need for an Environmental Impact Statement (EIS).

The NMFS avoids its NEPA obligations by suggesting that these survey actions warrant only a categorical exclusion. Categorical exclusions are reserved for proposals where the environmental impacts are clearly insignificant. For example, the analysis in the NMFS Federal Register (FR) documents and the Atlantic Shores application, the one-hundred and fifty references cited for support, the optimistic and scientifically unsupported assumptions in the numerical calculations raised below, the numerous qualified assumptions and conclusions made by NMFS of what is likely and unlikely belie that conclusion.

In fact, the cumulative impact of the multiple surveys being approved and proposed that overlap spatially and time wise, just based on the NMFS take numbers described above, clearly has the potential for significant environmental impact,

requiring the preparation of an EIS. In addition, those take numbers are underestimated as shown below.

NEPA regulations and case law also strongly discourage the segmenting of actions that have similar impacts and that occur in the same place and time. Therefore, these actions should be combined into a single proposal, and the cumulative impact of such actions needs to be disclosed and considered in decision making. This argues even further for the preparation of an EIS.

In addition, as discussed just below, the survey area proposed, versus all other viable areas, furthers the current federal process of prejudicing the selection of future wind energy areas, which has far-reaching and clearly significant environmental effects. Those future alternative areas for wind energy development should also be addressed in the EIS.

2. Excessive and Prejudicial Geographical Survey Scope.

The proposed Atlantic Shores survey areas (Exhibit A) extend far beyond its lease area and the currently proposed cable corridors to shore (Exhibit B). It extends north of the lease area but not south. It covers areas closer to shore, but not farther out.

The proposed IHA NMFS Federal Register renewal notice (March 30, 2023, page 19077) states that the purpose of the surveys are to:

“support the site characterization, siting, and engineering design of offshore wind project facilities, including wind turbine generators, offshore substations, and submarine cables within the Lease Areas and along the ECRs”,

However, no such export cable routes (ECR's), beyond those going to Atlantic City and Sea Girt, NJ potential or otherwise, have been identified in the Atlantic Shores proposal, raising the issue of the need for surveying such a large area.

We are also not aware of any proposal to site additional turbines in the survey area beyond projects 1 and 2 in the Bureau of Ocean Energy Management (BOEM) Notice of Intent to prepare the environmental impact statement (EIS). If that is being federally planned, then it should have been stated clearly in the Notice of Intent, and should be part of the EIS proposed action itself. Since such elements are not included in those documents, survey activities not directly necessary for the proposed action in the lease area and the two proposed cable routes to landfall locations should not be conducted.

Exacerbating this problem further, the survey area is limited to within approximately twenty-three miles off shore and intersects part of the primary migration corridor of the North Atlantic right whale (Exhibit C). We have documented elsewhere the significant environmental and economic impact of close-in visible turbines on shore communities, as well as the potential for disrupting the

migration of the whale from operational turbine noise permeating a primary migration corridor.

The Atlantic Shores website says the turbines will be located from 9 to 20 miles offshore in the lease area. But the survey area extends another 3 miles near there. As mentioned below, a primary migration corridor of the North Atlantic right whale goes from about 20 to 32 miles offshore. So, unless the project is actually planning to put turbines in 3 miles of the migration corridor- a very bad idea-there is no need to survey out that far.

No farther out areas are identified for surveying which could avoid these problems. If the project is planning new turbine locations, then it should be looking farther out in the NY Bight area at areas not currently being leased. No larger areas south of the lease area are also included for study. This amplifies the concerns raised in our lawsuit filed on January 10, 2022, Case 1:22-cv-00055, because it prejudices the selection of future wind energy areas where wind turbines will eventually be placed without proper NEPA review, including public input.

Rather those locations continue to be directed towards certain areas by others without public input. Our lawsuit contends that the selection of wind energy areas is the most environmentally important decision to be made, and it should be made by the responsible federal agency based on the public interest with public input. To do that it should be preceded and supported by a regional environmental impact statement (EIS) that considers all reasonable areas as alternatives and then selects the appropriate ones. Only then should survey activity proceed for the selected areas.

Therefore, survey activity in areas that is not directly needed for the publicly proposed scope of the Atlantic Shores project should not be pursued. The geographic scope of the proposed survey area should be reduced accordingly. If it is not, it would also seem improper for a potential future bidder on lease areas to do this survey work and potentially gain a competitive advantage on such sales.

In its approval of the IHA, FR Notice Volume 87, No 78, April 22, 2022, page 24103, and response to the concern of the unexplained large geographical survey area by Clean Ocean Action (COA) and Save LBI, the NMFS states that it is outside its jurisdiction to determine the scope of a survey. But surely the NMFS would not place marine mammals at risk for frivolous purposes, and it must know the survey purpose to determine least practicable adverse impact. The NMFS should have and should now consult with the Bureau of Ocean Energy Management (BOEM) and provide a satisfactory answer to these questions in a correction Notice in the Federal Register.

Specifically, NMFS should disclose the full purpose of the surveys in the FR. Shore communities and others have a right to know whether this federal survey approval is supporting any new ECR's for the current lease area, any new ECR's up or down the coast, and/or any further turbine placement along the ECR's or elsewhere along the shore.

B. Marine Mammal Protection Act (MMPA) Compliance

Background: The MMPA prohibits the "take" of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 et seq.) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are proposed or, if the taking is limited to harassment, a notice of a proposed incidental harassment authorization is provided to the public for review.

Authorization for incidental harassment takings shall be granted if NMFS finds that the taking will impact "small numbers" and have a negligible impact on the species or stock(s).....

"Take" is a term of art meaning, in brief, an action that captures, kills (serious injury, death), or has the potential to injure (level A) a marine mammal, or one that has the potential to disrupt its behavioral pattern (Level B). 16 U.S.C. § 1362(13), (18).

Specifically, "Level A" takings refer to "any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild" and,

"Level B harassment" refers to "any act of pursuit, torment, or announcement which has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering." 16 U.S.C. § 1362(18).

Where harassment and/or serious injury or death may occur, a rulemaking is required per CFR 216.105.

Deficiencies: The IHA's for these surveys are deficient in many respects.

- 1.** The survey actions are segmented and do not consider the full, cumulative impact on a marine mammal population.
- 2.** The source noise level for the highest noise level instrument used is artificially low, and not consistent with other higher values found in the technical literature.
- 3.** The noise propagation loss factor used is too high and optimistic, not consistent with current scientific norms or with the factor used by NMFS in other take authorizations, and significantly underestimates the area affected and level A and B Takes.

4. The proximity of the North Atlantic right whale's primary and critical migration corridor to the survey area was not presented.
5. The potential for Level A takes from cumulative noise exposure over time has not been fully analyzed.
6. All the pathways from Level B exposure and/or masking of the whale's communications potentially leading to serious injury or death have not been identified and analyzed.
7. Criteria for determining "negligible impact" have not been defined.
8. The criteria for "small numbers" is not supported scientifically or consistent with a prior Court decision.
9. The 160 dB criteria for determining whale disturbance may is too high, 140 dB should be used for baleen whales.
10. Therefore, the NMFS conclusions regarding "negligible impact" and "small numbers" are not supported.
11. A Rulemaking and Letters of Authorization are required for these surveys.
12. A robust Passive Acoustic Monitoring (PAM) System is required as one means of effecting the least practicable adverse impact.
13. Other measures and procedures are required to effect the least practicable adverse impact.

Deficiencies Explained

1. The survey actions are segmented and do not consider the full, cumulative impact on a marine mammal population.

There are now new major issues of lack of cumulative impact disclosure because NMFS is approving multiple surveys that overlap both spatially and time wise.

Last year, the NMFS authorized survey activities for the Ocean Wind project from May 10, 2021 to May 9, 2022 in an area that overlaps much of the Atlantic Shores survey area. Prior to that it had authorized survey activities for Atlantic Shores from April 20, 2021 to April 19, 2022. So, the two survey activities operated concurrently in much of the same geographical area for over 11 months. The Ocean Wind survey renewal repeated that overlap between May 10, 2022 and April 18, 2023 (Exhibit C).

The NMFS then approved a third IHA for a survey by Next Era Energy Transmission MidAtlantic Holdings LLC (NEETMA). That survey would overlap major parts of the two other survey areas and its Northern Survey Area would intersect the primary migration corridor of the right whale (see Exhibit D below and FR Notice, Volume 8,

Number 89, May 9, 2022, page 27578, Figure 1). Although the start date was not specified, the 320 survey days to be approved will very likely overlap the other two surveys above timewise.

Since then, additional surveys have been approved, but to illustrate the dramatic effect on Level B takes just from using an accepted noise loss factor and summing takes, we use those three surveys below in Table 1.

The cumulative impact of the three surveys is shown below in Table 1 for the distance-controlling Dura Spark 240 unit, and the NMFS published vessel travel per day and North Atlantic right whale density numbers, for both the 20 dB loss factor used by the NMFS and the more appropriate 15 dB noise loss factor-as explained in Section B.3 below.

Table 1, Cumulative Level B Takes

Survey	Survey Days	Vessel travel per day (km)	Radius to 160 dB (meters) 20 dB loss	Radius to 160 dB (meters) 15 dB loss	Level B Takes (20 dB) # of whale disturbances	Level B Takes (15 dB) # of whale disturbances
Atlantic Shores	360	55	141	736	17	95
Ocean Wind	275	70	141	736	9	47
Next ERA	318	62	141	736	8	45
Totals	953				34	187

The difference between the summed number of 187 (using the 15 dB loss factor) and the individual survey number of 17 (using the 20 dB factor) is dramatic, and this does not consider the even worse situation using an appropriate noise source level for the Dura Spark 240 unit for the Atlantic Shores survey as explained below and presented in Table 3.

Not considering these activities together is not only unscientific and not logical, but not consistent with the language in the marine Mammal Protection Act (MMPA). Sections 101(a)(5)(A) and (D) of the MMPA above speak to allowing incidental take “upon request therefore by citizens (in the plural) of the United States who engage in a specified activity (other than commercial fishing) within a specified geographical region” (in the singular). It would seem then that both legally and logically survey activities conducted at the same time in the same geographical region should be considered as a single Incidental Take Authorization (ITA) or IHA review.

In its previous response to this comment the NMFS singles out the term “specified activity” and asserts that that must apply to the proposal from a single applicant.

However, that is not consistent with the rest of the language in that paragraph. The paragraph speaks to citizens of the United States in the plural making such requests and operating in the same geographical region. If the Congress had meant it to apply to a single citizen action it would have said "citizen". It cites "commercial fishing" as a specified activity which is broader than a single applicant activity, and is analogous to vessel surveying. A more consistent reading of the paragraph in whole would define specified activity as for example, high resolution geographical surveys, or pile driving or wind turbine operation.

Therefore, the language of the Act supports combining like activities into a single authorization where that is feasible timewise, and if not, at least including a section in each ITA or IHA review on the cumulative impact of all recent, current and reasonably foreseeable authorizations.

The MMPA also speaks to maintaining a modern scientific resource program and the use of the best available scientific information in several sections. In addition, the Endangered Species Act (ESA) requires that analyses be done based on the best science available. It is not scientifically credible to analyze impacts on a critically endangered whale in a piecemeal, segmented fashion. Likewise, the NEPA requires analysis of cumulative impact.

Therefore, at a minimum, all such future authorizations should include a section on the cumulative impact of recent overlapping authorizations, those being considered concurrently and those that are reasonably foreseeable, so that the full impact on endangered mammals can be seen and considered in making decisions.

2. The source noise level for the highest noise level instrument used is low, and not consistent with other higher values found in the technical literature.

For example, in the Atlantic Shores proposed IHA, a reference for the source noise level in Table 2 of a 203 dB root mean square (rms) source noise level to represent the Dura-Spark 240 unit is not specified. It appears to be based on another unit, the Dura-Spark UHD, which was found in the 2021 authorization. The footnote says that the level was based on the Sig-electric 820 unit with a power level of 750 joules. But the data in the graph in Appendix A of the Atlantic Shores application of power output versus energy shows an average level of 215 dB at 750 joules for that unit, and the manufacturer presents a typical source level of 226 dB. It is not clear whether those are rms levels. If they are not, those numbers still point towards rms values greater than 203 dB.

The 203 dB value is not consistent with the 214 dB rms value for sparker units in Table 1 of the June 29th, 2021, ESA Programmatic Consultation report that NMFS says it relied on for ESA compliance. It is not consistent with the 214 dB value specifically for the Applied Acoustic Dura-Spark unit presented in Table 5 of the February, 2021, BOEM Biological Assessment referenced in the ESA Programmatic

Consultation. It seems odd for the NMFS to rely on a lower 203 dB value for MMPA compliance and a higher 214 dB value for ESA compliance.

The 203 dB level is not consistent with the Atlantic Shores IHA application dated December 23, 2019 which shows a higher rms level specifically for the Dura-Spark 240 unit of 211.4 dB in Table 2-2.

The 203 dB value is not consistent with the 213 dB rms value stated for the Applied Acoustics Dura-Spark 240 unit presented in Table 1 of the document titled "Takes of marine mammals incidental to specified activities; taking marine mammals incidental to marine site characterization surveys off of Delaware", April 4, 2018.

It is not consistent with two other references that show a higher rms level. The report titled, Characteristics of Sounds Emitted during High Resolution Marine Geophysical Surveys, BOEM OCS study 2016-044, Table 10, for 750 joules (per page 4204 of the FR notice the energy level based on Atlantic Shores previous experience with the unit) shows a rms source level of 211 dB for the Dura-Spark unit. That number is also found in the December 23, 2019 Jasco Applied Sciences Report on page 3.

As shown in the Tables 2 and 3 below, the difference in noise source level of 203 dB versus 211 dB has a very significant impact on the distances to meet criteria and the number of Level B takes. Absent a compelling justification for the 203 dB level, the 211 dB level is more prevalent in the technical literature and the preferable one to use.

The NMFS response to our comment does not support the use of a 203 dB noise source level for the Dura-Spark 240-unit. Rather the recommended 211 dB level should have been used and should be used now.

The Atlantic Shores IHA application states only that the energy level of the Dura-spark 240 unit will not exceed 700 to 800 joules of energy input (page 5). If a source level was needed for 800 joules, Atlantic Shores and NMFS could have easily interpolated the specific noise measurement data for the Dura-spark 240 unit in the 2016 Crocker and Frantantonio Report, which they both reference as a reliable source.

That report in Table 10 shows a 209 dB root mean square (rms) noise level at 500 joules and 213 dB at 1000 joules for the Dura-spark 240 unit. So, an interpolation between those for 800 joules results in a noise source level of 211.4 dB, which is likely why that number appears in other technical literature for the Dura-spark 240 unit.

Obviously, the noise source level for say 750 joules energy input must lie between 209 and 213 dB. But instead, Atlantic Shores and NMFS inexplicably turn to a quite different unit, the SIG ELC 820 sparker, for a noise source level number. That device is notably lighter and less powerful than the Dura-spark 240 unit. It weighs

only 1.8 kilograms or 4 pounds (page 46, Crocker & Frantantonio) compared to 60 kilograms or 132 pounds for the Dura-spark 240 unit (page A-14). It's emitted pressure wave form has a peak pressure for 500 joules at 5 meters of about 30,000 pascals (Figure 35) compared to 100,000 pascals for the Dura-spark 240 unit (Figure 37). For the energy range of interest here, 500 to 800 joules, a comparison of Tables 9 and 10 of the Crocker Report shows that it has a rms noise level 8 dB lower than the Dura-spark 240 unit.

In addition, the statement that operation at 500 to 600 joules is more likely isn't particularly relevant because the Atlantic Shores application only restricts the power level to below 800 joules, which is what NMFS has approved. However, even if operation was restricted to 500 joules, Table 10 of the Crocker and Frantantonio report shows a rms noise source level of 209 dB for the Dura-spark 240 unit for that power level, which in itself is substantially greater than 203 dB.

Therefore the use of the ELC 820 unit underestimates the noise source level and its use as a surrogate unit is not justified. The noise source level of 211 dB level that was recommended in our comments on the proposed Atlantic Shores IHA should have been employed here. The fact that the same substitution of the ELC 820 unit was used in the Mayflower Wind application for a different unit, the Geomarine-Geo-spark 800 joule system, does not add any further justification for that practice here.

3.The noise propagation loss factor is too high, not consistent with current scientific norms or with the factor used by NMFS in other take authorizations, and significantly underestimates the distances to meet criteria and level A and B takes.

The use of a 20 decibel (dB) noise propagation loss factor for all the equipment noise source levels is not appropriate. According to a number of scientific sources, the use of a noise propagation loss coefficient of 20 dB per tenfold increase in distance represents "spherical spreading" and is only appropriate in the "near field" where the calculated horizontal distance to meet criteria is comparable with the water depth.

The 20 dB loss factor in the equation $20 \log r$, where r is the horizontal distance from the source to the receiver, is only appropriate when the sound waves can spread out as a spherical shape. Away from the source when the waves are constrained by the sea bottom and surface, the waves spread out in a cylindrical way. That is often represented by a 10 dB loss factor and the equation $10 \log r$. The practical spreading 15 dB loss factor and formula $15 \log r$ is used to bridge and represent both of these regimes.

The key question then is how far from the source can spherical spreading be assumed. It would seem logical for a source near the surface-as these are- that spherical spreading would end once the sound wave hits the bottom or at a

horizontal distance equal to the water depth. For the survey areas here, that is less than 15 meters (See Exhibit B). For expected horizontal distances greater than 15 meters, the use of the "practical spreading" 15 dB loss factor would be appropriate.

This is explained more fully by Tetra Tech Inc. in their Acoustic Modeling Report prepared for Dominion Wind Energy of December, 2013. There they use the 20 dB loss factor only out to a distance equal to the water depth. At 8 times the water depth the formula transitions to the cylindrical equation $10 \log r$. In between one water depth and 8 times the water depth the practical spreading formula $15 \log r$ is used.

In its response to LBI comments on the Ocean Wind and Atlantic Shores surveys, the NMFS points to the 1995 book by Richardson et al. to support the use of the 20 dB factor. That reference does present the 20 dB level for spherical spreading, but NMFS neglected to mention that that description also includes the transition to cylindrical spreading with the 10 dB loss factor, which is assumed to occur at 100 meters (m). That is consistent with the 8 times water depth criteria used by Tetra Tech above, which for a 15 m depth will result in transition to cylindrical spreading at 120 m.

Put differently, the NMFS use of the 20 dB loss factor would only be appropriate out to a distance of about 15 m which is much less than 141 m it predicts to meet criteria for the Dura Spark unit even using the optimistic 20 dB loss factor. Using the 15 dB loss factor the distance to meet 160 dB behavior disruption criteria would be 736 m and 15 m would represent an insignificant portion of that path. Therefore, the NMFS is using a factor that is just not appropriate for the noise source levels, shallow depths, and distances required here to meet the 160 dB criteria.

In its response to comments on the Ocean Wind and Atlantic Shores surveys (FR Notice, Vol. 87, No. 93, May 13, 2022) the NMFS states that the wave length of the sound emitted relative to the water depth should be considered in determining these transitions. It states that for sounds in the thousands of hertz (cycle per second) range, the wave length is short and spherical spreading could extend further. The basis for this is unclear since spherical spreading is a geometric phenomena and attenuation of high frequency noise occurs at larger distances.

The distance at which spherical spreading transitions to cylindrical was derived by D.E. Weston, a renowned member of the British Acoustical Society in the paper titled, Intensity-Range Relations in Oceanographic Acoustics, May 26, 1971. It depends on geometric parameters, the water depth and a critical grazing angle for a sound wave, not frequency (equation 3). That same paper shows excellent agreement of measured noise loss with a 15 dB loss factor (Figures 7 and 8).

But in any case, here with respect to the right whale, we are interested in frequencies less than 2000 hertz (Hz) which are thought to be its primary hearing range, assuming that is the same as its dominant frequency calling range of 20 to 2000 Hz (See Parks, SE, Clark CW. 2007. Acoustic communication: Social sounds

and the potential impacts of noise. In: Kraus SD, Rolland R, editors. The Urban Whale: North Atlantic Right Whales at the Crossroads. Cambridge, Massachusetts: Harvard University Press. p. 310-332).

Further, based on analysis of vocalizations the right whale's estimated band of maximum hearing sensitivity is 100 to 400 Hz (See Short- and long-term changes in right whale calling behavior: The potential effects of noise on acoustic communication. The Journal of the Acoustical Society of America 122, 3725 (2007), Susan E. Parks and C. W. Clark.

For the highest frequency in that range (shortest wave length) the wave length would be about 1700 meters per second (sound speed in water) divided by 400 cycles per second or 4.25 meters, which is not small relative to water depths less than 15 meters. Therefore, wavelength is not a major factor here as regards the right whale and the use of the appropriate 15 dB noise loss factor.

The 20 dB factor is presented without explanation in equations in various reports provided to Atlantic Shores, e.g., in Distances to Acoustic Thresholds corresponding to Level B Harassment for High Resolution Geophysical Sources, December 23, 2019, Jasco Applied Sciences, Document 01875.

From Exhibit B here it can be seen that water depth in much of the survey area is often less than 15 m. Using a 15-meter water depth, it would be appropriate to use the 20 dB loss factor only out to a 15 m radius, or when the difference between the source noise level and the criteria level is less than 20 log 15 or than 24 dB. That is not the case here for many of the equipment units being used.

The use of the 20 dB factor is not consistent with the NMFS approach used and described well as "common practice" in the NMFS's own ITA by rulemaking of December 15, 2021 titled, "Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to U.S. Navy Construction at Naval Station Newport in Newport, Rhode Island", which explains,

"SOUND PROPAGATION. Transmission loss (TL) is the decrease in acoustic intensity as an acoustic pressure wave propagates out from a source. TL parameters vary with frequency, temperature, sea conditions, current, source and receiver depth, water depth, water chemistry, and bottom composition and topography. The general formula for underwater TL is:

$$TL = B * \log_{10} (R_1 / R_2),$$

Where

B = transmission loss coefficient (assumed to be 15)

R₁ = the distance of the modeled SPL from the driven pile, and

R_2 = the distance from the driven pile of the initial measurement.

This formula neglects loss due to scattering and absorption, which is assumed to be zero here. The degree to which underwater sound propagates away from a sound source is dependent on a variety of factors, most notably the water bathymetry and presence or absence of reflective or absorptive conditions, including in-water structures and sediments. Spherical spreading occurs in a perfectly unobstructed (free-field) environment not limited by depth or water surface, resulting in a 6 dB reduction in sound level for each doubling of distance from the source ($20 \cdot \log(\text{range})$).

Cylindrical spreading occurs in an environment in which sound propagation is bounded by the water surface and sea bottom, resulting in a reduction of 3 dB in sound level for each doubling of distance from the source ($10 \cdot \log(\text{range})$).

As is common practice in coastal waters, here we assume practical spreading (4.5 dB reduction in sound level for each doubling of distance). Practical spreading is a compromise that is often used under conditions where water depth increases as the receiver moves away from the shoreline, resulting in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions. Practical spreading was used to determine sound propagation for this project". Emphasis added, also a 4.5 dB doubling distance is equivalent to using a 15 dB loss factor, "B", and in the equation above and R_1 is one meter.

The use here of a 20 dB factor is not consistent with the 15 dB loss factor presented above that was used by NMFS in approving a request from its parent agency, the National Oceanic and Atmospheric Administration (NOAA), for authorization to take marine mammals incidental to the NOAA port facility project in Ketchikan, Alaska as recently as December 1, 2021.

Regarding the Navy construction at Newport, Rhode Island and the NOAA construction in Ketchikan, Alaska, the NMFS says in its response to our comments on the Ocean Wind and Atlantic Shores surveys that these activities are not relevant to the noise surveys at hand because they occur in less than 10 m depths. However, the depths at hand here are less than 15 m and not that different.

The NMFS also states that the pile driving activity associated with those projects produces sound with higher frequency and longer wavelengths than the noise sources being employed here-making them more amenable to the 15 dB factor. While pile driving activities do produce some noise energy at higher frequencies about 75 percent of the noise spectrum is still below the two-thousand Hz frequency level which is of interest here. That is shown in a report done by Jasco Applied Sciences of July 21, 2017 titled Acoustic Modeling Study of Underwater Sound Levels from marine pile driving in southeast Alaska, which contains results

specifically for the Ketchikan facility (See Figures 1 through 5 on page 12 and Figure 10 on page 17). Therefore, that approval is relevant to the noise surveys here.

The 30-inch diameter piles modeled in that study (Table 1) are also similar to those used in the Naval construction action in Newport, Rhode Island (See Table 2 of the Federal Register notice of October 13, 2021 titled Take of Marine Mammals Incidental to Specified Activities; taking marine mammals incidental to U.S. Navy construction at Naval Station Newport in Newport Rhode Island). Therefore, that approval is relevant to the noise surveys here.

The use of the 20 dB factor is not consistent with the 15 dB factor used very recently on February 8, 2022 by the NMFS to justify the "Taking of Marine Mammals Incidental to Kitty Hawk Wind Marine Site Characterization Surveys, North Carolina and Virginia" which used similar sound survey devices.

The use of a 20 dB factor is not consistent with the Bureau of Ocean Energy Management's (BOEM's) cited factor of 15 dB for use in the Practical Spreading Loss Model for pile driving in its report titled, A Parametric Analysis and Sensitivity Study of the Acoustic Propagation for Renewable Energy, OCS study, BOEM 2020-011,

It is not consistent with NMFS's own previous recommendation in 2012 cited in that Report on page 30 for use of a 15 dB factor. In fact, that same report shows that the use of the 10 Log r formula, i.e., even less transmission loss than the 15 dB factor, compared better with real or simulated measurements (See Figure 3.2 on page 31). So even the practical spreading loss formula may overestimate transmission loss, and certainly the 20 log r formula does.

The use of a 20 dB loss factor is not consistent with the method used by Tetra Tech Inc. for the Dominion Wind Energy Project as discussed in the report titled, Underwater Acoustic Modeling Report Virginia Offshore Wind Technology Advancement project, December 2013. In that report, Tetra Tech only uses the 20 dB factor out to the water depth distance, which can be seen from Exhibit B for this survey area is often less than 15 m. Tetra Tech then uses the lesser 15 dB factor from there to eight times the water depth, and beyond that uses a 10 dB factor. Using their approach, the distance to meet the 160 dB criteria for the Dura-Spark 240 unit with a 203 dB source level would increase from 141 meters to 354 meters, and with a 211 dB source to 2,234 m.

The use of the 20 dB factor is very far from the more conservative "worst case" formulas used by an Atlantic Shores noise specialist consultant, Pangea Subsea (Report 04563-1) in the Atlantic Shores application for incidental harassment authorization of December 15, 2021. Formulas 7 and 8 of that report only use a 20 dB loss factor from 1 m to 3.5 m, and a 10 dB coefficient beyond that. Using those formulas, the distance to reach the 160 dB level for the Dura-Spark 240 unit would be 5,677 m instead of the 141 m being used by NMFS, even using the lower noise source level of 203 dB.

The 20 dB factor is far from the effective transmission loss factor of 16 dB that reflects the distance to criteria results in the BOEM's own Atlantic Geological and Geophysical Activities Programmatic Environmental Impact (EIS) statement of March 2014. Using the above formula for transmission loss, that "effective" 16 dB value can be calculated from the radial distances (about 1750 meters) required to reach 160 dB in Table D-23 of the EIS for the four shallow depth scenarios 20, 26, 30 and 34, and the representative source noise level of 212 dB for boomers (modeled as similar to sparkers) and sparkers, in Tables D-6 and D -13 respectively.

The use of the 20 dB factor is not consistent with field measurements. A comparison of modeled transmission loss with actual measurements by Thompson et al. in the report titled, Effects of Offshore Wind Farm Noise on Marine Mammals and Fish, dated July 6, 2006, found that for pile driving events with frequencies less than 1000 hertz, the 15 dB loss factor was the best approximation of transmission loss for shallow North Sea and Baltic waters, and other settings comparable to this survey area, pages 15-16.

A number of other studies use the 15 dB factor such as the recent analysis by Stober et al. estimating larger turbine noise source levels titled, How Could Operational Underwater Sound from Future Offshore Wind Turbines Affect Marine Life, March 15, 2021, and the recent study on passive acoustic monitoring (PAM) detection probabilities titled, Pam Guard Quality Assurance Module for Marine Mammal Detection using Passive Acoustic Monitoring, CSA Ocean sciences Inc., August, 2020.

3. Impact of Proper Propagation Loss Factors and Source Levels. The dramatic effect on the distances required to meet criteria and on the number of animal takes using the 15 dB factor versus the 20 dB factor, and the 211 dB source level versus 203 dB are shown in Tables 2 and 3 respectively.

- Using NMFS's vessel speed, survey days, and animal densities in its previous Atlantic Shores FR Notices, with the stated lower noise source level of 203 dB for the Dura-Spark 240 unit, the use of the more appropriate **15 dB loss factor versus the 20 dB** would increase the **distance to meet the 160 dB criteria from 141 m to 736 m** (Table 2). The now larger Zone of Influence (ZOI) would increase the **annual Level B takes from 17 to 95** (Table 3 below).
- With the 15 dB loss factor, the use of the **211 dB source level versus the 203 dB** level increases the distance required to meet the 160 dB criteria from 736 m to 2,512 m (Table 2) and the number of **level B takes from 95 to 340** (Table 3).

- The use of the 211 dB source level versus 203 dB **and** the 15 dB loss factor versus 20 dB would dramatically increase the **distance** to meet 160 dB **from 141 m to 2,512 m** (Table 2), and the number of **Level B Takes from 17 to 340 per year** (Table 3).t

Table 2, Sensitivity of Radial Criteria Distance to Source Noise Level and Propagation Loss Factor-Atlantic Shores Survey

		Decibels (rms)		Distance to Criteria (meters)			
Equipment	Criteria	Sound Exposure Level (SEL)	Sound pressure Level (SPL)	20 dB Loss factor	15 dB Loss factor	Tetra Tech	Pangea Subsea
Dura-Spark 240	Level B, 160 dB		203	141	736	354	5,677
Dura-Spark 240	Level B, 160 dB		211 ⁽³⁾	355	2,512	2,234	35,980
Edge-tech 2000-DSS	Level B, 160 dB		195	56	215	80	900
Dura-Spark 240	Level A, PTS,1hour Imp.,183 dB	215.5 ⁽¹⁾	203	42	147	54	510
SBI	Level A, PTS,1hour non-imp., 199 dB	177 ⁽²⁾	190				58

(1) See Jasco Applied Sciences Report, in the Atlantic Shores incidental take application for 2021, titled Distances to Acoustic Thresholds corresponding to Level A Injury for High Resolution Geophysical Sources, November 4, 2019, Document 001880, Version 2.0, and the calculation below in Section B.5 for a one hour exposure.

(2) Atlantic Shores Incidental Harassment Authorization application, December 2021, Appendix C.

(3) From Characteristics of Sounds Emitted During High Resolution Marine Geophysical Surveys, BOEM OCS Study 2016 -044, Table 10, for 750 Joules (per page 4204 of the FR notice based on Atlantic Shores previous experience with the unit), and the Jasco Applied Sciences Report titled Distances to Acoustic Thresholds Corresponding to Level B Injury for High Resolution Geophysical Sources, December 23, 2019 Report, Document 01875, page 3.

Table 3. Estimated Takes-Atlantic Shores Survey

Take Level	Criteria (dB)	Source Level, rms (dB)	Propagation Loss factor (dB)	Distance to Criteria (meters)	ZOI (km ² per day)	Estimated Takes per year
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A	183 dB, one hour, cumulative	215.5 ⁽¹⁾	15	147	16.2	19
B	160	203	20	141	15.6	17
B	160	203	15	736	82.7	95
B	160	211	15	2,512	296	340

(1) See calculation in Section B.5

The Table results confirm that for Level B takes, the Dura-Spark 240 unit is the controlling one, but also that a one-hour Level A cumulative exposure scenario is one to be examined, and we recommend that NMFS do such an analysis.

The use of the scientifically supported 15 dB factor alone, even with the 203 dB source level calls into question the NMFS conclusions regarding adequate exclusion zones and negligible impact, even more so with the 211 dB source level.

As cautioned in the Introduction above, these two factors have a very significant effect on the area exposed to above criteria noise levels, and the number of animal takes, and must have a sound, defensible, technical and scientific support. That is not present here, as shown by the numerous inconsistencies cited.

In fact, without any plausible scientific explanation, it seems almost arbitrary on NMFS's part to approve the use of the 15 dB factor for its parent agency NOAA, the Navy, and other wind energy companies doing similar survey work, but bless the use of the 20 dB factor here. It surely is aware of the dramatic effect that factor has on reducing ensonified zones and the number of animal takes.

The NMFS should go back and revise its calculations using: (a) the scientifically mainstream 15 dB factor that it has used in other recent take authorizations, including a recent one for its parent organization, NOAA, and (b) the 211 dB source level for the Dura-Spark unit which lies between the measured levels of 209 and 213 dB within for the power levels within which the applicant says it will operate , and which is more prevalent in the technical literature.

4. The proximity of the North Atlantic right whale's primary migration corridor to the survey area was not presented.

In several places, the FR Notices attempt to minimize the correlation of the primary right whale's migration corridor with the survey areas. In fact, the two are strongly intertwined.

The Atlantic Shores survey area goes out about 23 miles. A primary migration corridor for the right whale on an annual basis extends from approximately 20 to 32 miles offshore as shown in Exhibit D. Therefore, much of the survey area is near or adjacent to that corridor and part of the survey area even intersect with it. This has implications for impairing the migration of the whale from survey noise, which is of course could jeopardize its continued existence, as discussed further in Section B.6.

Considering this, the statement on FR page 4205 in the Atlantic Shores proposal extending the right whale's migration area beyond the continental shelf and then comparing that huge area to the survey area is misleading.

While there may be some right whale movement farther out in May and June, most of the migration is concentrated closer in, near to, and even intersecting with the survey area in January, February, March, April, and November. See Habitat-based cetacean density models for the U.S. Atlantic and Gulf of Mexico (2015 version), Duke University, Explore Sea Map Observations. [_](#)

The concentration of the right whale's migration near and within the survey area is shown in Exhibit D here on an annual basis and in Exhibit E for the month of March. The presence of that migratory path is further confirmed by Figure 9 of Atlantic Shores Offshore Wind own application for an MMPA ITA rulemaking shown in Exhibit G. The density map there for winter shows that the migration corridor intersects the project area and extends about 12 miles southeast of it. The density map for spring shows an even narrower migration corridor adjacent to the project area of about 5 miles.

The NMFS large area comparison is therefore a misleading representation of the actual correlation between the migration and the proposed survey activities. It should not be used, especially in the section purporting to justify a "negligible impact" to the whale.

Rather, that correlation is essential to understanding the impact of the survey on the right whale, and in estimating Level A and B takes and the impact of masking its communication. The NMFS should have provided that density data in map format by month at the outset of this analysis to facilitate that understanding, and it should delete and not rely on the misleading large continental shelf area comparison.

The use of averaged density numbers in the highest season is a step in the right direction towards getting conservative take estimates. However, it would be better to use the whale's calendar instead of ours, and pick the three highest months of its migration in the area.

It is also unclear how the density data was used spatially in each area before a density number was averaged by season. It appears that some sort of average density was used for each area. However, right whale densities within an area can vary by an order of magnitude, and using an average may not be conservative. Since the proposal does not specify where the survey vessels will be, when, it is necessary to account for the worst case (with respect to right whale exposure to noise) where the vessels are in the worst places at the worst migration times.

The NMFS should present more data by month on the density numbers used so they can be compared to the Robert's data. It needs to explain how the density numbers were selected within each survey area before they were averaged over

time. This requires further presentation and analysis to show overall whether and how conservative the density selection method is.

5. The potential for Level A takes from cumulative noise exposure has not been fully analyzed.

Regarding the permanent threshold hearing shift (PTS) discussion, the NMFS cannot simply assume that an animal approaching a high noise area will turn away and quickly leave that area. To get there it may have already been subjected to behavioral disruption levels (see Section B.9), may be disoriented, stressed, and even experiencing temporary threshold hearing loss.

It is also important to keep in mind that, initially and perhaps for some time, the whale does not know where the noise source is. While it appears that baleen whales have some ability to localize sounds at frequencies of a few hundred hertz, it's not clear that that is the sole driver of how they move (see W. John Richardson, *Marine Mammals and Noise*, 1995, Section 8.6). In any case it may take them a while to figure it out, and initially they might even move toward the noise source. A whale might also tolerate some noise to stay on its migration course. Such an animal remaining in a high noise area for only an hour could receive a cumulative sound exposure exceeding the PTS hearing loss criteria for impulsive sources of **183 dB**.

One of Atlantic Shore's noise consultants, Pangea-subsea, apparently thought enough of the likelihood of a significant cumulative exposure to perform a detailed numerical analysis of a one-hour exposure to its Sub-Bottom Imager (SBI) in Appendix C of the Atlantic Shores application. A similar analysis was done here for the Dura-Spark 240 unit.

The cumulative source sound energy level (CSEL) for an hour exposure to the Dura-Spark 240 unit was calculated at:

$$\text{CSEL} = \text{SEL} (184 \text{ dB}^*) + 10 \log_{10} (0.4 \text{ sweeps per sec}^* \times 3600 \text{ sec}) = 215.5 \text{ dB},$$

Where SEL = the source energy level.

*Jasco Applied Sciences Report, in the Atlantic Shores incidental take application for 2021, titled Distances to Acoustic Thresholds corresponding to Level A Injury for High Resolution Geophysical Sources, November 4, 2019, Document 001880, Version 2.0.

The result in Table 2 above shows that for a one-hour exposure using the more realistic propagation loss factor of 15 dB a buffer distance of 147 meters is required to avoid exceeding the **183 dB criteria**. That is comparable to the 141 m distance that NMFS (optimistically) identified for Level B takes and caused it to create an exclusion zone, so it should not be dismissed here for the even more serious Level A takes.

Using the NMFS formula on page 4215 of the Atlantic Shores FR Notice, the 147 m gives a Zone of Influence (ZOI) of 16.24 km² per day. Using the FR vessel data, animal densities and the formulas on pages 4215, that larger ZOI would result in an

estimated Level A take from Permanent Threshold Shift (PTS) alone of 19, as shown in Table 3. That is clearly a significant number considering the right whale's precarious status, and does not account for potential serious injury or fatality from the other pathways described in Section B.6 below.

In its response to Save LBI's comment to further consider level A takes, the NMFS says that the wrong threshold criteria was used in our analysis. However, that is not the case. Save LBI used the appropriate 183 dB cumulative sound energy level criteria of 183 dB as shown in Tables 2 and 3 and the discussion in Section B.5. So, the example given of a one-hour exposure to the Dura spark unit remains sound. The discussion in Section B.6 on masking regarding relative vessel and whale travel speeds also shows that a one-hour exposure is indeed plausible.

Additionally, the NMFS assurance that Atlantic Shores is required to not approach any right whale within 500 m or operate the sparker unit within 500 m of a whale does not inspire confidence. The NMFS is allowing Atlantic Shores-and others- to rely solely on visual detection of the whales, even at night. It is not requiring passive acoustic monitoring to augment that. Given that sole visual reliance, the time the whale spends underwater, the times of poor visibility including night time, and the limits on human attention span and eyesight, the likelihood of detecting a whale at 500 m and beyond is quite low.

Therefore, the NMFS cannot so easily dismiss the cumulative exposure PTS scenario and should do a more thorough, quantitative analysis of it.

6. All the pathways from Level B exposure and/or masking of communication potentially leading to serious injury or death have not been identified and analyzed.

The NMFS traditionally does two analyses in reviewing ITA or IHA requests, for level A and Level B takes. A third, comparable level analyses, is needed.

A level A harassment analysis calls for an assessment of the potential to injure a marine mammal or a marine mammal stock in the wild.

A level B analysis calls for an assessment of the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including but not limited to migration, breathing, nursing, feeding, or sheltering.

Assessments where harassment and/or serious injury or death may occur require a rulemaking per CFR 216.105.

The two NMFS analyses try hard to separate Level A injury from Level B harassment. But in the real, whale world that distinction is not so clear, and lesser exposures can indirectly lead to worse outcomes. That linkage is also present in the December 21, 2016, NMFS interim guidance, defining the term "harass," under the Endangered Species Act (ESA), as to "create the likelihood of injury to wildlife by

annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering.”

The NEPA also demands a full analysis of these reasonably foreseeable real-world paths, particularly in the case of the North Atlantic right whale where serious injury or death to only one animal can spell extinction for the species as discussed below in Section B.8.

Therefore, the NMFS should assess this third path or missing linkage from reactions to level B harassment exposures and from masking of the whale’s sound detection and communication abilities, to the “likelihood of injury” with a level of analyses comparable to that given to Level A and Level B takes.

Such paths include reactions to noise stimuli causing right whales to ascend and swim just below the surface where they are more vulnerable to vessel strike, not just from survey vessels, but from other vessels as well. This behavior has in fact been demonstrated experimentally by Nowacek et al. in the paper titled, North Atlantic right Whales ignore ships but respond to alerting stimuli, The Royal Society, may 20, 2003. This potential path toward severe injury is particularly applicable to the survey areas off the NJ and NY coasts which are dissected and rimmed by shipping lanes which support high density shipping traffic into and out of the major ports of New York/Newark and Philadelphia. In trying to avoid the disturbing survey noise the whales may be moving into more hazardous waters.

Another path to injury involves separation of calves from mothers as a result of masking of their communication from elevated noise levels. Such communications can employ low-amplitude signals susceptible to masking as discussed in the report, Acoustic crypsis in communication by North Atlantic right whale mother–calf pairs on the calving grounds, Susan E. Parks, Sofie M. Van Parijs and Douglas P. Nowacek, Published: 09 October 2019.

The potential for such loss of mother/calf communication was also presented in, Acoustic propagation modeling indicates vocal compensation in noise improves communication range for North Atlantic right whales, Jennifer B. Tennessen, Susan E. Parks, June 15, 2016. Using the 150 dB source level in that study for a whale upcall, and the 15 dB loss factor, mother/calf communications could be blocked out to a distance of 2.1 to 7.2 miles from the Dura-Spark source noise levels of 203 and 211 dB respectively.

Still another path occurs from the potential disruption of the whale’s migration since the primary migration corridor for the right whale is concentrated near and even intersects part of the survey area. That could occur from reactions to above Level B exposures and/or masking of the whale’s sound capabilities.

Using either the 203 or the 211 dB noise source levels and the 15 dB propagation loss factor discussed above, a large number of level B takes, i.e., exposures above

160 dB, is predicted in Table 3. The potential for injury and to impair migration from reactions to those Level B behavioral disruptions needs to be fully analyzed.

Reactions to above Level B exposures could involve stress and distress. An animal's perception of a threat may be sufficient to trigger stress responses consisting of some combination of behavioral responses, autonomic nervous system responses, neuroendocrine responses, or immune responses.

Autonomic nervous system responses to stress typically involve changes in heart rate, blood pressure, and gastrointestinal activity, have a relatively short duration and may or may not have a significant long-term effect on an animal's fitness.

Neuroendocrine stress responses have been implicated in failed reproduction, altered metabolism, reduced immune competence, and behavioral disturbance. During a stress reaction, if an animal does not have sufficient energy reserves to satisfy the energetic costs of a stress response, energy resources must be diverted from other normal functions, leading to distress situation. This state of distress will last until the animal replenishes its energetic reserves sufficient to restore normal function. Studies in the Bay of Fundy found that noise reduction from reduced ship traffic was associated with decreased stress in North Atlantic right whales leading to a reasonable expectation that some of its normal functions, including its migration, could be impaired from higher level exposures.

The need to assess the impact on its migration from the **masking of the whale's communication** is equally important. The whales use sound to navigate along their migration. It also appears that their migration is aided by their capability to communicate with each other along the way.

The right whale's vocalizations are normally at the 125 dB rms level for low background noise, but can rise to 150 dB in the presence of high background noise (Parks et.al., The Royal Society, Individual right whales call louder in environmental noise, July 7, 2010). Using even the high 150 dB communication level, with the lower 203 dB noise source level for the Dura-Spark unit, and the 15 dB propagation loss factor above, masking of their communication would extend about 2 miles from the survey vessel. Using the 211 dB source number, masking would extend about 7 miles from the vessel.

The survey area extends about 3 miles into they primary 20 to 32-mile offshore migration corridor. So, when the vessel operates at the outer part, the whale's communications would be masked in about 33 to 83 percent of its corridor depending on the noise source level for the Dura-Spark unit. Vocalizations lower than 150 dB would be masked at greater distances, potentially throughout the entire corridor.

Because the whale vocalizations are less than the 160 dB behavioral disruption criteria, the masking of their sound capabilities extends further into their migration corridor, and the impacts of that masking on the obstruction or delay of their migration needs to be carefully considered, as it has direct implications on their survival as a species.

In its response to comments about masking the NMFS points to masking as only a chronic problem. It dismisses it here because the vessel is moving and that its analysis indicates because of the relative movement of whales in vessels that the masking should not be of long duration.

*This might be a plausible explanation for the low 141 m radius derived using the 20 dB factor. However, for the more realistic 736 m distance to the 160 dB criteria with the practical noise spreading 15 dB factor, a simple geometric calculation of a vessel traveling 2.4 km per hour (55 km per day) encountering a stationary whale indicates that the masking time could be over half an hour. In addition, the whales encountered here are migrating and likely to be moving. The mean travel speed for mother calf pairs and groups is about half the vessel speed here (see Swim Speed, Behavior, and Movement of North Atlantic Right Whales (*Eubalaena glacialis*) in Coastal Waters of Northeastern Florida, USA [James H. W. Hain](#),^{1, *} [Joy D. Hampp](#),² [Sheila A. McKenney](#),² [Julie A. Albert](#),³ and [Robert D. Kenney](#)¹) so that the masking time would be doubled to over an hour.*

That is more than enough time for a mother to lose communication with and be separated from a calf, for a feeding opportunity to be lost, or for a migration to be interrupted. The NMFS should disclose its analysis and examine the masking problem further.

A recent in-depth review of behavior response studies titled, A systematic review on the behavioural responses of wild marine mammals to noise: The disparity between science and policy, November, 2016, identified a number of studies specifically associated with whale traveling, migrating, and directional swimming. NMFS should review those studies for applicability here and present the results. The burden of technical support here on NMFS is the same as discussed in Section B.5 for direct serious injury or fatality, it must show with high confidence that not a single whale is prevented from completing its essential migration.

In the Negligible Impact Analysis and Determination section, the NMFS seems to acknowledge the linkage between level B takes and an impact determination. It says that NMFS considers other factors such as the likely nature of any responses and the context of any responses, including migration. But then in that discussion it only qualitatively addresses effects on foraging and mating and calving. That is not sufficient to address what could in fact be the most dominant impacts.

Before it can reach a reasoned conclusion regarding negligible impact to the right whale, the NMFS needs to do an in-depth analysis of all the potential paths to serious injury or death, both directly and from impairment of its migration as a whole, from cumulative sound exposure leading to PTS, from the adverse reactions from behavioral disruption identified above and perhaps others, and from the masking of its sound capabilities.

7. Criteria for determining “negligible impact” have not been defined.

Before proceeding to a discussion of and conclusion regarding negligible impact the NMFS needs to define what that is. That requires two criteria, one for serious injury and fatality and one to define "small numbers" of takes. The latter was intended by the Congress in the MMPA to be a separate criterion, and that was reinforced by the Court decision in *Natural Resources Defense Council, et al., Plaintiffs, v. Donald L. Evans, et al., Defendants*, of October 31, 2002 which found that "the legislative history demonstrates that Congress intended that "small numbers" and "negligible impact" serve as two separate standards".

The numbers of North Atlantic right whales are already very low at 350 animals and in steep decline (see Exhibit F). There are less than 94 females of reproductive age left. The NMFS 2020 stock assessment report for the North Atlantic right whale in Figure 4 shows an average per female productivity rate of 0.06 for the years 2013 to 2017. It also shows in Figure 2a an average female population of 180, leading to 11 average births per year. Table 2 of that report shows estimated human-caused fatalities at an average of 18.6 per year for that period.

According to the International Fund for Animal Welfare in its report titled, *Critically Endangered North Atlantic right whales Show Dramatic Decline and are at Risk of Extinction*, November 26, 2020, over the past five years from 2016 through 2020, 17 whales died on average per year from human actions. During that same period 7 whales were born on average per year.

With a human caused death rate (not including natural mortality) about twice the birth rate and a net loss of 8 to 10 whales per year, current mitigating and recovery measures are clearly not sufficient to protect the whale, and any additional serious injury or fatality would constitute a non-negligible impact.

Supporting that, in *District 4 Lodge of the International Association of Machinists v. Janet Coit, NMFS*, Case No. 21-1874, the following statement appears "In 2019, the Agency (NMFS) estimated there were no more than 368 right whales left in the ocean, and the Agency has determined that no more than eight right whales, on average, can be "taken" every ten years if they are to reach their optimum sustainable population. In other words, even one additional death a year increases the odds that the right whale will go extinct".

Table 3 in the NMFS proposed IHA FR notice gives a number of 0.7 for the potential biological removal of the North Atlantic right whale. That is defined as the maximum number of animals not including natural mortalities that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimal sustainable population size.

Therefore, the only sensible and scientifically credible criterion for the NMFS to adopt for the right whale is one of no instance of fatality or serious injury from survey noise. Therefore, the NMFS must demonstrate with very high statistical confidence, that not a single serious injury or fatality to the right whale will occur from either direct noise impact, or from indirect effects from behavior disturbance

or communication masking. For level B takes alone, that would mean higher than 99 percent confidence (94/95 takes) using the 15 dB loss factor and even the lower source noise level for the Dura-Spark unit. That level of confidence is not achieved as discussed below in Section B.10.

8. The NMFS criteria for “small numbers” is not supported scientifically or consistent with a prior Court decision.

Regarding small numbers, the FR proposed IHA Notice states on page 4225 that when the predicted number of individuals to be taken is less than one-third of the species or stock abundance, the take is considered to be “small numbers”. This seems extraordinarily high particularly for a critically endangered whale, and we can find no support for it in the scientific literature.

That one-third number is inconsistent with the NRDC vs. Evans decision, where the Court found that “a definition of “small number” that permits the potential taking of as much as twelve percent of the population of a species is plainly against Congress’s intent”.

A reasoned presentation of impact ratings based on severity and likelihood of occurrence by Wood, Southall, and Tollit can be found in Appendix H of the Pacific Gas and Electric report titled, Central Coastal California Seismic Imaging project, May 14, 2012. That analysis leads to, in Tables 3.3 and 3.4, a high severity rating for Level B takes greater than 2.5 percent of an ESA-listed regional minimum population. Combined with either a high or medium likelihood of occurrence in Table 3.5 that results in an overall high impact rating.

The final environmental assessment of a Marine Geophysical Survey (MATRIX) by the US Geological Survey in the Northwestern Atlantic Ocean, August, 2018, suggests on page 65 that for rare species, that one percent of the population size should be considered as a take limit.

The allowed level B take percentage of 33.3 percent is also not consistent mathematically with the criteria of less than one serious injury, fatality criterion. As discussed in Section B.6, it is plausible that reactions and circumstances following a level B take could lead to instances of serious injury or fatality. Therefore, the two criteria are not mathematically independent and one needs to be consistent with the other.

Allowing 33 percent of the right whale population, or 121 Level B takes would mean that NMFS would have to demonstrate with 99 percent confidence (120/121) that no serious injury or fatality will result from all of those takes. But its own conclusions as shown below in the impact determination discussion do not have that level of confidence but rather to expectations and anticipations.

Those conclusions speak to confidence levels that statisticians would assign a level of confidence to of 75 percent or less. Using a 25 percent chance of being wrong the allowed take percentage to meet one instance of serious harm or fatality would

have be about one percent ($\text{Allowed \%} \times 0.25 \times \text{population (350)} = 1$) to make the two criteria reasonably consistent, which would be in line with the above studies and within the upper limit set by the Evans Court decision.

Conversely, allowing 33 percent of the population in level B takes or 121 with the likelihood that 25 percent of those could result in serious injury or fatality means that 30 animals could be so harmed. That is 43 times the potential biological removal level of 0.7 defined by NMFS for the right whale as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. That would clearly be more than “reasonably expected to” and “reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment and survival” and constitute a non-negligible impact.

The NMFS has not provided any science or mathematically-based support for its one-third number. It is also inconsistent with a prior Court decision. It needs to redefine a science-based population percentage for “small numbers” based on the above considerations. In doing so, we suggest that a distinction be made between endangered and critically endangered species. It should also by now accept the fact that the proposed survey, and similar ones, will contravene any sensible allowed Level B Take “small numbers” percentage, and rather than struggle with descriptive adjectives, work to restrict survey proposals spatially and timewise as proposed in Section B.13.

9. The 160 dB criteria for determining whale disturbance may be too high.

The general Level B harassment thresholds currently relate only to impulsive (160 dB) and continuous sources (120 dB). No justification is provided for the NMFS’s application of the 160 dB impulsive level to e.g., CHIRP sub bottom profilers, which are neither impulsive nor continuous sources, but rather non-impulsive, intermittent sources. This issue has been raised numerous times by the Marine Mammal Commission, e.g., in their letter of March 19, 2019 on the Southeast Fisheries Science Center’s letter of authorization.

76. The use of the 140 dB as a criterion is supported by its recent use by the NMFS in the Atlantic Shores project request for ITA authorization for construction. It is considered to be more representative as the criteria for impulsive noise for baleen whales as opposed to the 160 dB level, which is more appropriate for the general marine mammal population.

77. The need to consider a lower criteria level is also supported by field observation on bowhead whales. It has been difficult to observe the direct response of right whales to man-made noise because they are so critically endangered and sparse. But bowhead whales are a close relative of the right whale and an excellent proxy for assessing behavioral impacts to them. Displacement of bowhead whales from air gun noise, another impulsive source, has been shown to occur at received levels of 120 to 130 dB.

They suggest that this NMFS practice does not reflect the current state of understanding regarding the temporal and spectral characteristics of various sound sources and their impacts on marine mammals, and that a lower, more precautionary Level B harassment threshold of 120 dB re 1 μ Pa would be more appropriate than the 160-dB re 1 μ Pa threshold until thresholds are updated. We share their concern, have yet to see and would welcome a cogent response to it and their sensible recommendation.

Compounding this concern is that, as shown above with a more realistic, practical 15 dB noise loss factor, the distances to meet even the 160 dB criteria are considerably larger. It is well known that discrete noise signals lose that characteristic and become of a more continuous nature as they travel longer distances due to variations in noise transmission paths. This would seem to be especially applicable to those sources with wider beamwidth, longer pulse durations, and higher pulse repetition rates.

The need to consider a lower criteria level is also supported by field observation on bowhead whales. It has been difficult to observe the direct response of right whales to man-made noise because they are so critically endangered and sparse. But bowhead whales are a close relatives of the right whale and an excellent proxy for assessing behavioral impacts to them. Displacement of bowhead whales from air gun noise, another impulsive source, has been shown to occur at received levels of 120 to 130 dB (see Richardson, W.J., G.W. Miller, and C.R. Greene, Jr. 1999. Displacement of migrating bowhead whales by sounds from seismic surveys in shallow waters of the Beaufort Sea. *The Journal of the Acoustical Society of America* 106(4): 2281).

If the 120 dB criteria were applied to the Dura spark units using the 203 dB source number the noise loss required would be 83 dB versus the 43 dB reduction required for 160 dB. That would substantially increase further the distances required to ensure that the whale's behavior is not disturbed. The NMFS needs to provide a thorough analysis of this issue.

10. The NMFS conclusions regarding "negligible impact" and "small numbers" are not supported.

Based on the above higher revised take numbers in Tables 1 and 3 using the appropriate propagation loss factor of 15 dB, and the need to analyze the other potential pathways to serious injury or death discussed in Section B.6, and others, the negligible impact determination for the Atlantic Shores survey regarding the right whale is flawed because;

It significantly underestimates takes.

It says that "Level A harassment is not expected due to the small PTS zones associated with HRG equipment types proposed for use". But the NMFS apparently

never did a cumulative exposure analysis with a proper noise propagation loss factor for the Dura-Spark unit. The analysis above in Section B.5 and Table 3 suggests that a plausible case can be made for the likelihood of 19 cases of PTS occurring.

It assumes that the number of level B takes is small. But that number was based on a low noise source level for the Dura-Spark unit, and a scientifically unsupported high propagation loss factor of 20 dB for the devices. Using the 15 dB loss factor, the number of Level B takes jumps from 17 to 95 or 340 respectively, depending on use of the 203 dB versus the 211 dB source noise level for the Dura-Spark unit.

It is not mathematically supported.

As discussed above in Sections B.7 and B.8, with respect to the right whale, almost near certainty in a prediction of not one case of serious harm or fatality is required to find a negligible population impact to the species. But throughout the negligible impact section discussion, including that for the right whale, NMFS only reaches qualified supporting conclusions using words and phrases such as “does not anticipate”, “unlikely”, “expects”, or “is not expected to occur”. Those expressions at best speak only to something below seventy-five per cent confidence as described in Section B.8.

Allowing 95 level B takes for the Dura Spark unit in Table 3 with the probability that 25 percent of those could result in serious injury or fatality means that 23 animals could be seriously harmed from reactions to level B takes. That is 33 times the potential biological removal level of 0.7 defined by NMFS for the right whale as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. That would clearly be more than is “reasonably expected to” and “reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment and survival” and therefore would constitute a non- negligible impact.

Despite the qualifiers throughout, at the conclusion, the qualifiers disappear and the NMFS concludes with certainty that “any takes that occur *would not result* in population level impacts”. That final conclusion does not flow logically or mathematically from the prior ones, and also contradicts the results of other studies such as that by Lusseau and Bejder titled, The long-term consequences of short-term responses to disturbance: experiences from whale watching impact assessment, November 2006.

It does not thoroughly assess all the paths to harm from Level B takes.

On page 4210 of the proposed IHA Notice, the NMFS properly states that behavioral disturbance may include a variety of effects ranging from subtle changes of behavior to more sustained and or potentially severe reactions. But it never says what all the more sustained or potentially severe reactions might be, so it is not

possible to know whether the NMFS has even considered them in the conclusions reached in the FR notice.

It presents no analytic assessment of the impact of communication masking on the potential separation of mothers and calves, or on the whale's migration as a whole.

Regarding impact on the migration itself, the FR Notice states on page 4223 that NMFS considers the context of responses, including migration, to determine impact, but there is no subsequent analysis or conclusion regarding impact on migration, through reaction to Level B exposures or masking of the whale's sound capabilities that it uses for navigation.

A recent in-depth review of behavior response studies titled, A systematic review on the behavioural responses of wild marine mammals to noise: The disparity between science and policy, November, 2016, identified a number of studies specifically associated with whale traveling, migrating, and directional swimming. NMFS should have reviewed those studies for applicability here and present the results.

There is also a logical inconsistency in the proposed IHA FR Notice regarding level B takes. On page 4210, it properly states that behavioral disturbance may include a variety of effects ranging from subtle changes of behavior to more sustained and or potentially severe reactions. It properly states that behavioral responses are highly variable, context specific, and difficult to predict. It properly points out that behavior disruption can also occur through masking of the whale's sound capabilities. Yet when it comes to the negligible impact discussion regarding the right whale on page 4224 from level B harassment, all of that potential severity, complexity and variability is dispensed with in a short, superficial, conclusory discussion without scientific support.

It does not meet a reasonable "small numbers" criterion.

The determination discounts the impact of a "small" number of Level B takes, but again relying on the 141 m zone based on the inappropriate 20 dB propagation factor. But with a realistic noise propagation factor of 15 dB and even the lower 203 dB source level, the 95 estimated level B takes alone is now quite large, i.e., 27 percent of the right whale population.

It says on page 4225 that when the predicted number of individuals to be taken is less than one-third of the species abundance, that is considered to be "small numbers". As discussed above in Sections B.7 and B.8, that percentage hardly seems small when considering a critically endangered whale, and the NMFS should provide justification for it or revise it.

That one-third number is inconsistent with the NRDC vs. Evans decision, where the Court found that "a definition of "small number" that permits the potential taking of as much as twelve percent of the population of a species is plainly against Congress's intent".

Nevertheless, even the one-third criteria may be exceeded for the Atlantic Shores survey alone. One-third of the revised NMFS the stock number of 350 is 115 takes. With the use of the 15 dB loss factor and even the low noise source level of 203 dB, and the NMFS FR vessel survey and density data, we calculate 95 Level B and 19 Level A takes for a total of 114 takes which comes very close to even the 33 percent 121 takes. With the 211 dB source number the 340 predicted Level B takes alone would exceed the one-third criteria. So, it is not clear that even a high one-third criteria for "small numbers" will be met just for the Atlantic Shores survey alone.

Furthermore, the NMFS has also approved marine site characterization surveys by the Ocean Wind II project in much the same geographical region running concurrently with that of Atlantic Shores (See FR Notice, Volume 87, No. 93, of May 13, 2022). The estimated right whale level B take for that authorization was 9 per year (see Table 1 of the FR Notice). But that estimate also inappropriately assumed spherical spreading throughout, and used the 20 dB noise propagation loss factor. Using the more appropriate practical spreading loss factor a 15 dB would increase the 9 takes to 47. So, the total number of level B takes alone in the same geographical region would be about 142 (95+47) which exceeds the even high one-third NMFS criteria of 121.

The impact determination is also based on a number of other incorrect premises:

It implies that the impact of noise is less important by stating that vessel strikes and entanglements are the primary cause of death for the majority of road whales. That is true now, but it misses the point, that given that existing risk, no further risk should be presented to the whale to try to preserve it.

It says "the size of the survey area in comparison to the entire migratory habitat for the NARW is small, representing 2.11% of the entire migratory corridor". But the entire north/south migratory path area is not meaningful in this context. What is meaningful is the of the migratory path through which the whales will pass. That east/west width is roughly 12 miles (20-32 miles from shore at this location) and the survey area is a significant part of that zone. If proper sound source and spreading levels are used the noise from the surveys impacts the entire migratory path width. That paints an entirely different picture from your "small in comparison" assertion.

It relies on the misleading comparison described in section B.4 above comparing the spatial extent of the sound produced from the survey to the huge area extending out on the continental shelf, without showing the relatively narrow, approximately 12-mile wide, dominant migration corridor for the right whale, which is concentrated near the survey area, and in some places intersects with it.

If attempts to amplify that comparison by stating that the spatial extent of the sound produced by the survey would be very small, presumably referring to the 141 m radius. But as seen in Section B.3 that smaller area only came about by

using an inappropriate sound propagation loss factor. Using a more realistic factor of 15 dB which the NMFS has used in other recent take authorizations, and even the lower Dura-Spark source level, the radial distance to the Level B criteria increases five-fold.

It then goes on to say that “no ship strike is expected to occur during Atlantic Shore’s proposed activities”, based on its “vessel avoidance measures” and the low 141 m radius. But the 141 m radius has been discounted here, there is no mention of how visual observations will prevent survey vessel strike at night, and there was no consideration of the experimental results observed by Nowacek et al., of noise stimuli causing right whales to ascend and swim just below the surface, increasing their risk of vessel strike. The latter is a particularly glaring omission since the Coast Guard has proposed to use the migration corridor area as a deep draft vessel lane.

The FR notice says that NMFS expects that all potential level B takes would be in the form of temporary avoidance of the area. But in a migratory setting where the whale is not returning to the same area, it’s not even clear with that means.

The determination assumes that above level B exposures will be a short duration and not repeated by the same animal. But that is not clear because the number of takes is now large and the migrating/moving whales and the survey vessels could encounter each other again.

The NMFS needs to go back and do an in-depth (see, e.g., An interim framework for assessing the population consequences of disturbance, [Stephanie L. King](#), et.al., June 30, 2015), science-based and preferably numerical analysis of the potential for serious injury or death from PTS hearing loss, reactions from the now higher number of above Level B exposures, and from masking of the whale’s sound capabilities, both directly and on its migration, and not just rely on conclusory phrases and suppositions, without specific and relevant scientific support for them.

11. A Rulemaking and Letters of Authorization are required for these surveys.

The MMPA, through its implementing rule CFR 216.105 requires a rulemaking “for allowed activities that may result in incidental takings of a small number of marine mammals by harassment, serious injury, death, or a combination thereof”. Serious injury is defined in 50 CFR 229.2 as “any injury that would likely result in mortality”. Assessments where harassment and/or serious injury or death may occur require a rulemaking per CFR 216.105.

The analysis in Sections B.15 and B.6 above regarding the right whale resulting in the potential for 19 instances of PTS hearing loss constitutes serious injury.

The large number of level B takes shown in Tables 1 and 3 using the appropriate propagation loss factor of 15 dB, coupled with the other potential paths to harm identified in Section B.6, and perhaps others, makes it plausible that other serious

injury and/or fatalities can occur from such exposures. The masking of the whale's sound capabilities could also impair its migration and have population impacts.

As discussed above in Section B.6, the NMFS has not adequately analyzed these paths. Therefore, it needs to prepare a rulemaking if it is to justify marine mammal taking for this proposed survey activity.

In response to our request for programmatic-type Incidental Take Regulations the NMFS states that the MMPA only allows for the development of the Incidental Take Regulations upon request (presumably by the applicant). We do not read the Act that way. Certainly, there must be an initial request by an applicant to perform an action to initiate a review. However once that request is received, it is at the Secretary's discretion-not the applicant's- whether to pursue that request through regulation, Section 101(a)(2)(5)(A), or harassment authorization (D).

That decision rests on whether the activity will result in taking more broadly, including potential serious injury or death, or harassment only, as well as the timeframes involved, five years or less for regulation, one year or less for harassment authorization.

So again, we would urge the NMFS to conduct such a programmatic rulemaking with a full analysis of the cause and effect issues, consider cumulative impacts, and develop some programmatic rules of the road for survey actions, rather than repeat this contentious exercise on every survey activity and renewal. As discussed in Section C.2 below, the Programmatic Biological Assessment prepared under ESA requirements, due to some calculation errors, doesn't accomplish this.

12. A Passive Acoustic Monitoring (PAM) System is required as one means of effecting the least practicable adverse impact.

The limitations on visual detection of marine mammals have been well documented, e.g., see the World Wildlife Federation Report Titled Reducing Impacts of Noise from Human Activities on Cetaceans, 2014, Section 5.

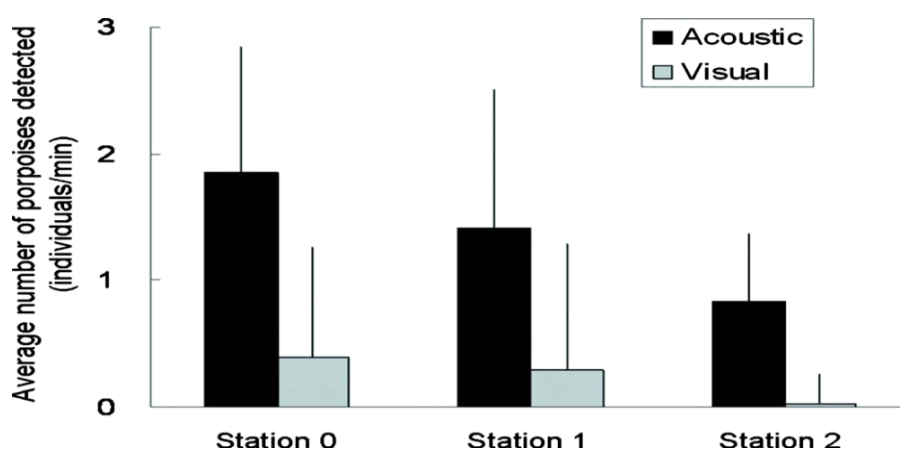
The proposal here for visual monitoring only would seem especially unreliable given that survey activities are to continue year-round and at night, and now that the need for exclusion zones much greater than 500 m has been identified.

The monitoring proposal also seems lax compared to the agreement was reached between a number of environmental organizations and the Vineyard Wind project. There, geophysical surveys were prohibited during certain periods of the year with high whale presence, and a passive PAM system required to augment visual observation.

A two-year comparison of visual and acoustic detection in the study titled, A Comparison of Visual and Acoustic Autonomous Monitoring Methods for Investigating Temporal Variation in Occurrence of Southern Right Whales dated

November, 2017, showed that a PAM system was six times more effective in identifying whale presence than visual methods.

A study done by Kimura et al., Kimura S, T Akamatsu, K Wang, D Wang, S Li, S Dong, and N Arai. 2009. "Comparison of stationary acoustic monitoring and visual observation of finless porpoises." *The Journal of the Acoustical Society of America* 125(1):547–553 compared visual and acoustic monitoring of the Yangtze finless porpoise. Acoustically the porpoise was detected approximately 82% of the observation times versus visual detection of about 13% of the observation times as shown in the results below. The PAM underestimated group size due to limited resolution of bearing angles, yet was more accurate than visual, especially with low-density populations, which is particularly relevant to detecting right whales.



Therefore, a PAM system should be implemented here as well in the right whale's primary migration corridor. In doing so however it should be recognized that the PAM systems are not perfect either, and are highly dependent on the distance from the mammal source to the receiver, and on background noise. For example, a study titled PamGuard Quality Assurance Module for Marine Mammal Detection using Passive Acoustic Monitoring, dated August 2020, found that (Figure 10) the mean probability of right whale detection varied from 0.9 to 0.5 at 500 m for low and high background noise conditions respectively. At 1500 m those probabilities drop to from 0.5 to 0.03, and are subject to wide statistical variation. For the 2500 m zone recommended here they would be even lower, so a sufficient number of monitors will be required.

Given the need for the larger than 500 m desired clearance zone that was identified above in Table 2, this will require a PAM system consisting of additional survey vessels removed from the geophysical survey source vessel to avoid masking, and/or mono-buoys that can operate in near real time placed strategically. That is practicable if the monitored area is limited to the right whale's primary migration corridor (Exhibit D).

In its response to our comments on the Atlantic Shores and Ocean Wind surveys the NMFS points to the limitations of PAM systems to support its rejection of it. We also pointed out its limitations, but as shown above, it is much more effective than visual detection, especially at night. In addition, those limitations can be overcome with proper spacing of monitors. Placing the required number of monitors is also feasible in this case because the right whale's primary migration corridor is fairly well defined (Exhibit D).

Given the high number of level B takes predicted here we would still strongly recommend to the NMFS that such a system be implemented to augment visual observations, and we find the rationale for the NMFS rejection at best perplexing.

13. Other measures and procedures are required to effect the least practicable adverse impact.

The IHA for the Atlantic Shores survey does not put forth all the "means of affecting the least practicable adverse impact" as required by the MMPA: the following measures should be included:

- (a) The desired exclusion zone should be set at the higher 2500 meters in Table 2, consistent with the higher source number of 211 dB for the Dura-Spark unit and the 15 dB loss factor.
- (b) The survey area should be significantly reduced to only that necessary to proceed with the currently proposed Atlantic Shores project,
- (c) Survey activity should be prohibited at night unless a robust PAM system is employed,
- (d) Survey activity should be prohibited in and near (a 2500-meter buffer) the right whale's primary migration corridor during its primary migration months of January, February, March, April and November. That leaves about sixty percent of the year to survey an area which appears to be less than 30 percent of the full survey area, which should be doable through good scheduling alone, which is certainly practicable.

It should be noted that this measure is consistent with that suggested by the New Jersey Department of Environmental Protection (NJDEP) in a letter to the National Science Foundation (NSF) of March 6, 2015 regarding a marine geophysical survey by the R/V Marcus G Langseth in the Atlantic Ocean off New Jersey in 2015. On page 9 of that letter the NJDEP acknowledged the migration of the North Atlantic right whale occurring "mostly between November and April" and therefore recommended that the NSF survey be limited to a September to October time frame.

- (e) An Annual Seasonal Management Area (SMA) should be established in and adjacent to the survey area, to mitigate against vessel strike.

C. Endangered Species Act (ESA) Compliance

1. Background.

Consultation under Section 7 of the ESA is required whenever a discretionary agency action "may affect" any listed species or its critical habitat, and the assessment of whether that low threshold has been satisfied must be based on the "best available" science.

Under the ESA, 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 defined by regulation (50 C.F.R. §222.102) as "an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including, breeding, spawning, rearing, migrating, feeding, or sheltering." NMFS does not have a regulatory definition of "harass." However, on December 21, 2016, NMFS issued interim guidance on the term "harass," under the ESA, defining it as to "create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering." The NMFS interim ESA definition of "harass" is not equivalent to MMPA Level B harassment. Due to the differences in the definition of "harass" under the MMPA and ESA, there may be activities that result in effects to a marine mammal that would meet the threshold for harassment under both the MMPA and the ESA, while other activities may result in effects that would meet the threshold for harassment under the MMPA but not under the ESA.

To approve such an action the agency must demonstrate through biological assessments (BA's) and opinions (BO's), where required, that the action is not likely to jeopardize the continued existence of a listed species. As shown above in Section B.7, for the North Atlantic right whale, that means it must be demonstrated with very high confidence that not a single whale will suffer serious injury or a fatality from the survey.

2. The documentation provided is not sufficient to meet ESA requirements.

The Federal Register Notice for the proposed Atlantic Shores ITA did not mention compliance with ESA. However, the website included a document labeled ESA Programmatic Consultation. That document is a letter to James Bennett, Program Manager, Office of Renewable Energy Programs, from Jennifer Anderson, Assistant Regional Administrator for Protected Resources, dated June 29, 2021, which is apparently intended to serve as the Biological Opinion (BO) supporting the Atlantic Shores ITA.

In its response to LBI comments the NMFS confirmed that it relied on that consultation opinion for these surveys. That document in turn in several places references a programmatic Biological Assessment (BA) prepared by the Bureau of Ocean Energy Management (BOEM) titled Data Collection and Site Survey Activities for Renewable Energy on the Atlantic Outer Continental Shelf (OCS), dated February, 2021.

A broader, programmatic look is desirable because the noise impacts on the right whale described here from the Atlantic Shores survey project will likely occur from other surveys as the whale migrates through its entire route (Exhibit E). However, neither of those existing documents can serve as the Section 7 consultation required to support the Atlantic Shores survey or the other actions for the reasons below.

First, a BO is required by CFR 402.14 to include a "detailed discussion of the effects of the action on listed species or critical habitat ", the presentation of any reasonable and prudent alternatives, any reasonable and prudent measures, and a conclusion regarding whether the proposed action is likely to jeopardize the continued existence of a listed species.

None of that is included in the BO. For example, regarding a detailed discussion there is only one page that qualitatively discusses the effects on

marine mammals of level B takes for the entire Atlantic Coast seaboard. That is in stark contrast to addressing the noise related impacts of geological and geophysical activities in the Gulf of Mexico and the mid and south Atlantic OCS area in two prior environmental impact statements.

Second, when a “no jeopardy” BO is issued — or when there are reasonable and prudent alternatives to the proposed action — it must include what is known as an “incidental take statement” addressing certain elements of the project’s potential to “take” a species. See 50 C.F.R. § 402.14(i).

The information that an agency must produce regarding “take” is laid out below:

*If after consultation under subsection (a)(2), the Secretary concludes that — (A) the agency action will not violate such subsection [i.e., through a no-jeopardy BiOp], or offers reasonable and prudent alternatives which the Secretary believes would not violate such subsection; (B) the taking of an endangered species or a threatened species incidental to the agency action will not violate such subsection; and (C) **if an endangered species or threatened species of a marine mammal is involved, the taking is authorized pursuant to section 1371(a)(5) of [the MMPA, discussed below]**; the Secretary shall provide the Federal agency and the applicant concerned, if any, with a written statement that — **(i) specifies the impact of such incidental taking on the species**, Case 1:18-cv-00112-JEB Document 219 Filed 07/08/22 Page 8 of 43 9 (ii) specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact, (iii) in the case of marine mammals, specifies those measures that are necessary to comply with section 1371(a)(5) of [the MMPA] with regard to such taking, and (iv) sets forth the terms and conditions (including, but not limited to, reporting requirements) that must be complied with by the Federal agency or applicant (if any), or both, to implement the measures specified under clauses (ii) and (iii). 16 U.S.C. § 1536(b)(4).*

The BO contains no such specification of the impact of taking. It does not even include any Level B take estimates, but only concludes on page 18 that the effect of any exposure above 160 dB from a moving survey vessel will be insignificant, raising the question of why a BO, BA and IHA analysis are done at all.

Third, the estimate of the level B disturbance distance in Table 5 of the BO of 502 meters is significantly underestimated because it uses the same unsupported 20 dB loss factor discussed above. That is confirmed on page 62 of the BA.

Fourth, the Sparker unit source level in Table 1 of the BA of 214 dB is inconsistent with the 203 dB value being used for the ITA.

Fifth, the value of 214 dB in Table 5 of the BO specifically for the Dura Spark unit is inconsistent with the 203 dB value being used for the ITA. Using the 214 dB sparker source level and the better 15 dB loss factor presented above would result in a disturbance distance of 3,414 meters, considerably larger than 502 meters.

Finally, the NMFS cannot rely on the take estimates in the BA for ESA compliance. Those are further underestimated due to a flawed assumption regarding the area affected. In that BA the BOEM uses only the area leased or to be leased, and the accompanying right of ways as the ensonified area, i.e., the area experiencing above criteria noise levels. But that does not account for the direction provided on page 12 of the BA that vessel survey lines be conducted at 30-meter line spacing over the proposed areas. That means, even for the 502-meter distance in the document, that a particular section of a lease area will experience Levels above 160 dB multiple times. Nor does the BA account for exposure over multiple years.

For example, for the Atlantic Shores IHA even using the 20 dB factor the ensonified area calculated for 120 days of survey in the lease area is 1868 km². Scaling that up to 360 days to

compare it with the BA leads to an ensouffled area of 5605 km². But the lease area itself is only 742 km². That results in a magnification of the disturbed area relative to the lease area by a factor of 7.5. For larger disturbance distances that magnification would be even greater.

This results in an erroneous annual level B take or exposures above 160 dB for the North Atlantic right whale of about 30 in Table 25 of the BA, for the entire Atlantic Coast seaboard as the survey area. The level B take here just for the Atlantic Shores proposed survey area is 17, using the same 20 dB loss factor so the two numbers are not consistent with each other, and it becomes clear that the 30 number for the entire seaboard cannot be accurate.

Therefore the NMFS has no reliable programmatic level B take number for the right whale to base its conclusions on. With a proper methodology, the number of level B takes for the entire seaboard would likely be quite high, just for one year. As mentioned above, the indirect effects of those takes could cause serious harm or even fatality and needs to be analytically addressed. It is not credible for the NMFS to dismiss this in one page of qualitative assumptions in the BO.

All this leaves no credible BA or BO to support compliance with the ESA for the Atlantic Shores survey, and the other two. In addition, according to NMFS Technical Guidance a programmatic assessment is not meant to supplant a project specific one, but only to streamline it.

Considering the different survey areas, the uncertainties in equipment noise source levels, the unique proximity of the right whale's primary migration corridor to this survey area, and the need to use a more appropriate noise propagation loss factor, the NMFS needs to do survey specific BAs and BOs to comply with the ESA.

D. The Coastal Zone Management Act.

The proposed survey may not be consistent with New Jersey Coastal Zone Management (CZM)

rules, specifically NJAC 7:7E-3.38. That provision protects against adverse impacts occurring to New Jersey coastal resources, including endangered wildlife habitats.

In a letter from the New Jersey Department of Environmental Protection (NJDEP) to the National Science Foundation (NSF) of March 6, 2015 regarding a marine geophysical survey by the R/V Marcus G Langseth in the Atlantic Ocean off New Jersey in 2015, the NJDEP found that survey to be inconsistent with that rule provision and others.

The current survey extends into State territorial waters and the State's coastal zone. As discussed above the noise impacts from the survey could directly or indirectly harm endangered whales not just the North Atlantic right whale, but fin and humpback whales that frequent the area. In addition, noise from survey activities outside the State's coastal zone could alter marine mammal behavior and their use of the States coastal resource.

The NMFS should have sought a CZM consistency determination from New Jersey.

Conclusions

The NMFS uses as a noise source level of 203 dB for the controlling Dura spark unit which is low compared to the source level for that unit in numerous other technical sources that underestimates the level A and B takes.

The NMFS uses a noise propagation loss factor that is too high, not consistent with current scientific norms or with the factor used by NMFS in other take authorizations, and which significantly underestimates distances to meet criteria and level A and B takes.

The NMFS uses a 33-percent small numbers criteria that is not scientifically supported, inconsistent with a prior court decision, and with its other potential biological removal criteria.

	<p>Nevertheless, using the 211 dB source number and the 15 dB loss factor even the one-third criteria would be exceeded for the Atlantic Shores survey alone. Even with the 203 dB value the number of predicted takes (114) comes very close to the one-third number (121 takes).</p> <p>It refuses to add together and consider the impacts of three separate surveys operating in the same area at the same time. With the more realistic propagation loss factor of 15 dB the total number of level B takes from all three surveys is 187 which exceeds the even the unjustifiably high 33 percent small numbers criteria.</p> <p>In the face of these large take numbers, it refuses to require a passive acoustic monitoring program which could augment visual observation and would rather rely solely on visual observation, even at night to detect whales.</p> <p>It refuses to restrict surveys during the predominant right whale migration months in its primary migration corridor.</p> <p>To at least better understand the problem, it refuses to prepare an environmental assessment, conduct a letter of authorization rulemaking, or prepare relevant and up to date ESA documents.</p> <p>Regrettably we would suggest that this is all a bridge too far and does not represent reasoned decision making,</p>	
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Remedies Sought

1. The Atlantic Shores survey renewal, all other pending reviews and currently approved surveys should be suspended, pending resolution of our Court complaint.
2. Regarding the NEPA at a minimum,, an environmental assessment should be prepared.

The NMFS should consult with the BOEM and provide to the public a satisfactory answer to the question in Section A.2 regarding the unexplained large geographical scope of the survey relative to the current Atlantic shores project.

3. Regarding the MMPA, given the potential for serious injury and fatality, the NMFS should proceed through a rulemaking as required by CFR 216.105, which should include:

- use of the 15 dB propagation loss factor, and the 211 dB noise source level, and a numerical estimate of plausible cumulative Level A PTS exposures,
- an in-depth science-based analysis of all the paths to harm from the now large number of expected Level B takes, and from masking of the whale's sound capabilities, and a demonstration with very high confidence that not a single serious injury or fatality to the right whale will result from any of those paths.
- a revised science-based population percentage for allowed "small numbers" of Level B takes, and include a distinction between endangered and critically endangered species
- a consolidated review of all ongoing and proposed survey projects, or at a minimum, a section on the cumulative impact of recent authorizations, those being considered concurrently and those that are reasonably foreseeable, so that the full impact on endangered mammals can be seen and considered in making decisions.

4. Regarding the ESA, the Programmatic Biological Assessment and Biological Opinion should be updated, and supplemented with survey-specific ones that cover all three survey actions.

5. Regarding the Coastal Zone Management Act, consistency determinations for the survey projects should be sought from the State of New Jersey.

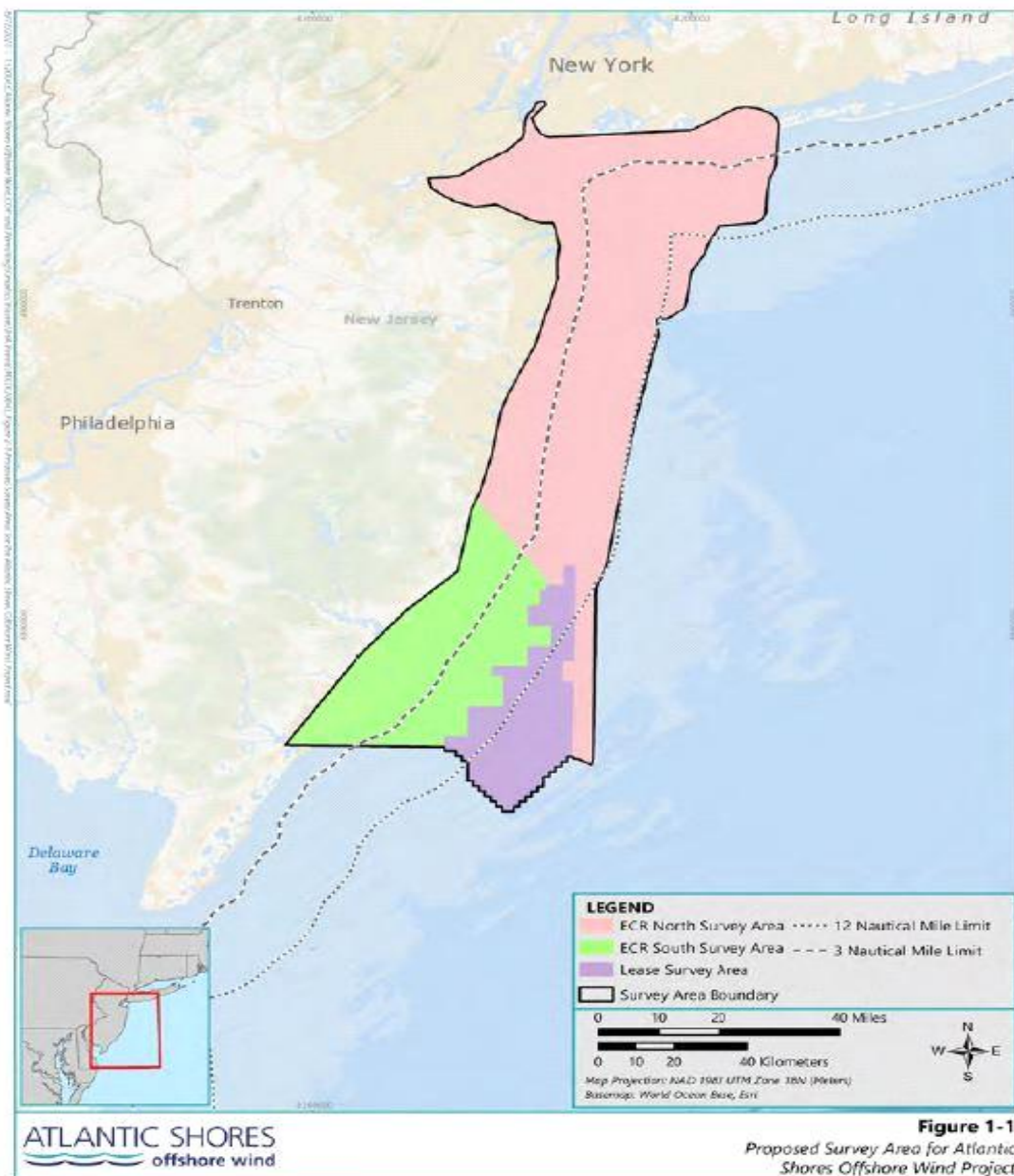
Bob Stern

Bob Stern, Ph.D., President
Save Long Beach Island, Inc.
drbob232@gmail.com
917 952-5016.

Incidental Harassment Authorization Renewal for Atlantic Shores Marine Site and other Survey Actions

Save Long Beach Island, Inc., Exhibits.

Exhibit A. Proposed Survey Area, Atlantic Shores Project



Cardiff Export Cable

- Option 1
- Option 2

Larrabee Export Cable

- Option 1
- Option 2

Other Features:

- Sportfishing Area (NJDEP)
- Atlantic Shores Offshore Wind Project

NOTES:

MAGNETIC VARIATION
Magnetic variation curves are for 2012 derived from 2010 World Magnetic Model and accompanying secular change. If annual change is in same direction as variation it is additive and the variation is increasing. If annual change is opposite in direction to variation it is subtractive and the variation is decreasing.

WARNING
The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

RADAR REFLECTORS
Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

NOTE J
DANGER AREA
Vessels are warned against fishing, dragging or anchoring in this area.

NOTE C
The traffic lanes for the Delaware approach are in chart 12244.

Scale: 0 2 4 Nautical Miles

Exhibit C. Survey Area for the Ocean Wind Project

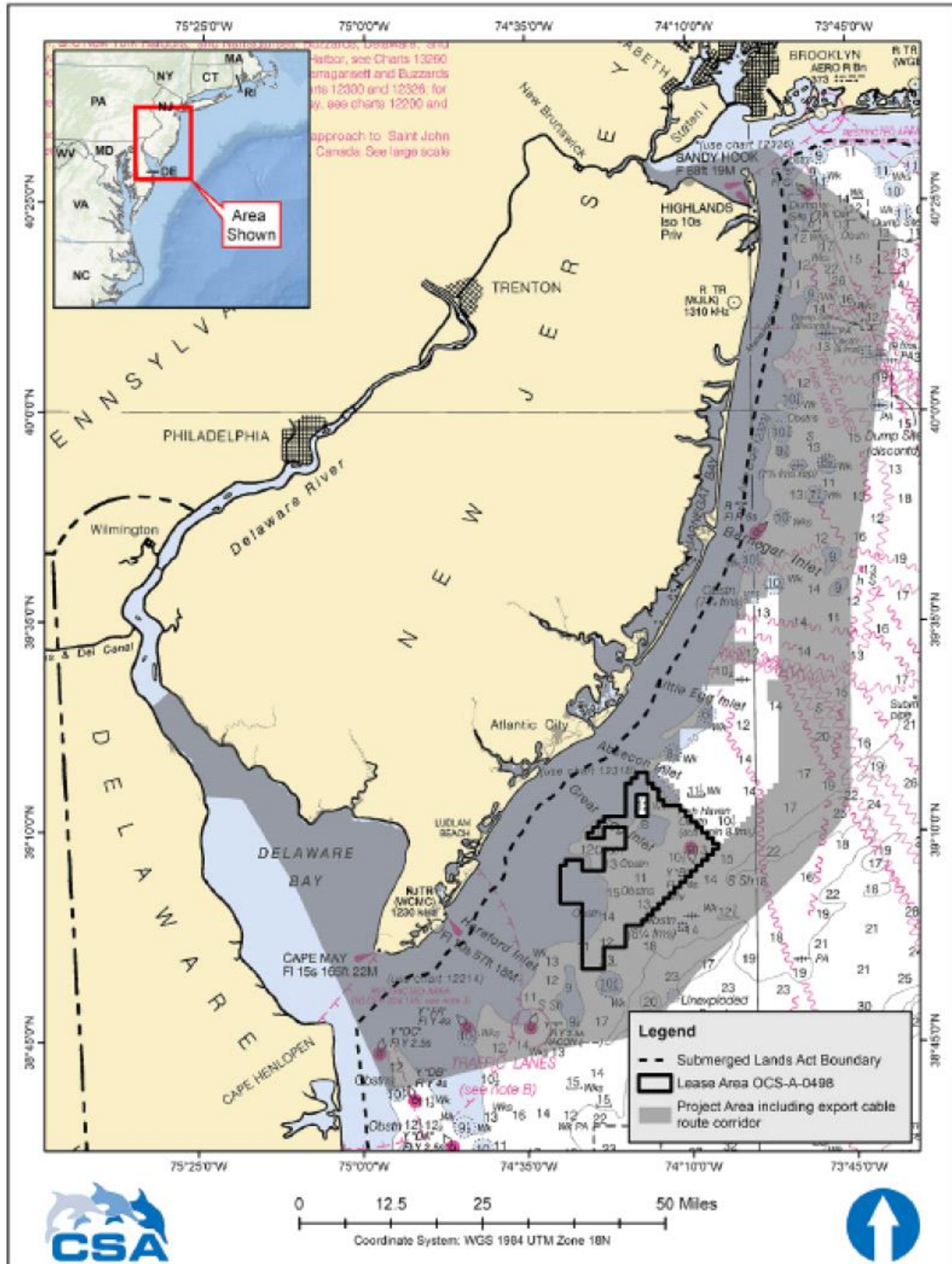
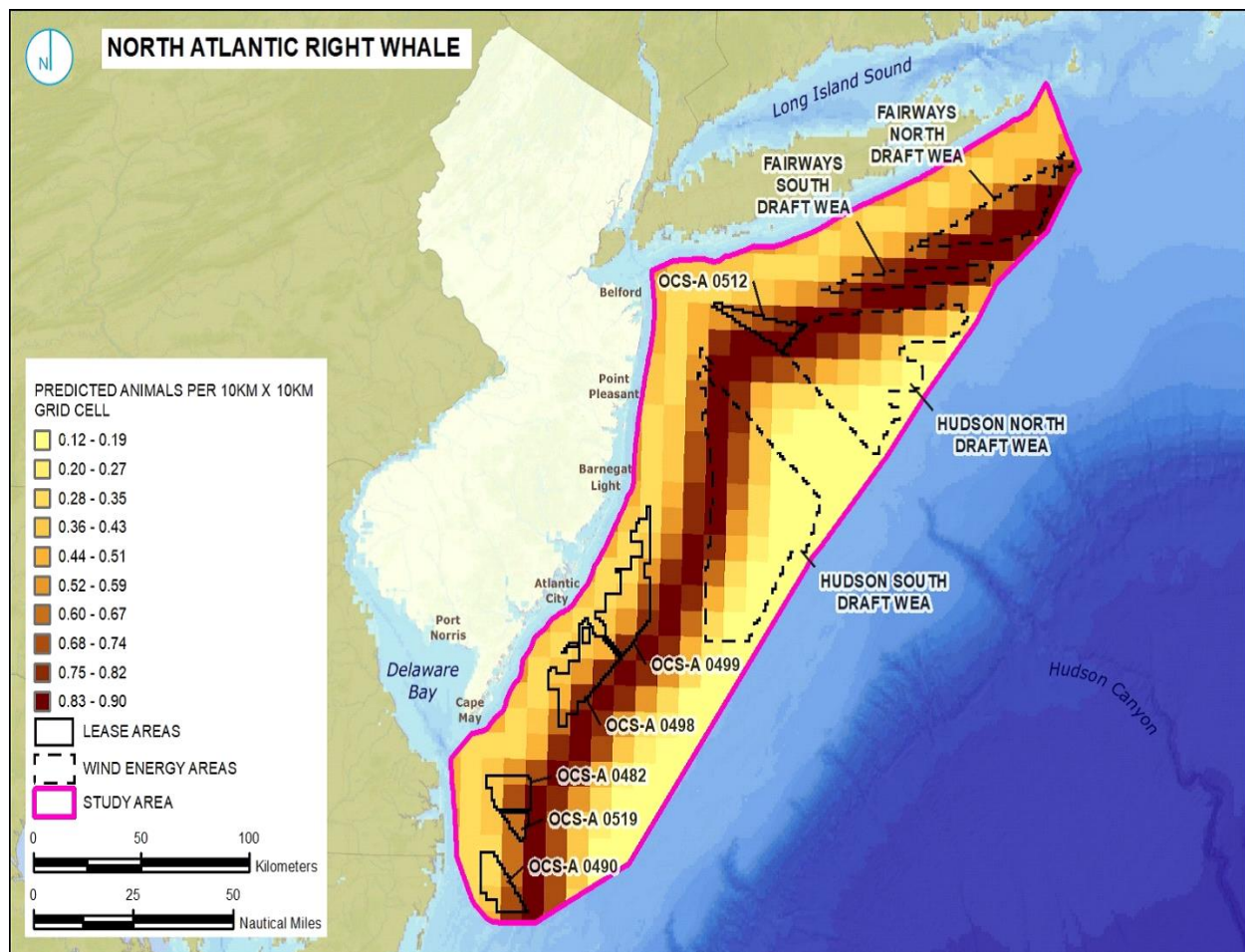


Exhibit D. Right Whale Migration Density-Annual Basis



Key Points: The annual abundance of the NARW is highest in the study area at depth contours between 30 and 40 meters, at up to 0.9 animals per 100 km². Areas that are shallower (as well as much deeper) than this range show less relative density, including significant portions of existing wind lease areas and WEAs. The NARW high abundance areas are present in all lease areas and draft WEAs but do not exceed 0.9 individuals per 100 km².

Source, NJ Offshore Wind Strategic Plan, Natural Resource Technical Appendix, Figure 21.

Exhibit E. Right Whale Migration Density for March

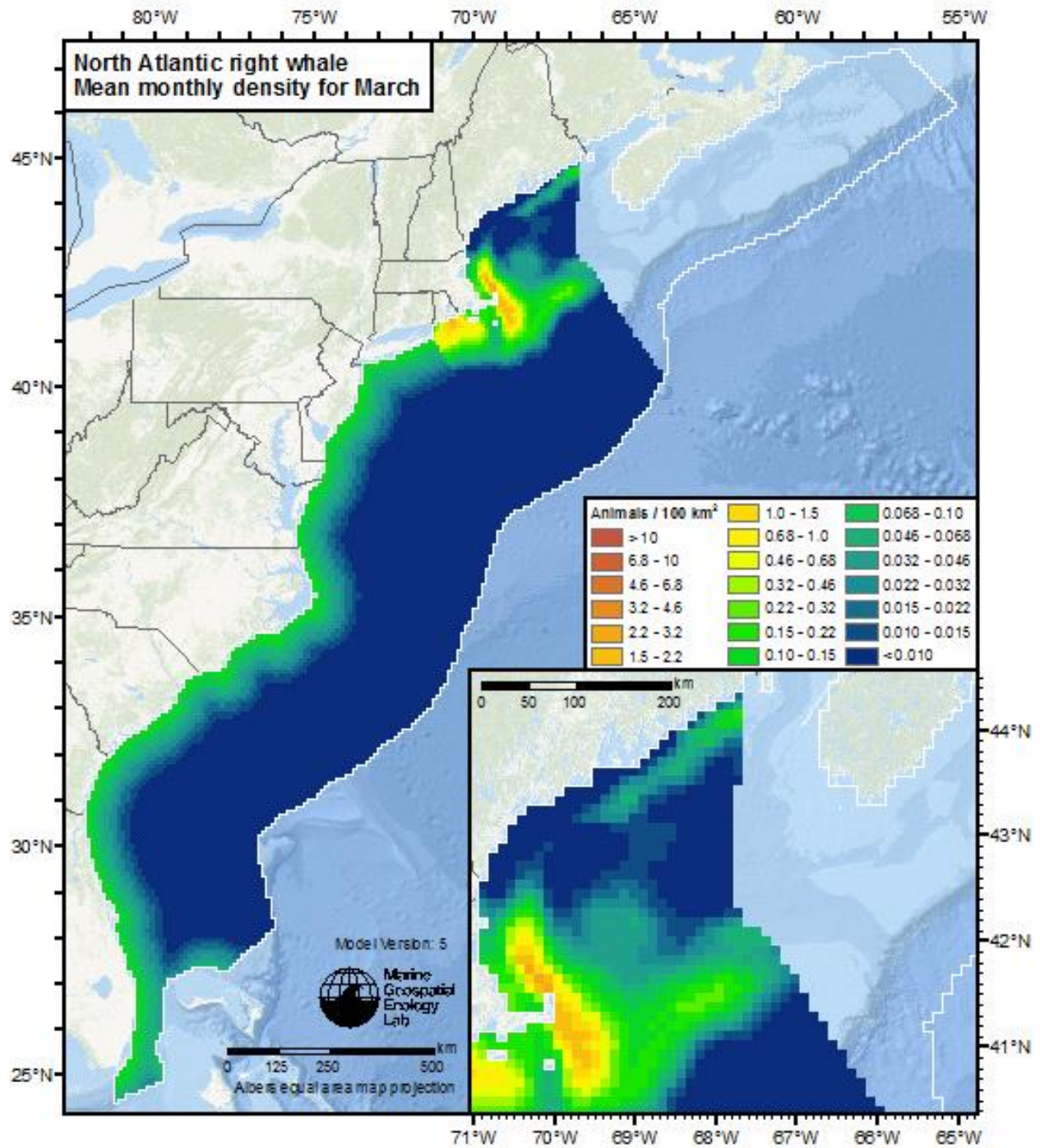
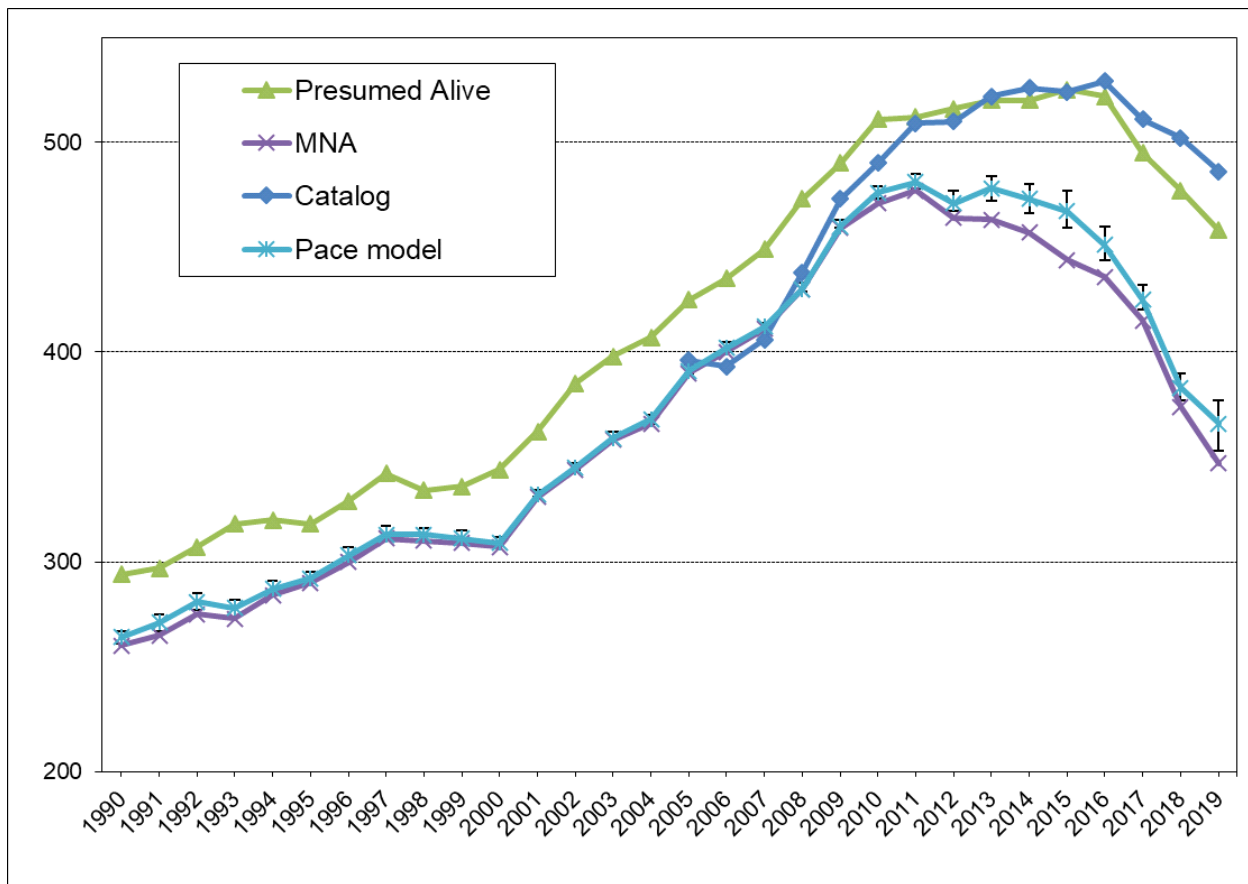
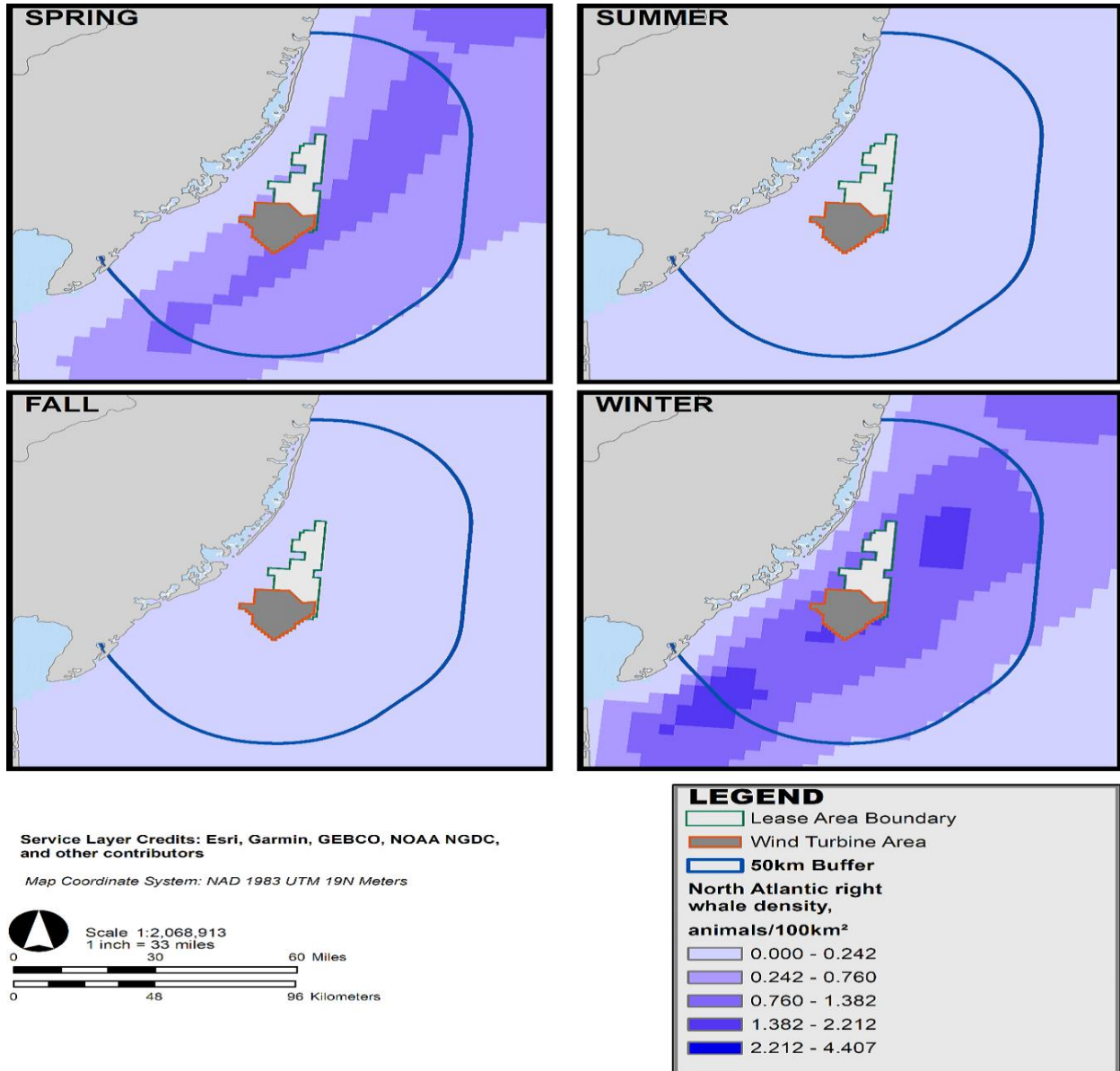


Exhibit F. North Atlantic Right Whale Population Trend



Source, North Atlantic Right Whale Consortium 2020 Annual Report Card Pettis, H.M. 1, Pace, R.M. III2, Hamilton, P.K.1. MNA=minimum number alive.

Exhibit G , NARW Density



Source: Atlantic Shores Offshore Wind Application for Marine Mammal Protection Act (MMPA) Rulemaking and Letter of Authorization Prepared by: JASCO Applied Sciences (USA) Inc. September 2022 Submitted to: Permits and Conservation Division, Office of Protected Resources, NOAA Fisheries, Figure 9. North Atlantic right whale maximum seasonal density from Roberts et al. (2016a, 2021a, 2021b).

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Counsel for Plaintiffs: SAVE LONG BEACH ISLAND, Bob Stern, Ph.D.

**THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY**

SAVE LONG BEACH ISLAND, a
nonprofit corporation,
P.O. Box 579, Ship Bottom, NJ
08008; and ROBERT STERN, Ph.D.,
an individual, 329 4th Street,
Beach Haven, NJ 08008;
Plaintiff(s),

v.

UNITED STATES DEPARTMENT OF
COMMERCE, 1401 Constitution Ave.
NW Washington, DC 20230;
GINA RAIMONDO, UNITED STATES
SECRETARY OF COMMERCE, acting in
her official capacity, 1401
Constitution Ave. NW Washington,
DC 20230
NATIONAL MARINE FISHERIES
SERVICE, 1315 East-West Highway,
Silver Spring, MD 20910;
JANET COIT, Director of the
National Marine Fisheries
Service, acting in her official
capacity, 1315 East-West
Highway, Silver Spring, MD 20910

Defendant(s).

Case No.

Judge

**Complaint For Declaratory and Injunctive Relief Under the Marine
Mammal Protection Act, National Environmental Policy Act and
Administrative Procedures Act**

Plaintiff SAVE LONG BEACH ISLAND ("Plaintiff") by its attorney files this Complaint against Defendants United States Department of Commerce, United States Secretary of Commerce Gina Raimondo, National Marine Fisheries Service, and Director of the National Marine Fisheries Service, Janet Coit, ("Defendants") and alleges as follows:

NATURE OF THE ACTION

1. This is an action to reverse and set aside Defendant National Marine Fisheries Service's ("NMFS") incidental take/harassment authorizations, eleven active and five pending, off the New York and New Jersey coasts, issued pursuant to 16 U.S.C. § 1361 et seq., the Marine Mammal Protection Act ("MMPA"), as such authorizations, cumulatively, and even individually, contravene 16 U.S.C. § 1371(a)(5)(D),(i),(I), of the MMPA, and moreover, constitute arbitrary and capricious agency actions unsupported by substantial evidence in violation of 5 U.S.C. § 706(2)(A) and (E) ("APA").

2. Plaintiff is seeking an order reversing and setting aside Defendant's eleven active and five pending incidental

take/harassment authorizations permitting offshore wind energy development activities adjacent to the New Jersey and New York coastlines, as violative of the MMPA and arbitrary and capricious under the APA. A formal prayer is delineated *infra*.

3. In contravention of the MMPA, the eleven active and five pending incidental take/harassment authorizations, cumulatively, and even individually, take more than a "small number" of the North Atlantic Right Whale and Humpback Whale species, and will have more than a "negligible" impact on same.

4. The incidental take/harassment authorizations, active and pending - even considering their already impermissibly high amount of requested takes - determined the quantity of takes arbitrarily, capriciously, and without substantial evidence by significantly underestimating the maximum spatial extent of Level B harassment noise emanating from survey vessels, as explained further *infra*.

5. The incidental take/harassment authorizations, active and pending, arbitrarily and capriciously assumed that the authorized high-intensity noise activities would result in almost exclusively Level B harassment takes, and virtually no Level A harassment takes. This was arbitrary, capricious and unsupported by substantial evidence. The incidental take/harassment authorizations arbitrarily underestimate the potential for Level A harassment takes from the noise exposure and cumulative noise

exposure.

6. Moreover, Defendant also violates 16 U.S.C. § 1371(a)(5)(D)(i) by issuing incidental take/harassment authorizations to certain companies which do not maintain headquarters in the United States or are otherwise unowned by United States' citizens, in direct contravention of the language of 16 U.S.C. § 1371(a)(5)(D)(i) providing only U.S. citizens with the legal pathway to obtain incidental take/harassment authorizations.

7. Finally, pursuant to the National Environmental Policy Act ("NEPA"), 42 USCS § 4332(2)(C), the Plaintiff is seeking an order from the Court to direct the Defendant to prepare an environmental impact statement assessing the cumulative effects of Defendant's issuance of the eleven incidental take/harassment authorizations off the NY/NJ coasts. Such cumulative incidental take/harassment authorizations (and likely soon issuance of five pending incidental take/harassment authorizations) constitutes a major federal action which significantly affects the quality of the human environment, triggering the requirement of an environment impact statement assessing cumulative effects, which Defendant has neglected to perform, in contravention of 42 USCS § 4332(2)(C) and the Administrative Procedures Act, 5 U.S.C. § 706(2)(A) and (E).

JURISDICTION AND VENUE

8. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. § 1331 (federal questions), 28 U.S.C. § 1346 (United States as defendant), 16 U.S.C § 1361 et seq. (Marine Mammal Protection Act), 28 U.S.C. § 2201 (declaratory judgment), 42 USCS § 4321 et seq. (NEPA), and 5 U.S.C. § 701 through 706 (Administrative Procedures Act).

9. Final agency decisions are subject to judicial review. Plaintiffs have met all applicable statute of limitations, namely, the six-year statute of limitations, pursuant to 28 U.S.C. § 2401.

10. Plaintiffs have standing to sue for the Defendant's alleged violations of the Marine Mammal Protection Act ("MMPA") through the Administrative Procedures Act ("APA").¹ Plaintiffs assert injuries that have occurred in the "zone of interests" intended to be protected by the MMPA.² The principal purpose of the MMPA is to protect marine mammals,³ and as fully explained *infra* under "Parties," Save Long Beach Island and Robert Stern have legally protected interests in preserving marine mammals in the waters off of New Jersey/New York, marine mammals which have been increasingly dying as a primary result of Defendant's actions. The exponential rise in whale (and dolphin) mortality events over

¹ *Kanoa Inc. v. Clinton*, 1 F. Supp. 2d 1088 (D. Haw. 1998).

² *Id.*

³ *Id.*

recent months is attributable to Defendant's incidental take/harassment authorizations, as will be discussed further infra. Finally, it is likely that the injury in fact suffered by Save Long Beach Island and Robert Stern will be redressed by a favorable decision. **The same analysis of standing applies for NEPA. Accordingly, standing is established for both MMPA and NEPA, and Plaintiffs seek judicial review via the APA.**

11. Plaintiffs have exhausted all administrative remedies available to them. Plaintiffs submitted formal comments to Defendant NMFS concerning their vessel survey approvals for three disparate companies, Atlantic Shores, Ocean Wind, and NextEra Energy. Plaintiffs further submitted formal comments to Defendant NMFS on the Notice of Application by Atlantic Shores for their incidental take authorization approvals for construction pile driving and vessel surveys. Plaintiff also sent a letter to National Oceanic and Atmospheric Administration Administrator Rick Spinrad and President Joseph Biden, regarding the vessel survey issues. No response was received to the letter, and the Defendant NMFS' responses to comments failed to address the issues discussed in this action.

12. Venue is properly vested in this Court pursuant to 28 U.S.C. § 1391(b)(2) because a substantial part of the events or omissions giving rise to the claim occurred in this jurisdiction.

PARTIES

13. Plaintiff SAVE LONG BEACH ISLAND is a 501(c)(3) non-profit corporation, of over 5,000 supporters, organized under the laws of New Jersey, and created to guard human and natural resources. These resources include, for example: marine mammals, fish, and other species that inhabit, use, or migrate off the New Jersey and New York coasts; the aesthetic elements of Long Beach Island and the New York Bight; economic interests strongly tied to the maintenance of the environmental features comprising Long Beach Island and the New York Bight, inter alia. These resources, in particular, the marine mammals off the NJ and NY coasts, are being harmed, harassed, and killed, in large part by the activities authorized by Defendant in the waters of the NY Bight. These marine mammals, not only are exceptionally important to the oceanic ecosystems, but they also impart carbon dioxide mitigatory effects. Save Long Beach Island supporters have a legally protected interest in preserving the marine mammals, some of which, like the North Atlantic Right Whale, are critically endangered species. The Defendant NMFS' issuance of numerous permits to take thousands of marine mammals runs directly counter to Save Long Beach Islands mission and guiding purpose as an entity.

14. Plaintiff ROBERT STERN, Ph.D., is an individual residing in Long Beach Island, New Jersey. He previously managed the Office of Environmental Compliance in the United States

Department of Energy. He is the president of Save Long Beach Island, and believes it to be his responsibility to guard the natural resources of Long Beach Island and the waters adjacent to it, including the land animals, plants, and marine life. Dr. Stern is concerned with all aspects of the wind turbine development process, and one focus of this action is on the harmful preparatory activities, in the form of seabed characterization which utilize high intensity noise devices. This noise propagates outward from the source vessel and disturbs, harasses, and even leads to deaths of marine mammals off the NJ and NY coasts. The current rate of whale mortality, based on the past three months, is unprecedented in the record and highly statistically significant. Dr. Stern has deeply researched the issue and has expertise in the field. As such, he is very cognizant of the harms, both in the preparatory and operational phases of the wind turbines. This ongoing noise-based sea characterization threatens the unique marine life of the Long Beach Island waters, and the place Dr. Stern has chosen to call home. The Defendants' activities, thus, are resulting in harm to Dr. Stern.

15. Defendant National Marine Fisheries Service is an agency of the federal government, within the United States Department of Commerce's National Oceanic and Atmospheric Administration, which is empowered to issue incidental take/harassment authorizations for specified human activities that result in takings of marine

mammal species. Defendant Janet Coit is the director of the NMFS. Defendant NMFS is an agency within Defendant United States Department of Commerce, of which, Gina Raimondo is the Secretary.

STATUTORY FRAMEWORK

16. The NMFS, also known as NOAA Fisheries, is a United States federal agency within the United States Department of Commerce's National Oceanic and Atmospheric Administration that is tasked with management and stewardship of the United States marine resources. The NMFS, one of the defendants in this action, is the agency responsible for issuing incidental take/harassment authorizations (hereafter referred to as "ITA") for wind energy development activities adjacent to and off the coasts of New Jersey and New York.

17. Various companies applied for, and thereupon received, innumerable ITAs issued by the Defendant.

18. The guiding purpose of the MMPA, as established in 1972, is to "prevent marine mammal species and population stocks from declining beyond the point where they ceased to be significant functioning elements of the ecosystems of which they are a part."⁴

19. Additionally, the Congressional declaration of policy as

⁴ Marine Mammal Protection Act Policies, Guidance, and Regulations, NOAA Fisheries (Mar. 22, 2023), <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act-policies-guidance-and-regulations#:~:text=The%20Marine%20Mammal%20Protection%20Act%20was%20enacted%20on%20October%2021,which%20they%20are%20a%20part.>

explicated in 16 U.S.C. § 1361(6) is consonant with that guiding purpose:

marine mammals have proven themselves to be resources of great international significance, esthetic and recreational as well as economic, and it is the sense of the Congress that they should be protected and encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management and that the primary objective of their management should be to maintain the health and stability of the marine ecosystem. Whenever consistent with this primary objective, it should be the goal to obtain an optimum sustainable population keeping in mind the carrying capacity of the habitat.

20. However, somewhat paradoxically, the MMPA contains provisions which permit the "taking" of marine mammal species for certain periods of time, in defined geographical regions, if such taking is not intentional, but rather, only "incidental" to another specified activity.

21. The term "take" within the meaning of 16 U.S.C. § 1362 (13) "means to harass, hunt, capture, or kill, or attempt to

harass, hunt, capture, or kill any marine mammal."

22. Level A harassment is defined as, "has the potential to injure a marine mammal or marine mammal stock in the wild." 16 USCS § 1362(18)(A)(i).

23. Level B harassment is defined as, "has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering." 16 USCS § 1362(18)(A)(ii).

24. 16 U.S.C. § 1371 - "Moratorium on taking and importing marine mammals and marine mammal products" - sets forth the relevant exceptions to the general prohibition on takings.

25. Specifically, 16 U.S.C. § 1371(a)(5)(D), (i), (I) provides in pertinent part:

Except as provided by clause (ii), upon request therefor by citizens of the United States who engage in a specified activity (other than commercial fishing) within a specified geographical region, the Secretary shall allow, during periods of not more than five consecutive years each, the incidental, but not intentional, taking by citizens while engaging in that activity within that region of small numbers of marine mammals of a

species or population stock if the Secretary, after notice . . . and opportunity for public comment -- finds that the total of such taking during each five-year (or less) period concerned will have a negligible impact on such species or stock and will not have an unmitigable adverse impact on the availability of such species or stock for taking for subsistence uses pursuant to subsection (b) or section 109(f) [16 USCS §§ 1379(f)] or, in the case of a cooperative agreement under both this Act and the Whaling Convention Act of 1949 (16 U.S.C. 916 et seq.), pursuant to section 112(c).

26. Note, in particular, the phraseology, "small numbers of marine mammals of a species or population stock," and, "finds that the total of such taking . . . will have a negligible impact" and that the Act refers to "citizens" engaged in a specified activity in the plural and "geographical region" in the singular. These clauses require the defendant to consider cumulative impact both spatially and temporally and are particularly pertinent in the case at bar, as will be discussed *infra*.

27. NEPA imposes a requirement that federal agencies, such

as Defendant, assess the impact of major federal actions that significantly affect the quality of the human environment, in an environmental impact statement. 42 USCS § 4332(2)(C). The assessment must include both individual and cumulative effects of the major federal action. As explained in the third claim for relief, *infra*, Defendants, failed to prepare the required cumulative environmental impact statement on the major federal action (see third claim for relief).

FACTS

A. Wind Energy Development Activities Authorized Over the Past 12-16 Months off of New Jersey and New York

28. Numerous wind energy development projects were authorized in the year 2022 for the coastal waters off of the New Jersey and New York shores. In total, there are eleven active ITAs issued by Defendant and five pending ITAs with Defendant, for the waters off the New Jersey/New York coasts.⁵ The active ITAs are as follows.

29. South Fork Wind, LLC received an ITA for the construction of the South Fork Offshore Wind Project near New York (off of Rhode Island and Massachusetts) on December 21, 2021, for the period November 15 2022 through November 14 2023.

⁵ See, Exhibit A - Clean Ocean Action letter to President Biden.

30. Atlantic Shores Offshore Wind, LLC received an ITA for marine site characterization surveys off of New Jersey and New York on April 18, 2022 for the period April 20, 2022 through April 19, 2023.

31. Ocean Wind, LLC received an ITA for the renewal of marine site characterization surveys off New Jersey on May 9, 2022 for the period May 10, 2022 through May 9, 2023.

32. Orsted Wind Power North America, LLC received an ITA for marine site characterization surveys off Delaware on May 6, 2022 for the period May 10, 2022 through May 9, 2023.

33. Ocean Wind II, LLC received an ITA for marine site characterization surveys off New Jersey on May 9, 2022 for the period May 10, 2022 through May 9, 2023.

34. NextEra Energy Transmission Mid-Atlantic Holdings, LLC received an ITA for marine site characterization surveys off New Jersey on June 29, 2022 for the period July 1, 2022 through June 30, 2023.

35. Park City Wind, LLC received an ITA for marine site characterization surveys for the New England Wind Project Phase 1, off Massachusetts to New York on July 19, 2022 for the period September 1, 2022 through August 31, 2023.

36. Atlantic Shores Offshore Wind Bight, LLC received an ITA for the marine site characterization surveys off of New Jersey and New York on August 10, 2022 for the period August 10, 2022 through

August 9, 2023.

37. Attentive Energy, LLC received an ITA for marine site characterization surveys off of New Jersey and New York on August 16, 2022 for the period September 15, 2022 through September 14, 2023.

38. Vineyard Northeast, LLC received an ITA for marine site characterization surveys from Massachusetts to New Jersey on July 27, 2022 for the period July 27, 2022 through July 26, 2023.

39. Orsted Wind Power North America, LLC received an ITA for marine site characterization surveys from New York to Massachusetts on October 6, 2022 for the period October 6, 2022 through October 5, 2023.

40. In total, there are eleven active ITAs, as delineated *supra*, and five pending ITAs, fully outlined in Clean Ocean Action's⁶ letter to President Biden.

41. These ITAs (both active and pending) almost exclusively requested Level B harassment takes.

42. Level B harassment takes include, "behavioral disturbance or temporary [hearing] threshold shift)."⁷

43. As such, the classification of the ITAs issued

⁶ Clean Ocean Action "is a leading national and regional voice working to protect waterways using science, law, research, education, and citizen action," <https://cleanoceanaction.org/about-coa>.

⁷ Marine Mammal Protection - Apply for an Incidental Take Authorization, NOAA Fisheries (Aug. 31, 2022), <https://www.fisheries.noaa.gov/national/marine-mammal-protection/apply-incidental-take-authorization>.

explicitly concedes that the anthropogenic acoustic source utilized in the wind turbine characterization surveys can result in takings.

44. For example, the Orsted ITA provides, under "General Conditions" subsection (e): "The acoustic source must be deactivated when not acquiring data or preparing to acquire data, except as necessary for testing. Unnecessary use of the acoustic source shall be avoided."⁸

45. Note, further, in "Mitigation Requirements - Shutdown Requirements" (e)(vii): "Shutdown of acoustic sources is required upon observation of either a species for which incidental take is not authorized or a species for which incidental take has been authorized but the authorized number of takes has been met, entering or within the Level B harassment zone."⁹

46. Accordingly, the ITA verbiage itself recognizes the impact of the anthropogenic acoustic sources on the marine mammals authorized to be taken by the ITA.

47. In total, the eleven active ITAs permit 181 Level B takes of North Atlantic Right Whales, 169 of Humpback whales, and 63,820 of total marine mammals. The five pending ITAs permit 782 takes of Humpback whales and 229 of North Atlantic Right Whales. This is a

⁸ Incidental Harassment Authorization - Orsted, National Marine Fisheries Service (May 6, 2022), https://media.fisheries.noaa.gov/2022-05/OrstedDE_2022IHA_Issued_OPR1.pdf

⁹ *Id.*

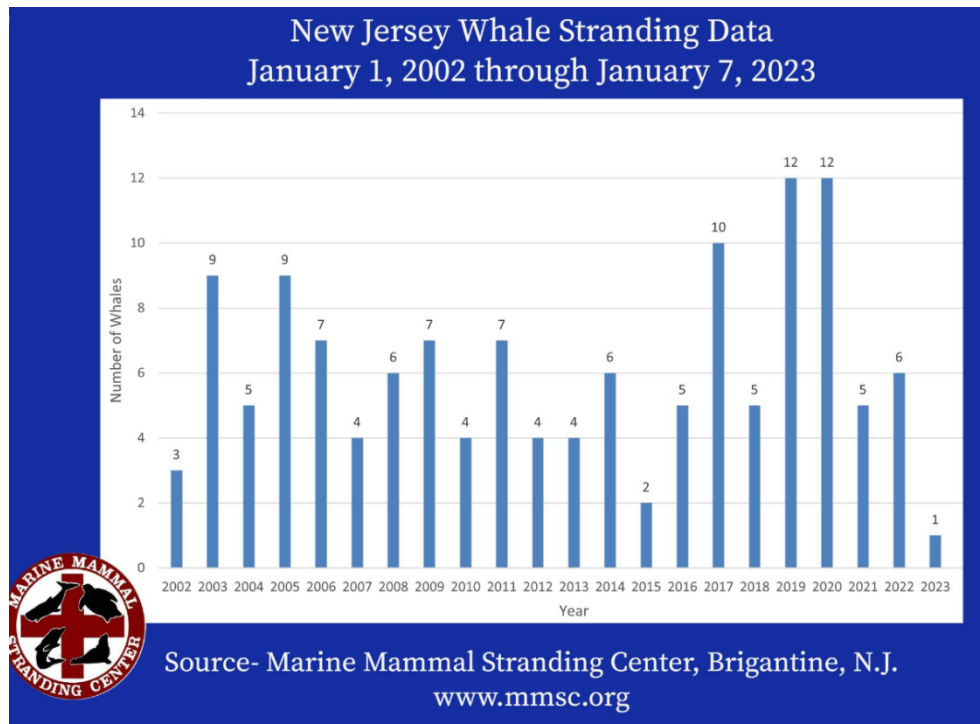
total of 951 takes of Humpback whales out of a population size of 1,396 (up to 68.1%), and 411 of North Atlantic Right Whales out of a population size of less than 350 in the NJ/NY area (up to 100%). Such high takes likely involve multiple elevated noise exposures to the same animal.

B. Exponential Increase in Whale Mortality Events Over the late 2022-early 2023 Period, Heretofore Unprecedented in the Record

48. The Marine Mammal Stranding Center ("MMSC") is a federally authorized animal hospital in the State of New Jersey, formed in 1978, that responds to animals in distress and provides medical treatment. It is a 501(C)(3) organization.¹⁰

49. The MMSC has collated historical data on New Jersey whale strandings and presented same in graphical form. The below graph depicts the whale strandings per year from January 1, 2002 through January 7, 2023. This graph was posted publicly on the MMSC's Facebook page. Note, importantly, 2023 is only through January 7th.

¹⁰ Marine Mammal Stranding Center, <https://www.linkedin.com/company/marine-mammal-stranding-center-nj/>; <https://mmsc.org/>.



50. An alarming and dramatic increase in whale deaths (as well as dolphin deaths, discussed, *infra*) began in late 2022.

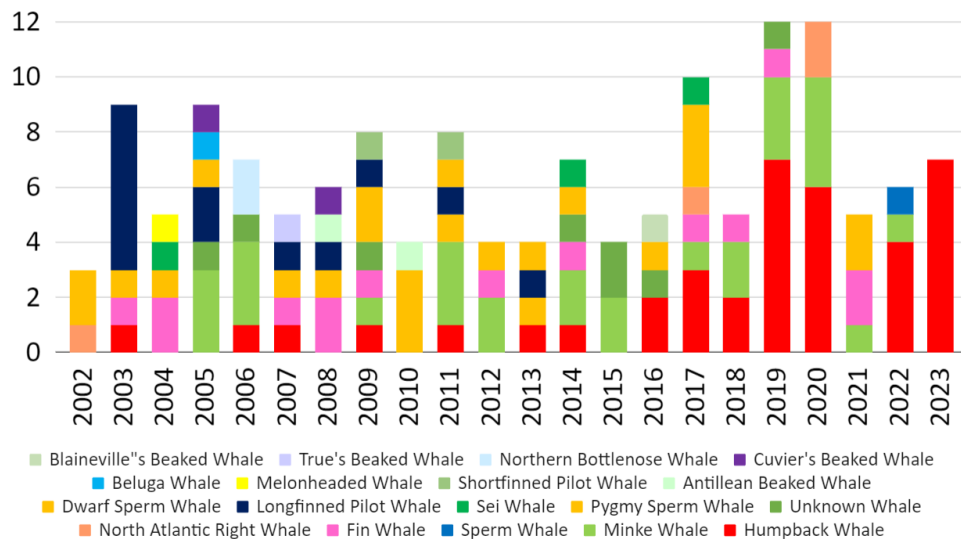
51. This alarming increase in whale deaths rapidly gained public attention, and same was reported in prominent New Jersey media sources in early 2023.¹¹

52. The MMSC's updated graph¹² of whale strandings as of March 9, 2023 is depicted below. Note, importantly, this graph only reflects about 2 months of data for 2023. A graph extrapolating the extraordinary recent rate of whale mortality for all of 2023 is in paragraph 57.

¹¹ Are more dead whales washing up? A look at the numbers from the past 20 years, NJ.com (Jan. 12, 2023), <https://www.nj.com/news/2023/01/are-more-dead-whales-washing-up-a-look-at-the-numbers-from-the-past-20-years.html>.

¹² Cetacean Stranding Data, Marine Mammal Stranding Center (Mar. 22, 2023), <https://mmsc.org/cetaceans-2002-2023>.

New Jersey Whale Strandings by Species and Year
Marine Mammal Stranding Center© updated 3/9/2023



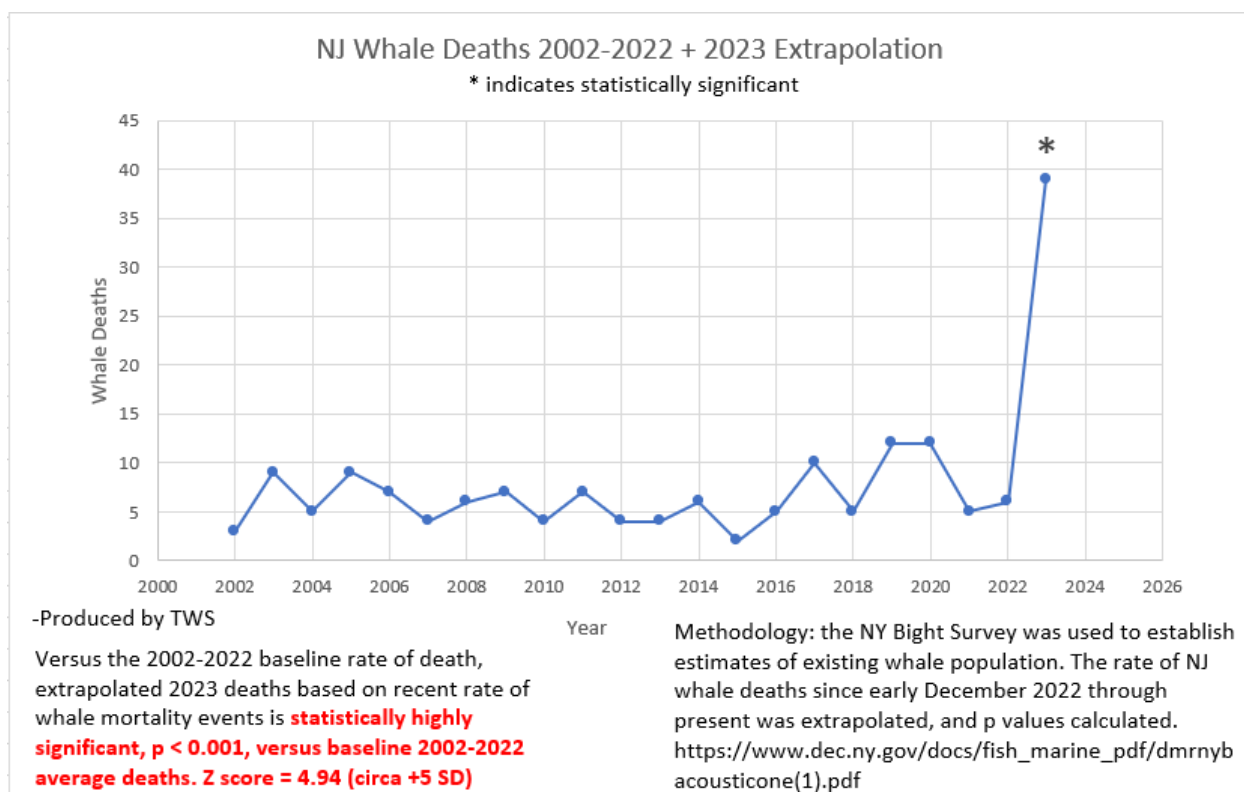
53. For the period December 5, 2022 through January 7, 2023, there were 4 New Jersey whale strandings. One of those four strandings occurred in early January 2023 (as noted in the first MMSC graph). From January 7, 2023 through March 9, 2023, there were an additional 6 New Jersey whale strandings (totaling the 7 NJ whale strandings for 2023 depicted on the above graph).

54. Thus, there have been a total of 10 New Jersey whale strandings for the period December 5, 2022 through March 9, 2023.

55. The average whale mortality rate for the 2002-2022 multidecadal period in New Jersey is 6.3 whale deaths per year.

56. The estimated total New Jersey whale deaths were calculated based upon the recent multi-month rate of mortality events and extrapolated for the upcoming year. This yielded an estimated total whale deaths of 39 whales for 2023.

57. This number of whale deaths is not only greater in quantity than the highest year of deaths in the 20 year MMSC database, but it also constitutes a highly statistically significant increase in whale deaths. Such a determination can be quickly and easily performed. See the below graph depicting the New Jersey whale deaths for the 2002-2023 period including the extrapolated value for 2023, and statistical significance note regarding 2023's estimated increase:



58. The extrapolated estimate of 39 NJ whale deaths for 2023 versus the baseline average constitutes a highly statistically significant event, with the p-value well under 0.001, and a z-

score of 4.94.

59. These data indicate a highly rare, anomalous event is underway. The p-value provides strong evidence that such an event is unlikely occurring due to chance. The z-score indicates a near 5 standard deviation event, which again, is exceedingly rare. A five standard deviation event corresponds to a 1 in 3.5 million chance of happening.¹³

60. Additionally, a study funded by Defendant NMFS found through an estimation model that - over the period 1990-2007 - observed North Atlantic Right Whale carcasses account for only 36% of all deaths.¹⁴ Adjusting for this implies the above estimate of 39 whale deaths for 2023 could be quite a bit higher.

61. In totality, the recent exponential uptick in whale deaths is unprecedented in the NJ record since 2002, highly statistically significant, and provides robust evidence that an environmental variable is causing this dramatic increase. The only common denominator, i.e., the recent changed variable of significance, has been the spate of ITAs issued during 2022 in connection with the wind energy marine characterization activities off the New Jersey/New York coasts. The mechanisms and

¹³ Tibi Puiu, *What does 5-sigma mean in science?* ZME Science (Jan. 28, 2021), <https://www.zmescience.com/science/what-5-sigma-means-0423423/>.

¹⁴ Richard M. Pace III, et al., *Cryptic mortality of North Atlantic right whales*, Society for Conservation Biology (Feb. 2, 2021), <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/csp2.346>.

corroboration for imputing the exponential whale mortality increase to the wind energy activities is outlined *infra*.

62. Moreover, whales have not been the only victim of death. There have already been a total of 23 dolphin and porpoise strandings along the NJ coast for 2023 thus far, as per MMSC.¹⁵ The average number of deaths for the 2002-2022 is 42 (note that the one anomalous year in 2013 was due to morbillivirus¹⁶ in dolphins - a virus in the same family as measles).

63. The extrapolated total deaths for 2023 based upon the current rate of dolphin/porpoise deaths in 2023 thus far is 104 deaths for 2023.

64. As such, the estimate for 2023 of 104 deaths of dolphins/porpoise versus the running baseline average of 42 deaths would be highly statistically significant, with a p-value less than 0.001, and a z-score of around 5, again, suggesting this is an exceedingly rare event.

65. It further fortifies the argument that an environmental/exogenous agent is responsible for this exponential increase in mortality, and since the effect is observed across multiple marine mammal species, namely, both whales and dolphins,

¹⁵ Cetacean Stranding Data, Marine Mammal Stranding Center (Mar. 22, 2023), <https://mmsc.org/cetaceans-2002-2023>.

¹⁶ 2013-2015 Bottlenose Dolphin Unusual Mortality Event in the Mid-Atlantic (Closed) - Marine Life in Distress, NOAA Fisheries (Oct. 26, 2021), <https://www.fisheries.noaa.gov/national/marine-life-distress/2013-2015-bottlenose-dolphin-unusual-mortality-event-mid-atlantic>.

it must be a variable capable of affecting both cetaceans/marine mammals.

66. A common denominator between dolphins and whales is their utilization of sound as a means to communicate and navigate, as discussed further *infra*.

C. Scientific Evidence Causally Linking the Wind Turbine Marine Characterization to the Dramatic Increase in Dolphin/Whale Deaths

67. While it cannot be foreclosed that more than one etiological factor is causing the overall increase in marine mammal deaths, if this were a multifactorial phenomenon, we should have observed multiple changed variables over the preceding 12-16 months. That has not been the case.

68. The one, materially changed variable has been the numerous ITAs issued in 2022, and thereupon, the significant amount of seabed characterization activity offshore, in preparation for turbine construction.

69. The seabed is characterized by survey vessels which emanate high magnitude noise, typically operating in the low-mid frequency range.

70. Dr. Robert Stern, the former director in the Office of Environmental Compliance in the U.S. Department of Energy, is a recognized expert in environmental impact studies. He submitted a

letter,¹⁷ on behalf of his organization, Save LBI, to President Joseph Biden. This letter is replete with scientific data on the potential deleterious effects of wind turbines on marine life, both in the preparatory and operational phases.

71. The high magnitude noise emitted by survey vessels to characterize the sea floor in preparation for turbines permits noise levels over 200 decibels.¹⁸

72. The Defendant's own 2018 technical guidance¹⁹ shows the various marine mammals, including whales and dolphins, hear in the low to mid frequency range:

Table ES1: Marine mammal hearing groups.

Hearing Group	Generalized Hearing Range*
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 35 kHz
Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz
High-frequency (HF) cetaceans (true porpoises, <i>Kogia</i> , river dolphins, cephalorhynchid, <i>Lagenorhynchus cruciger</i> & <i>L. australis</i>)	275 Hz to 160 kHz
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 kHz
* Represents the generalized hearing range for the entire group as a composite (i.e., all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65 dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall et al. 2007) and PW pinniped (approximation).	

¹⁷ See, Exhibit B, Dr. Robert Stern's analysis and letter to President Biden.

¹⁸ *Id.*

¹⁹ Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts, 2018 Revision to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (April 2018), [https://media.fisheries.noaa.gov/dam/migration/tech_memo_acoustic_guidance_\(20\)_pdf_508.pdf](https://media.fisheries.noaa.gov/dam/migration/tech_memo_acoustic_guidance_(20)_pdf_508.pdf).

73. Defendant NMFS uses an established threshold for Level B harassment at 120 decibels for continuous noise, and 160 decibels for impulsive and intermittent noise²⁰ which is characteristic of noise source level of these vessel survey devices.

74. The Defendant NMFS' issuance of the ITAs established a maximum distance of 141 meters (slightly less than 1/10 of a mile) from the sound source for Level B harassment noise.²¹

75. Conversely, Dr. Stern's analysis demonstrates that noise levels over 160 decibels can extend outward to 16 miles, and noise levels over 140 decibels up to 34 miles away from the vessel.²² See below table (under paragraph 79) produced by Dr. Stern. The large changes in the range of elevated noise occur because the range is an exponential function of the noise source level and transmission loss factor-measured in decibels.

76. The use of the 140 dB as a criterion is supported by its recent use by the NMFS in the Atlantic Shores project request for

²⁰ Request for an Incidental Harassment Authorization to Allow the Non-Lethal Take of Marine Mammals Incidental to Site Characterization Surveys of the Atlantic Shores Lease Area (OCS-A0499), Atlantic Shores Offshore Wind Project Dec. 2021), "NOAA Fisheries has defined the threshold level for Level B harassment at 120 dBRMS re 1 microPascal (µPa) for continuous noise and 160 dBRMS re 1 µPa for impulsive and intermittent noise." https://media.fisheries.noaa.gov/2022-01/AtlanticShoresHRG_2022_App_OPR1.pdf.

²¹ *Id.* at 31, "The maximum calculated distance to the Level B harassment threshold for any category and type of HRG survey equipment that could be operated is the sparker at 462.6 ft (141 m; Table 6-2 and Appendix B)."

²² See, Exhibit B, Dr. Robert Stern's analysis and letter to President Biden.

ITA authorization for construction.²³ It is considered to be more representative as the criteria for impulsive noise for baleen whales as opposed to the 160 dB level, which is more appropriate for the general marine mammal population.

77. The need to consider a lower criteria level is also supported by field observation on bowhead whales. It has been difficult to observe the direct response of right whales to man-made noise because they are so critically endangered and sparse. But bowhead whales are a close relative of the right whale and an excellent proxy for assessing behavioral impacts to them. Displacement of bowhead whales from air gun noise, another impulsive source, has been shown to occur at received levels of 120 to 130 dB.²⁴

78. Compounding the concern over large ranges is that, as shown below (paragraph 79), with a more accurate noise source level and a more often used realistic, practical 15 dB noise loss factor, the distances to meet even the 160 dB criteria are considerably larger. Regarding noise source level, the plaintiffs questioned the use of the defendant's 203 dB source level for the loudest

²³ Application for Marine Mammal Protection Act (MMPA) Rulemaking and Letter of Authorization, Atlantic Shores Offshore Wind (Sept. 2022), https://media.fisheries.noaa.gov/2022-09/AtlanticShoresOWF_2022_Application_OPR1.pdf.

²⁴ W. John Richardson and Gary W. Miller, Displacement of migrating bowhead whales by sounds from seismic surveys in shallow waters of the Beaufort Sea, The Journal of the Acoustical Society of America (Aug. 30, 1999), <https://asa.scitation.org/doi/10.1121/1.427801>.

"Dura Spark 240 Unit" when measured data in a Report²⁵ (Table 10) they often use places the number between 209 and 213 dB. The Plaintiffs questioned the defendant's use of a 20 dB noise loss factor when 15 dB has been used in numerous other IHA's and even recommended by the defendants for that purpose.

79. It is well known that discrete noise signals lose that characteristic and become of a more continuous nature as they travel longer distances due to variations in noise transmission paths. This would seem to be especially applicable to those sources with wider beamwidth, longer pulse durations, and higher pulse repetition rates. The disturbance criteria for continuous noise is 120 DB, even lower than the 140 DB. See Dr. Stern's table below, showing noise to 140 dB out to 13-34 miles and noise to 160 dB out to 16 miles from sound source (in contrast to Defendant's numbers - only 1/10 of a mile from sound source for 160 dB).

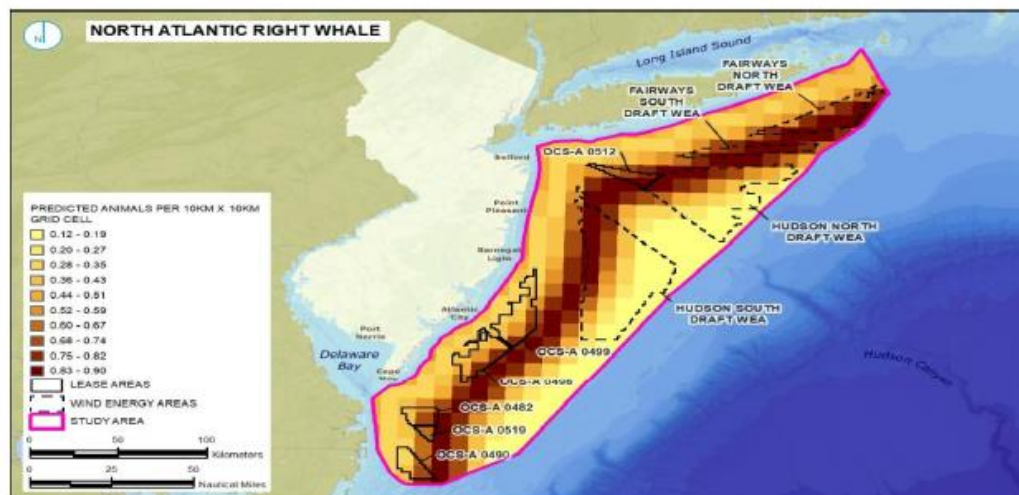
²⁵ Letter to Ms. Jolie Harrison, NMFS, from Save LBI, February 23, 2022, Comments on the proposed ITA for Atlantic Shores Offshore Wind Project's Marine Site Characterization Surveys.

Vessel Surveys –Noise Impact

	NMFS	Alternate
Source Level	203 dB	205-211
Transmission Loss	20	15
Criteria- Noise Level to Get Down to	160	140 (for baleen whales)
Range to 140 dB	-----	13-34 miles
Range to 160 dB	1/10 mile	1/2-16 miles

80. The vessel surveying activity has been occurring directly within or near a key right whale migratory zone off the New Jersey coast. Note in the below image, the darker brownish colors indicate the highest concentration of right whale migration.

Figure 2. Right Whale Primary Migration Corridor-in purple



Source, NJ Offshore Wind Strategic Plan, Natural Resource Technical Appendix, Figure 21. Section 2.6.

81. The Atlantic Shores incidental take authorization

application²⁶ for construction ostensibly displays the right whale migration corridor directly intersecting the leased area and proposed wind turbine locations:

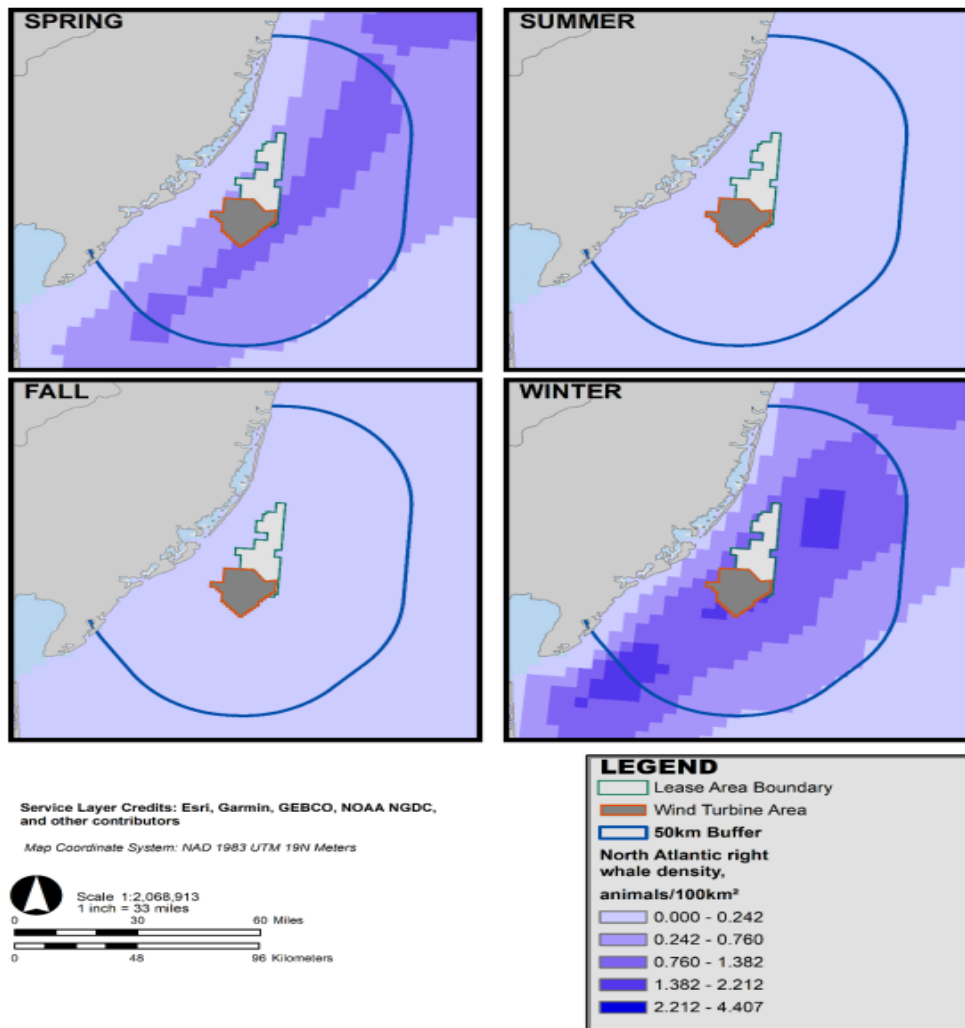
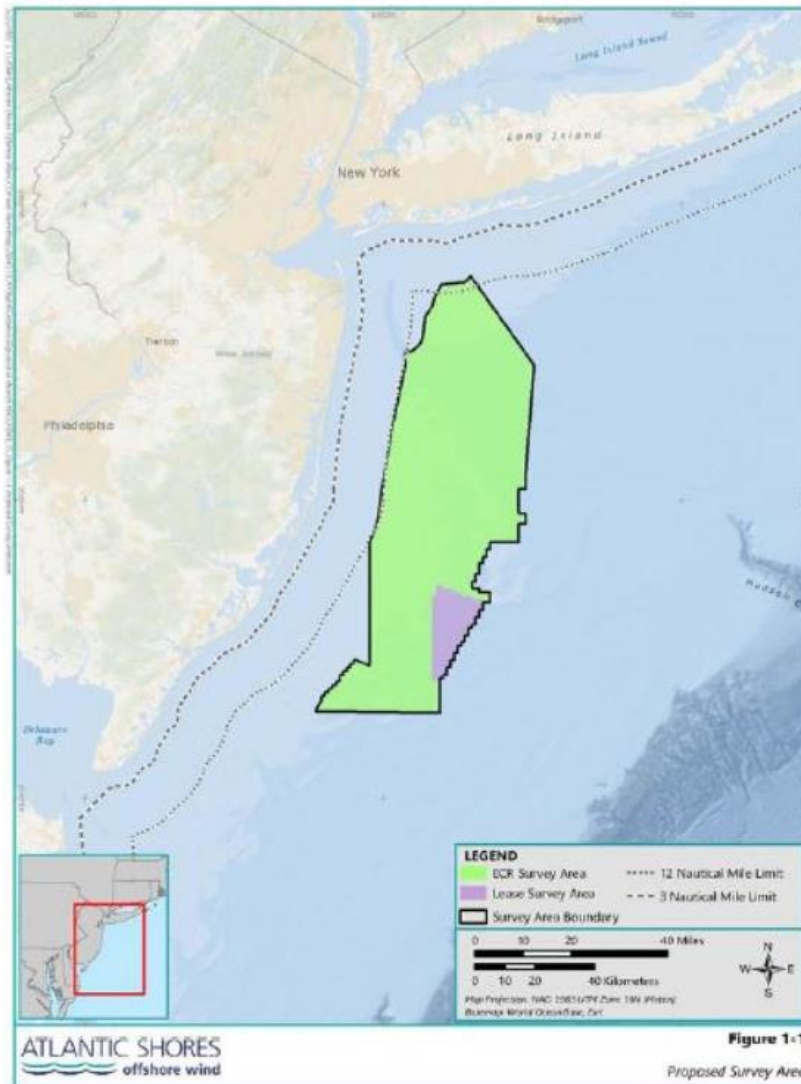


Figure 9. North Atlantic right whale maximum seasonal density from Roberts et al. (2016a, 2021a, 2021b).

²⁶ Application for Marine Mammal Protection Act (MMPA) Rulemaking and Letter of Authorization, Atlantic Shores Offshore Wind (Sept. 2022), https://media.fisheries.noaa.gov/2022-09/AtlanticShoresOWF_2022_Application_OPR1.pdf.

82. As another example, Atlantic Shores Offshore Wind Bight, LLC's ITA application²⁷ shows their survey area (see image below) intersecting with the whale migration corridor (map of corridor, *supra*, under paragraph 80):



²⁷ Request for an Incidental Harassment Authorization to Allow the Non-Lethal Take of Marine Mammals Incidental to Site Characterization Surveys of the Atlantic Shores Lease Area (OCS-A0541), Atlantic Shores Bight LLC (Apr. 2022), https://media.fisheries.noaa.gov/2022-06/AtlanticShoresBightHRG_2022PropIHA_App_OPR1.pdf.

83. The threshold of 140 decibels is particularly significant. The Defendant NMFS has recently used that threshold as the level at which 50% of the baleen whale population would be disturbed, meaning a large percent of the whales could be disturbed at lower levels.²⁸

84. Supporting that, two studies found that Humpback whales try to avoid the noise down to a level of 140 decibels.²⁹

85. Moreover, there is a scientific consensus that whales will consistently seek to avoid noise of approximately 160 decibels.³⁰

86. As noted, noise of these levels emanating from the sea characterization surveys can propagate many dozens of miles away from the survey vessel, and the surveying is occurring directly in or near the right whale migration zone.

87. Disturbing the whale's behavior can mean many things:

²⁸ C.I. Malme, et. al., *Investigations of the potential effects of underwater noise from Petroleum industry activities on migrating gray whale behavior* (Aug. 1984), <https://www.boem.gov/sites/default/files/boem-newsroom/Library/Publications/1983/rpt5586.pdf>.

²⁹ Robert D. McCauley, et al., *Marine Seismic Surveys: Analysis and Propagation of Air-Gun Signals; And Effects of Air-Gun Exposure on Humpback Whales, Sea Turtles, Fishes and Squid*, Centre for Marine Science and Technology - Curtin University of Technology (Aug. 2000), <https://cmst.curtin.edu.au/wp-content/uploads/sites/4/2016/05/McCauley-et-al-Seismic-effects-2000.pdf>; R.D. McCauley, et al., *Marine Seismic Surveys—A Study Of Environmental Implications*, Centre for Marine Science and Technology - Curtin University (Mar. 17, 2000), <https://espace.curtin.edu.au/bitstream/handle/20.500.11937/80308/80370.pdf?sequence=2&isAllowed=y>.

³⁰ B. Southall, et al., *Marine Mammal Noise Exposure Criteria: Initial Scientific Recommendations*, Aquatic Mammals (Jan. 1, 2008), <https://tethys.pnnl.gov/publications/marine-mammal-noise-exposure-criteria-initial-scientific-recommendations>.

It very often means first, that the whale will seek to avoid the noise or "standoff" from it, potentially in an undesirable direction or location. In a migratory setting that could mean obstruction of, or even blockage of that migration. It could mean being driven towards the shore seeking relief. It can also involve the whale surfacing to seek a lower noise level at the surface and becoming more vulnerable to vessel strike. It can mean separation of mothers and calves due to the 'masking' of their normal communications by the vessel device noise, and such separation can be fatal for the calf. It can also mean the loss of its navigational capability, cessation of feeding or mating, and the loss of the ability to detect predators or oncoming ships. Finally, because whales use sounds to determine the very nature of their surroundings, the effects may be much more profound than that.³¹

88. Such paths to serious harm and fatality include reactions to noise stimuli causing right whales to ascend and swim just below the surface where they are more vulnerable to vessel strike, not just from survey vessels, but from other vessels as well. This behavior has in fact been demonstrated experimentally.³²

89. Another path to injury involves separation of calves from mothers as a result of masking of their communication from

³¹ See, Exhibit B, Dr. Robert Stern's analysis and letter to President Biden.

³² Douglas P. Nowacek, et al., *North Atlantic right whales (Eubalaena glacialis) ignore ships but respond to alerting stimuli*, Proc. R. Soc. Lond. B. (Feb. 7, 2004), <https://royalsocietypublishing.org/doi/10.1098/rspb.2003.2570>.

elevated noise levels. Such communications can employ low-amplitude signals susceptible to auditory masking.³³

90. The potential for such loss of mother/calf communication was also presented in another study,³⁴ using a 150 dB source level for a whale upcall, and a 15 dB loss factor, mother/calf communications could be blocked out to a distance of 7.2 miles from the sparker units' source noise levels of 211 dB.

91. Still another path occurs from the potential disruption of the whale's migration since a primary migration corridor for the right whale is concentrated near and even intersects part of the survey area. That could occur from reactions to above Level B exposures and/or masking of the whale's sound capabilities.

92. Reactions to above Level B exposures could also involve stress and distress. An animal's perception of a threat may be sufficient to trigger stress responses consisting of some combination of behavioral responses, autonomic nervous system responses, neuroendocrine responses, or immune responses.

93. Autonomic nervous system responses to stress typically involve changes in heart rate, blood pressure, and

³³ Susan E. Parks, et al., *Acoustic crypsis in communication by North Atlantic right whale mother-calf pairs on the calving grounds*, Biol. Lett. (Oct. 9, 2019), <https://royalsocietypublishing.org/doi/10.1098/rsbl.2019.0485#:~:text=Right%20whale%20mothers%20produced%20a,the%20most%20vulnerable%20to%20predation>.

³⁴ Jennifer Tennessen and Susan Parks, *Acoustic propagation modeling indicates vocal compensation in noise improves communication range for North Atlantic right whales*, Endang Species Res (June 15, 2016), <https://www.int-res.com/articles/esr2016/30/n030p225.pdf>.

gastrointestinal activity, have a relatively short duration and may or may not have a significant long-term effect on an animal's fitness.

94. Neuroendocrine stress responses have been implicated in failed reproduction, altered metabolism, reduced immune competence, and behavioral disturbance. During a stress reaction, if an animal does not have sufficient energy reserves to satisfy the energetic costs of a stress response, energy resources must be diverted from other normal functions, leading to distress situation. This state of distress will last until the animal replenishes its energetic reserves sufficient to restore normal function. Studies in the Bay of Fundy found that noise reduction from reduced ship traffic was associated with decreased stress in North Atlantic right whales leading to a reasonable expectation that some of its normal functions, including its migration, could be impaired from higher level exposures.

95. The need to assess the impact on its migration from the masking of the whale's communication is equally important. The whales use sound to navigate along their migration. It also appears that their migration is aided by their capability to communicate with each other along the way.

96. The right whale's vocalizations are normally at the 125 dB rms level for low background noise, but can rise to 150 dB in

the presence of high background noise.³⁵

97. A recent in-depth review of behavior response studies identified³⁶ a number of studies specifically associated with whale traveling, migrating, and directional swimming.

98. Numerous other studies evince the detrimental effects of anthropogenic underwater noise on marine mammals. For example, “[a]nthropogenic noise can directly or indirectly affect many marine organisms, causing auditory masking, leading to cochlear damage, changing individual and/or social behavior, altering body metabolism, and hampering embryogenesis.”³⁷ Auditory masking is a phenomenon that occurs when the presence of one sound compromises and affects the presence of another sound.³⁸

99. Marine mammal deaths as a result of sonar or otherwise

³⁵ Susan E. Parks, et al., *Individual right whales call louder in increased environmental noise*, Biol. Lett. (July 7, 2010), <https://royalsocietypublishing.org/doi/10.1098/rsbl.2010.0451>. Using even the high 150 dB communication level, with the 211 dB noise source level and the 15 dB propagation loss factor above, masking of their communication would extend seven miles from the survey vessel.

³⁶ C. Gomez, et al., *A systematic review on the behavioral responses of wild marine mammals to noise: the disparity between science and policy*, Canadian Journal of Zoology (Nov. 2, 2016), <https://cdnsiencepub.com/doi/abs/10.1139/cjz-2016-0098>.

³⁷ Chao Peng, et al., *Noise in the Sea and Its Impacts on Marine Organisms*, Int J Environ Res Public Health. (Sep. 30, 2015), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4626970/>.

³⁸ Christophe Anet, *Auditory Masking and its Effect on our Perception of Sound*, QSC (May 5, 2021), “Auditory masking occurs when the perception of one sound is affected and compromised by the presence of another sound.” <https://blogs.qsc.com/live-sound/auditory-masking-and-its-effect-on-our-perception-of-sound/#:~:text=Auditory%20masking%20occurs%20when%20the,temporal%20or%20non%20Dsimultaneous%20masking>; Brian K. Branstetter and Jillian M. Sills, *Mechanisms of auditory masking in marine mammals*, Anim Cogn. (Aug. 26, 2022).

high-intensity anthropogenic noise is not a novel phenomenon, in fact, it has been documented in studies for decades.

100. In March 2000, the U.S. Navy admitted that its high-intensity sonar systems resulted in the strandings of sixteen beaked and minke whales after the Navy ships passed by through the Bahamas.³⁹

101. Studies conducted by Tyack (1998) and Tyack and Clark (1998) concluded that 10 of 17 singing Humpback whales exposed to low-frequency sounds from the SURTASS-LFA4 sonar system stopped singing during playback with a source level that ranged from 155 to 205 dB, resulting in maximum received levels of 120 to 150 dB"⁴⁰

102. "Low-frequency sound also may affect sperm whales because their wide-band clicks contain energy between 100 and 2,000 Hz (Watkins et al., 1985; Moore et al., 1993), which is suggestive of low-frequency hearing . . . Many earlier reports suggest that sperm whales may silence or move out of an area in response to manmade noise (Watkins et al., 1985; Bowles et al., 1994; Mate et al., 1994)."⁴¹

103. The Atlantic Shores Bight LLC's ITA application, for

³⁹ Mark Schrophe, *Whale deaths caused by US Navy's sonar*, Nature (Jan. 10, 2002), <https://www.nature.com/articles/415106a>.

⁴⁰ National Research Council, *Marine Mammals and Low-Frequency Sound (2000)*, <https://www.ncbi.nlm.nih.gov/books/NBK225334/>.

⁴¹ *Id.*

example, concedes that their characterization surveys can interfere, in particular with low-frequency communicating mammals "Impacts most likely to occur from HRG⁴² surveys are masking of sound and behavioral disturbance (URI 2021a). Masking effects have the largest impacts on low-frequency communicating mammals like baleen whales (NOAA 2021a)."⁴³

104. Furthermore, many studies have deduced a possible causal link between naval sonar operations and whale strandings:

Several papers have suggested that beaked whales tend to strand when there are naval operations offshore. Simmonds and Lopez-Jurado (1991) reported on four mass strandings between 1985-1989 of Cuvier's beaked whale (*Ziphius cavirostris*) on the coast of Fuerteventura in the Canary Islands that may have been related to naval maneuvers. Frantzis (1998) reported on another mass stranding of 12 or more beaked whales sighted over 38 km of coastline during two days (May 12 and 13, 1996) in the Kyparissiakos Gulf in Greece. There was no external sign of injury or disease in any of these animals. Frantzis (1998) concluded that the mass stranding was associated with a concurrent NATO sonar exercise. The Frantzis paper stimulated the NATO research center that conducted the sonar tests to convene panels to review the data (D'Amico, 1998). The NATO sonar transmitted two simultaneous signals, one at 450-700 Hz

⁴² High-resolution geophysical.

⁴³ Request for an Incidental Harassment Authorization to Allow the Non-Lethal Take of Marine Mammals Incidental to Site Characterization Surveys of the Atlantic Shores Lease Area (OCS-A 0541), Atlantic Shores Bight LLC (Apr. 2022), https://media.fisheries.noaa.gov/2022-06/AtlanticShoresBightHRG_2022PropIHA_App_OPR1.pdf.

and one at 2.8-3.3 kHz at source levels of just under 230 dB. This combined signal lasted four seconds and was repeated once every minute. The NATO analysis suggested close timing between the onset of sonar transmissions and the first strandings.⁴⁴

105. A U.S. Court of Appeals 9th Circuit case found that the U.S. Navy's low frequency sonar was harming marine mammals, and ordered the U.S. Navy to develop new rules that would adequately comply with the requirements of MMPA § 1371(a)(5)(A)(i)(II)(aa) for "least practicable impact" on said mammals.⁴⁵

106. Importantly, an internal memorandum⁴⁶ written by Sean Hayes, Ph.D., the Chief of Protected Species at NOAA Northeast Fisheries Service Center, sent to Brian Hooker (lead biologist at Bureau of Ocean Energy Management) strongly warns of the numerous deleterious impacts of turbine construction and operation on marine mammals, including and especially right whales.

These risks occur at varying stages, including construction and development, and include increased noise, vessel traffic, habitat modifications, water withdrawals associated with certain substations and resultant

⁴⁴ National Research Council, *Marine Mammals and Low-Frequency Sound (2000)*, <https://www.ncbi.nlm.nih.gov/books/NBK225334/>.

⁴⁵ NRDC, Inc. v. Pritzker, 828 F.3d 1125 (9th Cir. 2016).

⁴⁶ See, Exhibit C, Internal NOAA memorandum.

impingement/entrainment of zooplankton, changes in fishing effort and related potential increased entanglement risk, and oceanographic changes that may disrupt the distribution, abundance, and availability of typical right whale food.

107. Various news and media outlets have been disseminating the statements made by federal and state agencies to the effect that no connection exists between the spate of whale/dolphin strandings and the ongoing offshore wind turbine preparatory work.

108. NOAA asserts that there is no evidence to support speculation attributing the whale deaths to the seabed characterization related noise ⁴⁷, presumably referring to evidence of hearing organ damage.

109. However, necropsies do not often look for damage to marine mammals' hearing organs and cannot show whether disturbance from noise led to behaviors that can and do invariably lead to injury and death, as described passim. Rather, that connection needs to be plausibly made through a thorough examination of vessel location, noise device use and power settings and other factors at

⁴⁷ Robert Zullo, *Wind and whales: 'No evidence' links projects to deaths*, Virginia Mercury (Mar. 3, 2023), <https://www.virginiamercury.com/2023/03/03/wind-and-whales-no-evidence-links-projects-to-deaths/#:~:text=%E2%80%9CA%20this%20point%2C%20there%20is,NOAA%20said%20in%20a%20statement.>

the times of the whale deaths.

110. Hence, to suggest there is no evidence of a connection between the turbine preparatory activity and the strandings based solely on the necropsies is misleading because such evidence is neither looked for or can be found. Therefore, claiming it doesn't exist is proof of nothing.

111. The NJ DEP has joined in this chorus of avoidance of evidence, "As of March 2023, no offshore wind-related construction activities have taken place in waters off the New Jersey coast, and DEP is aware of no credible evidence that offshore wind-related survey activities could cause whale mortality."⁴⁸

112. For instance, a News 12 New Jersey article discussing the NJ DEP's statement notes that necropsies have determined that some whales died due to vessel strikes.⁴⁹ But this is potentially only the secondary cause of death.

113. NOAA further avers that these strandings have been increasing since 2016 ⁵⁰ but that is not borne out by the graph in

⁴⁸ NJDEP STATEMENT ON EAST COAST WHALE MORTALITIES, Department of Environmental Protection (Mar. 15, 2023), https://www.nj.gov/dep/newsrel/2023/23_0021.htm#:~:text=As%20of%20March%202023%2C%20no,activities%20could%20cause%20whale%20mortality.

⁴⁹ Matt Trapani, *NJDEP: 'No credible evidence' offshore wind power projects are killing whales*, NEWS 12 NJ (Mar. 15, 2023), <https://newjersey.news12.com/njdep-no-credible-evidence-offshore-wind-power-projects-are-killing-whales>.

⁵⁰ Marine Life In Distress - 2016-2023 Humpback Whale Unusual Mortality Event Along the Atlantic Coast, NOAA Fisheries (Mar. 23, 2023), <https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2023-humpback-whale-unusual-mortality-event-along-atlantic-coast>.

paragraph 49. That graph shows low strandings in 4 of the last 7 years. Also, such an assertion fails to account for the exponential increase in the rate of mortality events over the past 3-4 months in the regions off of NJ/NY specifically authorized by Defendant to conduct noise-based characterization.

114. In 2020, a series of 29 beaked whale strandings/sightings occurred on the northern shores of Europe.⁵¹ Experts then suggested the strandings were related to a military sonar exercise.⁵² Among the research cited was a prominent Australian study which found a "Strong association between beaked whale stranding events with the presence of multinational naval ASW training operations."⁵³ Those operations used mid-frequency sonar.

115. Finally, and additionally, given all the above, and as stated by Dr. Stern in his numerous submitted comments in connection with the ITAs, "The scope of the Level A and serious injury/death analysis here is insufficient. The take numbers generated under the level B analysis are low and not justified compared to those using current scientific norms for estimating

⁵¹ Betsy Reed, *Beached whale increase may be due to military sonar exercises, say experts*, The Guardian (Aug. 25, 2020), <https://www.theguardian.com/environment/2020/aug/24/beached-whale-increase-may-be-due-to-military-sonar-exercises-say-experts>.

⁵² *Id.*

⁵³ Anne E. Simonis, et al., *Co-occurrence of beaked whale strandings and naval sonar in the Mariana Islands, Western Pacific*, Proc. R. Soc. B. (Feb. 19, 2020), <https://royalsocietypublishing.org/doi/10.1098/rspb.2020.0070>.

noise propagation loss. The potential for Level A takes from cumulative exposure has not been analyzed.”⁵⁴ The Defendant NMFS, in the active and pending ITAs, are authorizing these ITAs with virtually no requested Level A harassment takes. This flies in the face of all the evidence of pathways to harm and death from cumulative exposure to the noise, outlined herein, and the exponential rise in marine mammal deaths attributable to same.

116. Accordingly, it is entirely counterfactual to assert there is “no evidence” given the above.

Climate Change Mitigatory Ability of Whales is Significant

117. Finally, and importantly, Defendants, inter alia, will argue that one of the primary goals of wind turbine development is climate change mitigation. However, the final Environmental Impact Statement for the Vineyard wind project states that there will be “no effect” on climate change from these projects.⁵⁵ Save LBI also assembled and presented to the Defendant NMFS sea level rise data from International Panel on Climate Change reports that show that the impact of these projects will not reduce future sea level rise at all, but only delay whatever is coming for a very modest time. For the Atlantic Shores project that delay would amount to about

⁵⁴ Dr. Stern’s submitted comments in connection with Atlantic Shore’s ITA.

⁵⁵ Appendix A - Vineyard Wind 1 Offshore Wind Energy Project Final Environmental Impact Statement Volume II (Mar. 2021), <https://tethys.pnnl.gov/sites/default/files/publications/Vineyard-Wind-1-FEIS-Volume-2.pdf>, page 66: “Overall, it is anticipated that there would be no collective impact on global warming as a result of offshore wind projects.”

nine days, so the argument that these projects are necessary and must proceed rapidly to save the planet does not hold seawater.⁵⁶

118. In fact, a Harvard University study that analyzed 28 operational wind farms in the US suggests that wind turbines can impart an effect of warming temperatures, primarily through enhancement of low-level atmospheric mixing and interruption of radiative nighttime cooling. This net localized warming effect was quantified in 10 other studies, cited therein.⁵⁷ This warming effect could be non-negligible at a continental scale, assuming a very high amount of wind power, though less certain as to global scale temperature impacts.⁵⁸

119. Defendants and others advocating for turbines, also fail to recognize the immense carbon sequestration capacity of great whales. Each, single great whale sequesters 33 tons of carbon dioxide (CO₂) on average, removing same from the atmosphere for centuries.⁵⁹

⁵⁶ Reference: Letter from Save LBI, Comments and Project Concerns by the Long Beach Island, NJ, Coalition for Wind Without Impact Regarding the Notice of Intent for the Atlantic Shores Offshore Wind Projects, Docket # BOEM-2021-0057. October 21, 2021

⁵⁷ Lee Miller and David Keith, Climatic Impacts of Wind Power, *Joule* (Dec. 19, 2018), <https://www.sciencedirect.com/science/article/pii/S254243511830446X>.

⁵⁸ David W. Keith, et al., The influence of large-scale wind power on global climate, *Environmental Sciences* (Nov. 9, 2004), <https://www.pnas.org/doi/abs/10.1073/pnas.0406930101>.

⁵⁹ Ralph Chami, et al., *Nature's Solution To Climate Change*, International Monetary Fund (Dec. 2019), <https://www.imf.org/en/Publications/fandd/issues/2019/12/natures-solution-to-climate-change-chami>.

120. Whales have a multiplicative effect on phytoplankton generation, which offset global CO2 production levels by an incredible 40% annually through capturing 30-50 billion metric tons of CO2 per year⁶⁰(occurs via CO2 fixation by phytoplankton). Thus, the destructive impacts of wind turbine surveying and future operations on the whale population will in fact reduce the Earth's inherent carbon sequestration abilities, through reducing whales and by extension phytoplankton.

121. Conversely, it is estimated that all wind energy (on and offshore) offsets CO2 by only 340 million tons annually.⁶¹ Hence, phytoplankton alone capture 147 times more CO2 than wind energy annually. When one combines the multiplicative effect of whales on phytoplankton (and whales themselves), the CO2 offsetting effect of whales and phytoplankton are very significant, and the latter surpasses wind energy by an exceedingly high amount.

122. As per the International Monetary Fund, "If whales were allowed to return to their pre-whaling number of 4 to 5 million—from slightly more than 1.3 million today—it could add significantly to the amount of phytoplankton in the oceans and to

⁶⁰ P G Falkowski, *The role of phytoplankton photosynthesis in global biogeochemical cycles*, Photosynth Res. (Mar. 1994), <https://pubmed.ncbi.nlm.nih.gov/24311124/#:~:text=Phytoplankton%20biomass%20in%20the%20world's,about%2040%25%20of%20the%20total>.

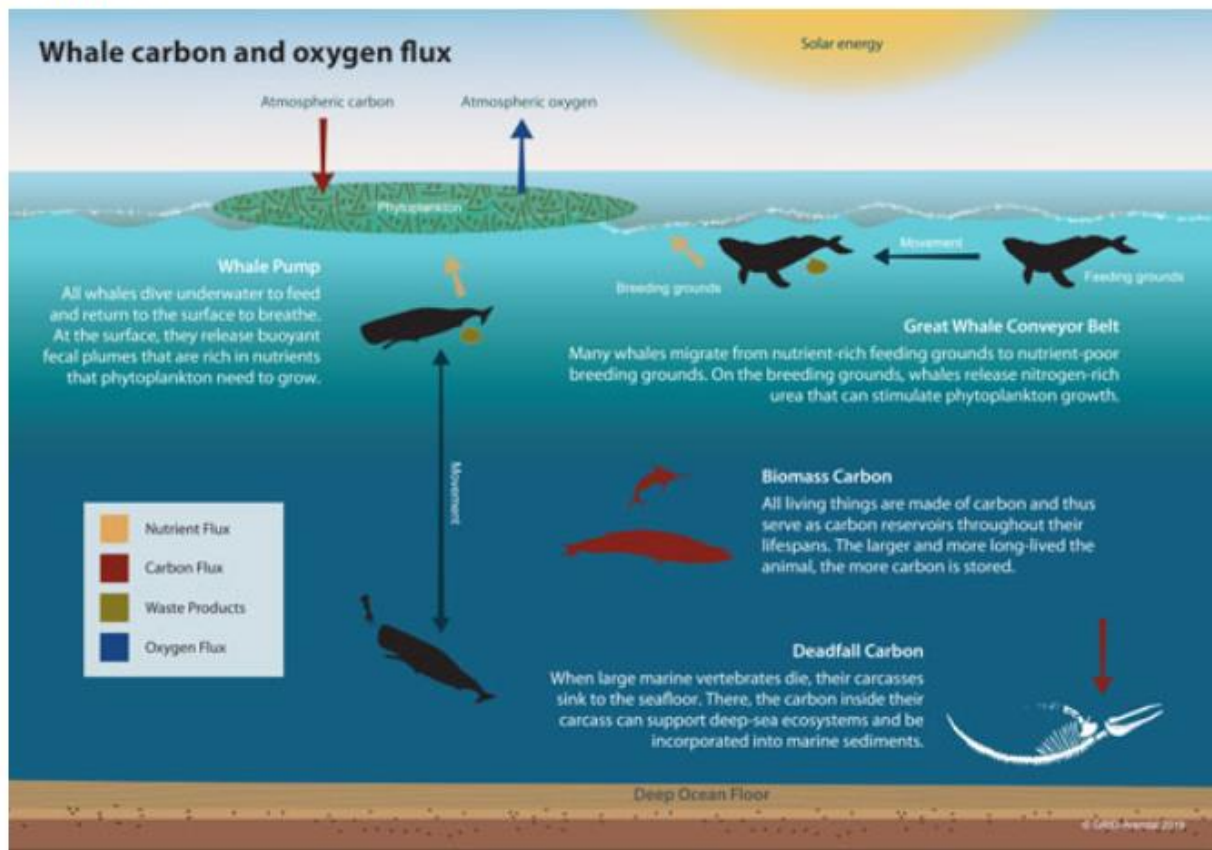
⁶¹ Wind power facts, American Clean Power, <https://cleanpower.org/facts/wind-power/#:~:text=Environmental%20benefits,million%20cars'%20worth%20of%20emissions>.

the carbon they capture each year. At a minimum, even a 1 percent increase in phytoplankton productivity thanks to whale activity would capture hundreds of millions of tons of additional CO₂ a year, equivalent to the sudden appearance of 2 billion mature trees.”⁶²

123. As depicted in the below image, whales play an integral role in the Earth system carbon and oxygen flux, by facilitating transport of nutrients, production of phytoplankton, and oxygen, as well as reduction of carbon dioxide.

⁶² Ralph Chami, et al., *Nature's Solution To Climate Change* , International Monetary Fund (Dec. 2019), <https://www.imf.org/en/Publications/fandd/issues/2019/12/natures-solution-to-climate-change-chami>.

Chart 1



D. Violations of the MMPA have occurred because the cumulative impact of the ITAs on marine mammals, particularly North Atlantic right whales and Humpback Whales, is more than a small number of the population, and will have a greater than negligible impact on the species, and, certain ITA applicants are not US citizens; Violations of the APA have occurred, as the quantity of requested takes were determined arbitrarily and

capriciously by underestimating outward sound propagation from vessels among other reasons, and by underestimating the Level A harassment takes that are occurring; and, violations of NEPA and APA for failure to prepare EIS assessing the cumulative impact of ITAs

FIRST CLAIM FOR RELIEF

Violation of the MMPA, 16 U.S.C. § 1371(a)(5)(D), (i), (I)

124. Plaintiffs hereby incorporate by this reference each paragraph and allegation set forth above.

125. The MMPA provides, as noted *supra*, 16 U.S.C. § 1371(a)(5)(D), (i), (I), that the prescribed activity must only take "small numbers of marine mammals" and such harassment can only have a "negligible impact on such species or stock."

126. The implementing regulations define "negligible" and "small numbers" as follows, pursuant to 50 CFR 18.27:

"Negligible impact is an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

"Small numbers means a portion of a marine mammal species or stock whose taking would have a negligible impact on that species or stock."

127. Cases interpreting these provisions, including analysis of legislative intent and history, such as Ctr. for Biological

Diversity v. Salazar, 695 F.3d 893 (9th Cir. 2012), have determined that the "small numbers" and "negligible" clauses are two separate and distinct standards. "Specifically, the "small numbers" determination focuses on the portion of a species or stock subject to incidental take, whereas the "negligible impact" analysis focuses on the impact of the anticipated take."⁶³

128. Therefore, the agencies issuing ITAs must "reasonably determine through some other means that the specified activity will result in take of only 'small numbers' of marine mammals. The Service can analyze 'small numbers' in relation to the size of the larger population, so long as the 'negligible impact' finding remains a distinct, separate standard."⁶⁴

129. As presented in paragraphs 25-26, the Act requires the assessment of cumulative impact in determining small numbers and negligible impact. The implementing regulations at 50 CFR 18.27(b)(3), regarding scope, include a note discussing "cumulative" impacts: "The information is being collected to describe the activity proposed and estimate the cumulative impacts of potential takings by all persons conducting the activity."

130. Hence, it's clear the intent of the statute is to assess the cumulative impacts of takings.

131. The Defendants are also required to implement the MMPA

⁶³ *Id.* at 906.

⁶⁴ *Id.* at 907.

using the “best scientific evidence available.” Said science demands the use of fact and mathematics. The fact is that the right whale is seeking to migrate while being assaulted from numerous vessel survey activities with noise levels that disturb its behavior. Each such disturbance carries a finite mathematical probability that that disturbance will result in serious harm or fatality. It is the sum of those probabilities that determines whether or not it can succeed in its essential migration, and therefore whether there is a non-negligible impact to the species.

132. Therefore, both the law and the facts demand a cumulative impact assessment, for the Defendant NMFS to act otherwise and to determine impact on a piecemeal basis is contrary to the MMPA and both arbitrary and capricious.

133. The cumulative impact of the issued, active ITAs for the coastal waters of the NJ/NY region is such that it violates the “small numbers” and “negligible impact” provisions of the MMPA.

134. The active ITAs granted by the Defendant total 182 takes of North Atlantic Right Whales.⁶⁵ The five pending ITAs⁶⁶ currently

⁶⁵ See *supra* note 2.

⁶⁶ https://media.fisheries.noaa.gov/2022-11/TerraSond_2022IHA_App_OPR1.pdf;

https://media.fisheries.noaa.gov/2022-03/OceanWind1OWF_2022_508APP_OPR1.pdf;

https://media.fisheries.noaa.gov/2022-09/AtlanticShoresOWF_2022_Application_OPR1.pdf;

https://media.fisheries.noaa.gov/2022-09/Empirewind_2024LOA_App_OPR1.pdf;

with Defendant will add an additional 229 takes of North Atlantic Right Whales.

135. The Defendant's webpage places the current population estimate of North Atlantic Right Whales at 350,⁶⁷ and not all migrate through NJ and NY coastal waters.

136. Thus, the 182 cumulative authorized takes of right whales, given a local population estimate of less than 350, can amount to more than 52% of the migrating population. If the pending ITAs are issued (229 more takes), that percentage will be even higher.

137. This is contrary to any reasonable interpretation or dictionary definition of "small numbers" or "negligible impact."

138. The Merriam-Webster definition of "negligible" is: "so small or unimportant or of so little consequence as to warrant little or no attention."⁶⁸ It is axiomatic that 52% of the migrating population of an endangered species is far more than negligible.

139. Similarly, the Merriam-Webster definition of "small" includes words such as: minor, trivial, of little consequence, and

https://media.fisheries.noaa.gov/2022-11/SunriseWind_2022ITR_App_PR1.pdf;

⁶⁷ North Atlantic Right Whale, NOAA Fisheries (Mar. 17, 2023), <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale#:~:text=Population%20Status,years%20has%20been%20below%20average>.

⁶⁸ Merriam-Webster, Definition of negligible, <https://www.merriam-webster.com/dictionary/negligible#:~:text=%3A%20so%20small%20or%20unimportant%20or,little%20or%20no%20attention%20%3A%20trifling>.

limited.⁶⁹ This runs contrary to a determination on the order of 52% of an endangered species.

140. Moreover, as to Humpback whales, the eleven active ITAs issued by Defendant off the NJ/NY coasts amount to 169 requested takes⁷⁰ of Humpback whales. Given a population size of 1,396, this yields takes amounting to 12.1% of the total population of Humpback whales. The five pending ITAs request takes of 782 additional Humpback whales. This yields 951 total, or $951/1,396 = 68.1\%$ of the population.

141. Even on an individual survey authorization basis, the

⁶⁹ Merriam-Webster, Definition of small, <https://www.merriam-webster.com/dictionary/small#:~:text=small%2C%20little%2C%20diminutive%2C%20minute,a%20relatively%20small%20backyard.>

⁷⁰ As ascertained from summing the Level B requested takes on each respective ITA application for the currently active/issued ITAs:

https://media.fisheries.noaa.gov/2022-08/OrstedNEHRG_2022IHA_App_OPR1.pdf;

https://media.fisheries.noaa.gov/2022-05/Vineyard%20Northeast%20LLC_HRG%20IHA%20Application%20508_OPR1_0.pdf;

https://media.fisheries.noaa.gov/2022-06/AttentiveEnergyNYBight_2022IHA_App_OPR1.pdf.pdf;

https://media.fisheries.noaa.gov/2022-06/AtlanticShoresBightHRG_2022PropIHA_App_OPR1.pdf;

https://media.fisheries.noaa.gov/2022-05/Park%20City%20Wind_App_508_OPR1_0.pdf;

https://media.fisheries.noaa.gov/2022-05/NEETMA_2022IHA_App_OPR1.pdf;

https://media.fisheries.noaa.gov/2022-03/OceanWind_2022IHA_App_OPR1.pdf;

https://media.fisheries.noaa.gov/2022-03/Orsted_2022IHA_app_OPR1.pdf;

https://media.fisheries.noaa.gov/2021-04/OceanWind_2021IHA_App_OPR1.pdf?null=;

https://media.fisheries.noaa.gov/2022-01/AtlanticShoresHRG_2022_App_OPR1.pdf;

https://media.fisheries.noaa.gov/2021-02/SouthForkWind_2021proposedIHA_App_OPR1.pdf?null=;

Defendant's threshold of one-third for "small numbers" is not supported scientifically nor consistent with case precedent. "A definition of 'small number' that permits the potential taking of as much as 12 percent of the population of a species is plainly against Congress' intent." NRDC v. Evans, 232 F. Supp. 2d 1003 (N.D. Cal. 2002).

142. The Defendant states in its authorizations that when the predicted number of individuals to be taken is less than one-third of the species or stock abundance, the take is considered to be "small numbers".⁷¹ This is extraordinarily high, particularly for a critically endangered whale, and we can find no support for it in the scientific literature, which suggests thresholds such as 2.5%⁷² and 1.0%.⁷³

143. Therefore, the case law and science supports a "small

⁷¹ 87 FR 40796, Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys off New Jersey by NextEra Energy Transmission MidAtlantic Holdings, LLC (July 8, 2022), <https://www.federalregister.gov/documents/2022/07/08/2022-14569/takes-of-marine-mammals-incidental-to-specified-activities-taking-marine-mammals-incidental-to>, "As such, NMFS considers that one-third of the most appropriate population abundance number—as compared with the assumed number of individuals taken—is an appropriate limit with regard to "small numbers."

⁷² A reasoned presentation of impact ratings based on severity and likelihood of occurrence by Wood, Southall, and Tollit can be found in Appendix H of the Pacific Gas and Electric report titled, Central Coastal California Seismic Imaging project, May 14, 2012. That analysis leads to, in Tables 3.3 and 3.4, a high severity rating for Level B takes greater than 2.5 percent of an Endangered Species Act (ESA)-listed regional minimum population. Combined with either a high or medium likelihood of occurrence in Table 3.5 that results in an overall high impact rating

⁷³ The final environmental assessment of a Marine Geophysical Survey (MATRIX) by the US Geological Survey in the Northwestern Atlantic Ocean, August, 2018, suggests on page 65 that for rare species, that one percent of the population size should be considered as a take limit.

number" criteria less than 12 percent, which even some of Defendant's individual ITAs would not meet. A level B take percentage of 33.3 percent is unsupported legally, mathematically and scientifically.

144. With respect to findings of negligible impact, the Biological removal rate for the right whale is less than one animal per year meaning that not one animal can suffer fatality from these activities, in order to sustain the population.

145. In the face of hundreds of level B takes, to reach such a negligible impact conclusion, the defendant would have to find that none of them resulted in such a fatality. Given all of the potential pathways to such an outcome described in paragraphs 87 through 105, such a conclusion would ignore numerous scientific studies and evidence, and be both arbitrary and capricious. And in fact, the defendant even on individual authorizations never reaches such conclusions with that confidence but only speaks to generalized expectations and anticipations.

146. Such a conclusion would conflict with the MMPA itself. If hundreds of Level B Takes to a critically endangered whale is innocuous, why does the law even require its assessment?

147. Additionally, given, as noted *supra*, the Defendant's underestimation of the maximum extent of spatial propagation of the noise emanating from survey vessels, and the uncertainty regarding subsequent negative impacts to whales, including the

potential for death (i.e., evidenced by the recent statistically significant increase in deaths), Defendant's ITAs cannot be said to unequivocally comport with the statutory directive prohibiting an "unmitigable adverse impact on the availability of such species." 16 U.S.C. § 1371(a)(5)(D),(i),(I).

148. Furthermore, as explained *supra*, the issued ITAs improperly determined, and significantly underestimated, the requested quantity of takes, due to reasons outlined by Dr. Robert Stern, such as, *inter alia*, underestimation of spatial extent of sound propagation.⁷⁴

149. Therefore, the ITAs were granted in contravention of the MMPA, 16 U.S.C. § 1371(a)(5)(D),(i),(I), since the cumulative effect of the ITAs, and even individual ITAs, will take more than a reasonably defined small number of the marine mammals, specifically North Atlantic right whales and Humpback Whales, and will have more than a negligible effect on the species. Defendant's determination of the number of takes was discordant with the statutory directive requiring only "small numbers" and "negligible

⁷⁴ See, Exhibit B, Dr. Robert Stern's analysis and letter to President Biden. The Defendant often cites a measurement study which shows that Defendant underestimates the magnitude/intensity of the source level noise from the vessel surveys. Moreover, Defendant uses an improper noise loss factor (20 decibels) which overestimates the extent of noise dissipation from the source. The end result is Defendant significantly underestimates the propagation range to the 140+ and 160+ decibel criteria from the source, noise which has been shown in studies to disturb whales (leading to many negative impacts, including death). As discussed *supra*, Defendant assumes a distance of 141 meters (slightly less than 1/10 mile) for Level B harassment noise. Dr. Stern's analysis finds such noise can propagate to 16-34 miles from the sound source.

impact.”

150. Separately and finally, Defendants also violate 16 U.S.C. § 1371(a)(5)(D)(i) by issuing ITAs (and considering pending ITAs) to certain foreign national companies, violating the clear statutory directive of (i), “Upon request therefor by citizens of the United States who engage in a specified activity . . . the Secretary may specify, the incidental, but not intentional, taking by harassment” Only U.S. citizens are afforded the legal ability to obtain ITAs. Of the eleven issued, active ITAs, and five pending, the following ITAs were requested by non-U.S. citizens, in part or whole: Orsted Wind Power North America, LLC,⁷⁵ Vineyard Northeast, LLC,⁷⁶ Ocean Wind I and II,⁷⁷ South Fork Wind, LLC⁷⁸ and Empire Offshore Wind, LLC.⁷⁹ These projects are all partially or wholly owned by foreign nationals, not U.S. citizens, in contravention of the MMPA.

SECOND CLAIM FOR RELIEF

⁷⁵ Danish State holds the majority of shares, <https://orsted.com/en/investors/shares>.

⁷⁶ Vineyard Wind is a joint venture between Avangrid of Connecticut and Copenhagen Infrastructure Partners of Denmark.

⁷⁷ These two ITAs were requested by Orsted of the Danish State, <https://oceanwindone.com/>, <https://us.orsted.com/news-archive/2021/06/ocean-wind-2#:~:text=%C3%98rsted%20Offshore's%20North%20American%20business,employs%20more%20than%20150%20people>.

⁷⁸ Owned by Orsted (Denmark) and Eversource (Connecticut), <https://southforkwind.com/>.

⁷⁹ Owned by British Petroleum (United Kingdom) and Equinor (Norway), <https://www.empirewind.com/>.

Violation of the APA

151. Plaintiffs hereby incorporate by this reference each paragraph and allegation set forth above.

152. The APA, at 5 U.S.C. § 706(2)(A) and (E) provides that agency action shall be held unlawful and set aside if it is "(A)arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;" and "(E)unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute."

153. In issuing the eleven active ITAs, and five pending ITAs with Defendant NMFS, the Defendant NMFS arbitrarily, capriciously and without substantial evidence, determined the number of requested takes. Defendant NMFS' requested takes were largely based upon incorrect noise loss factors emanating from the vessel source. Defendant NMFS has very frequently used, and even recommended, a different, more reasonable "practical" noise loss factor;⁸⁰ however, they do not employ the reasonable noise factor in connection with these ITAs. Defendant NMFS' significant underestimation of the maximum spatial extent of Level B harassment noise constitutes an arbitrary and capricious agency action. Defendant NMFS arbitrarily and without substantial evidence allows

⁸⁰ See, Exhibit B, Dr. Robert Stern's analysis and letter to President Biden.

wind energy companies to use a maximum spatial extent (from sound source) Level B harassment distance of 141 meters. Even considering the high number of requested takes in the ITAs (which violate the MMPA), such requested takes are greatly underestimated due to the above.

154. Moreover, and finally, the APA is violated because the Defendant NMFS arbitrarily, capriciously, and without substantial evidence, assumed virtually no Level A harassment takes would occur (as can be seen in all the approved and pending ITAs - little to no Level A takes were requested). This decision runs counter to the mountains of evidence, *supra*, on how exposure, especially cumulatively, to disturbance level noise can cause marine mammals to suffer many detrimental effects, including injury and death. The exponential increase in whale and dolphin deaths over recent months, in concert with all the evidence discussed *supra*, is clear evidence that Level A harassment takes are occurring (injury and even worse - death). Yet, virtually no Level A takes were requested in any of the approved and pending ITAs.

THIRD CLAIM FOR RELIEF

Violation of NEPA, 42 USCS § 4332(2)(C), and APA

155. Plaintiffs hereby incorporate by this reference each paragraph and allegation set forth above.

156. Pursuant to NEPA, 42 USCS § 4332(2)(C), and as

interpreted by case precedent, "In deciding whether a major federal action will 'significantly' affect the quality of the human environment, under § 102(2)(C) of the National Environmental Policy Act, the agency in charge, although vested with broad discretion, should normally be required to review the proposed action in the light of at least two relevant factors: (1) the extent to which the action will cause adverse environmental effects in excess of those created by existing uses in the area affected by it, and (2) the absolute quantitative adverse environmental effects of the action itself, including the cumulative harm that results from its contribution to existing adverse conditions or uses in the affected area."⁸¹

157. Moreover, agencies are not permitted to segment actions into individual pieces, rather, they must assess major federal actions cumulatively, "The Council on Environmental Quality regulations require that 'cumulative actions' be considered together in a single environmental impact statement. 40 C.F.R. § 1508.25(a)(2)."⁸²

158. Here, the Defendant NMFS' final agency action by way of issuing eleven individual ITAs off the New Jersey/New York coastlines constitutes a major federal action which significantly affects the quality of the human environment. As thoroughly

⁸¹ Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972).

⁸² Thomas v. Peterson, 753 F.2d 754 (9th Cir. 1985).

explained supra, the inordinate amount of requested takes of marine mammals, including mammals listed as endangered species (e.g., North Atlantic right whale) in the individual and cumulative ITAs, throughout the waters off NY/NJ, will satisfy both prongs of the "significantly affect" standard delineated by case precedent. The approved ITAs, and soon likely approval of pending ITAs, is causing adverse environmental effects in excess of those created by existing uses in the region (again, explained herein, passim). The final agency action has also resulted in quantitative adverse environmental effects, including cumulative harm, to marine mammals, especially dolphins and whales.

159. As such, Defendant NMFS was derelict in its statutorily imposed duty to assess the cumulative effects of a major federal action significantly affecting the quality of the human environment in an environmental impact statement, analyzing the cumulative effects of the eleven issued ITAs.

160. This lack of cumulative assessment in an environmental impact statement constitutes a violation of NEPA, 42 USCS § 4332(2)(C), and violation of the APA, 5 U.S.C. § 706(2)(A) and (E), as arbitrary and capricious agency action, and unsupported by substantial evidence.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs respectfully request that this Court:

(1) Enter an order reversing and setting aside National Marine Fishery Service's eleven active ITAs issued for the New Jersey and New York coastal regions as arbitrary, capricious, and contrary to law, including the Marine Mammal Protection Act and Administrative Procedures Act;

(2) Enjoin the Defendant NMFS from issuing the five pending ITAs as such ITAs are arbitrary, capricious, and contrary to law, including the Marine Mammal Protection Act and Administrative Procedures Act;

(3) Direct the Defendant NMFS to halt consideration of prospective ITAs concerning wind energy projects in the New York/New Jersey waters;

(4) Direct the Defendant NMFS to create an Advisory Board of acoustic and marine mammal specialists with sufficient independence to: (a) perform a thorough, transparent, investigation of the potential causes of the recent statistical anomaly of whale deaths; and, (b) develop noise impact estimation protocols for use in future IHAs and ITAs; (c) That if that Board finds that the vessel surveys are a plausible cause of the whale deaths, require the Defendant NMFS to submit to the Court a revised vessel survey program that includes measures to achieve the least practicable adverse impact on the species. Such measures could include the avoidance of surveys in primary whale migration

corridors during primary migration months and a data sharing Program among the different companies to avoid the need for multiple vessels gathering essentially the same data.

(5) Direct the Defendant NMFS to prepare an environmental impact statement assessing the cumulative impacts of the ITAs pursuant to NEPA.

(6) Award Plaintiffs' reasonable attorneys' fees and costs under the Equal Access to Justice Act; and

(7) Provide such other and further relief as the Court may deem just.

Dated: April 4, 2023

Respectfully submitted,

/s/ Thomas Stavola, Jr.

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SAVE LONG BEACH ISLAND

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CFACT Comments on proposed Atlantic Shores IHA

1 message

David Wojick <dwojick@craigellachie.us>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 5:34 PM

To: Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service

Attached please find CFACT's comments on the proposed Atlantic Shores IHA

If you have any questions please contact me at dwojick@craigellachie.us

My best regards,

David

David Wojick, Ph.D.
CFACT



CFACT Comments on proposed Atlantic Shores IHA.pdf
22K

To: Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service

From: Craig Rucker
President, CFACT
<https://www.cfact.org/>

April 28, 2023

Re NMFS proposal for Atlantic Shores Wind IHA at <https://www.federalregister.gov/documents/2023/03/30/2023-06594/takes-of-marine-mammals-incident-to-specified-activities-taking-marine-mammals-incident-to>

We respectfully submit the following comments on this proposal.

This proposal is premature because the Atlantic Shores Wind project has yet to be approved and may never be approved. Harassments should not be authorized for speculative projects.

Moreover the proposed survey area is enormously larger than the lease survey area, at roughly 2,300 square miles. There is nothing about the Atlantic Shores Wind project that supports such a huge survey area. There is no justification for this huge and potentially damaging survey.

This proposal requires a full scale Environmental Impact Assessment under NEPA. The proposal's cursory environmental impact assessment is far too simple. NMFS itself predicts that a great many marine mammals will be subjected to unsafe levels of survey noise. See <https://www.fisheries.noaa.gov/s3/2023-03/> AtlanticShoresHRG_2023_Proposed_IHA_OPR1.pdf

NOAA predicts the number of adverse impacts by species, but here are the large numbers by category:

42 Whales

2,534 Dolphins

142 Porpoises

1,472 Seals

Total = 4,190 adversely impacted marine mammals

Here is NOAA's basic argument: "...only Level B harassment is proposed for authorization, which NMFS expects would be of a lower severity, predominately in the form of avoidance of the sound sources that may cause a temporary abandonment of the location during active source use that may result in a temporary interruption of foraging activities for some species. NMFS does not expect that the proposed activity will have long-term or permanent impacts as the acoustic source would be mobile and would leave the area within a specific amount of time for which the animals could return to the area."

In short these thousands of large animals will get out of the way and come home when the survey is over, in a year or so. Apparently NMFS thinks this massive forced relocation is harmless. Here are two obviously harmful possibilities, among many.

First, the site is deliberately in a relatively low ship traffic area, surrounded by high traffic zones. This is one of the busiest ship traffic areas in the world. Being forced to relocate into higher

traffic areas is very likely to increase the incidence of fatal ship strikes. This effect can be modeled.

Second, moving this many animals into territory already occupied by similar animals should increase the population densities for each species. But the food supply remains the same, which could lead to food scarcity. This effect can be modeled.

The treatment of the severely endangered North Atlantic Right Whale is especially egregious. NOAA says this: "...the size of the survey area (5,868 km²) in comparison with the entire migratory habitat for the North Atlantic right whale (BIA of 269,448 km²) is small, representing 2.11 percent of the entire migratory corridor."

Right Whales migrate through the area twice a year, going between offshore Georgia and New England so the "corridor" is indeed large, but this is irrelevant. What is crucial is that the survey area is about 35 miles wide East to West and almost all of the migrating whales presently pass through this space. Thus the survey has the potential effect of blocking the migration, or at least seriously disrupting it, taking nearly 100% of the needed space not 2.11%.

Despite all of the above predicted and potential impacts, NOAA maintains that this proposed authorization is exempt from the environmental impact assessment requirements of NEPA. They specifically claim there is "no anticipated serious injury or mortality". They should anticipate a little harder. NEPA requires assessment if injury is reasonably likely. Injury and death certainly are reasonably likely here, potentially to supposedly protected marine mammals, including the severely endangered Right Whales.

Moreover, full scale NEPA Environmental Impact Assessment is not limited to cases of serious injury or mortality. Harassment itself is an adverse impact, plus there are the deleterious effects of harassment, none of which have been assessed. NMFS has extensive scientific resources and these need to be applied to modeling these effects. Such an analysis would also help resolve the issue of the role of offshore wind development in the recent whale deaths in the area.

For the reasons stated above we request that this proposed IHA (and any others for offshore wind projects) not be granted until a proper assessment has been done.

Respectfully submitted,

Craig Rucker



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of NJ and NY

1 message

Katie Finnegan <ktfinnegan4208@gmail.com>

Mon, May 1, 2023 at 8:11 AM

To: "itp.potlock@noaa.gov" <itp.potlock@noaa.gov>

Please see letter attached.

Kathryn Finnegan, President
DEFEND BRIGANTINE BEACH INC.
PO Box 562
Brigantine NJ 08203



OSWITAAtlanticShoresVesselSurveyRenewal.docx
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Save Long Beach Island, Inc.
www.SaveLBI.org

National Oceanic and Atmospheric Administration [RTID 0648–XC667] Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York.

To: Ms. Jolie Harrison, Chief
Permits and Conservation Division,
Office of Protected Resources,
National Marine Fisheries Service (NMFS)
Submitted via email to ITP.Potlock@noaa.gov.

April 22, 2023

Dear Ms. Harrison,

These comments are offered regarding the proposed renewal of the Atlantic Shores vessel survey activities on behalf of the Save Long Beach Island organization consisting now of over 5000 supporters, many of whom have a deep concern for the well-being of the marine mammals that inhabit or traverse our shores.

It is hard to express our disappointment that the NMFS would consider a simple renewal of this activity with no modifications to the noise devices and noise impact estimation protocols being used, its monitoring requirements or consideration of the cumulative impacts of other survey activities ongoing in the same geographical area.

As you know, we commented extensively on the proposed approval of the previous survey. Since the same problems exist here, those comments are largely repeated in Enclosure 1 with some updates. Also, in that Enclosure we point out- in italics- that the previous responses to our comments do not address the issues raised.

Now, further in the face of evidence that the multiple surveys being approved may in fact be the cause or a cause of the recent unprecedented spate of whale and dolphin deaths along the shore we find this NMFS action particularly arbitrary and disturbing. The responses from NMFS and others to this potential causation have been equally dismissive and disturbing.

Claims Being Made Regarding Vessel Surveys and Recent Whale and Dolphin Deaths.

The vessel survey approvals by the federal agency and a government sponsored study at the Woods Hole Oceanographic Institution show elevated noise only close to the vessel.

Response: both the recent approvals and that study use a high scientifically unsupported noise dissipation rate that was not used by the federal agency in other marine mammal Take authorizations. Using reliable, measured noise source levels, mainstream science noise dissipation factors, and baleen whale noise disturbance criteria, the elevated noise from these vessels extends miles, will disturb whale behavior and can lead to serious outcomes. The

vessel surveys therefore are a potential cause of the recent spate of whale and dolphin deaths, and the place and time coincidence of recent multiple vessels and whale deaths should be independently investigated.

Claim Made: There Is No Direct Evidence of Whale Deaths from The Vessel Surveys.

Response; “Direct” hearing damage is not the issue, but rather disturbance of the whale’s behavior at lesser noise levels compromising its noise-using capability and leading indirectly to serious harm and fatality. The post-mortem examinations do not often look for hearing damage and cannot detect whether noise was a precipitating factor in such outcomes. The agency reliance only on the examinations and the logic in concluding that there is no evidence of causation when that evidence is not looked for or does not exist frankly escapes us. The examinations cannot be relied on to determine whether the surveys are a cause, rather, a detailed investigation of the vessel locations, and the noise devices used at the times of the whale deaths, needs to be conducted.

Claim Made: There Have Been No Cases of Whale Deaths Associated with Seismic Surveys.

Response: actually, there have been many documented cases of whale strandings worldwide coincident with nearby seismic surveys using air guns and mid-frequency sonars, which create noise patterns similar to the sparker units used here. There are no cases recorded in the U.S. because the agencies and Stranding Centers here do not investigate the possible correlation of nearby seismic surveys with strandings.

The notion that prior studies of NAVY sonar coincident with whale strandings are totally incomparable to the noise devices used in seabed characterizations is false. The operational bandwidth (that is, the frequency ranges) of the devices used (e.g., Dura-Spark, Geo Source) by the wind energy companies operate in the same frequency ranges as the whales and dolphins at issue, thus destructively interfering with their hearing/communication, resulting in numerous avoidance behaviors which can and do lead to injury and death.

The Agency’s avoidance and obfuscation of the issue has forced us to take the matter to Court. Our complaint is included in Enclosure 2, and we request that you review it as well as part of our comments here. We believe it provides more than sufficient evidence and reason that the situation, at a minimum, warrants a thorough, independent investigation. We ask that the agency reconsider its refusal to conduct such an investigation, and to suspend the survey activities while it takes place.

Sincerely,

Bob Stern

Bob Stern, Ph.D., President
Save Long Beach Island Inc.

Enclosures 1 (Detailed Comments) and 2 (Court Complaint)



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores Offshore Wind IHA

1 message

H. Sterling Burnett <hsburnett@heartland.org>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Mon, May 1, 2023 at 4:52 PM

Per directions on NOAA's website below and attached are my public comments on the "Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York"

Comments on the 'Taking Marine Mammals Incidental to Marine Site Characterization Surveys off New Jersey and New York for Atlantic Shores Offshore Wind, LLC'

Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Springs, MD 20910
ITP.Potlock@noaa.gov

Submitted by H. Sterling Burnett, Ph.D.
Director of the Arthur B. Robinson Center on Climate and Environmental Policy
at The Heartland Institute

The National Marine Fisheries Service (NMFS) and the National Oceanic and Atmospheric Administration (NOAA) have issued a call for public comments on Atlantic Shores Offshore Wind's (ASOW) request to renew or extend its previously granted incidental harassment authorization (IHA) for North Atlantic Right Whales (NARW) and other marine mammals. There are two types of harassment recognized under 1994 amendments to the Marine Mammals Protection Act (MMPA);

- (Level A Harassment) has the potential to injure a marine mammal or marine mammal stock in the wild; or,
- (Level B Harassment) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering but which does not have the potential to injure a marine mammal or marine mammal stock in the wild.

During ASOW's application for an IHA in 2022, NOAA determined that ASOW's acoustic site characteristic survey would likely not result in Level A harassment, causing direct injury to protected species, particularly NARWs. It did, however, find Level B harassment was possible and allowed ASOW to potentially take, through Level B harassment, as many as 17 NARWs, amounting to approximately 4.62 percent of the population. In the IHA being considered for by NOAA now, for which these comments are being offered, NOAA has significantly scaled back the "Potential Incidental Take," of NARWs via Level B harassment to no more than 3 NARWs.

The NARW has been categorized as "Endangered," under the 1973 Endangered Species Act, since its inception. The NARW has also been categorized "depleted," under the 1972 Marine Mammals Protection Act, since it was enacted.

In ensuing years, despite the regulatory protections supposedly afforded by these two laws to the NARWs and millions of dollars spent on recovery efforts, NARW numbers have continued to decline, to the extent that there are only an estimated 350 whales in existence, with fewer than 100 of those being breeding females.

In 2021, the NMFS determined that the maximum Potential Biological Removal (PBR) standard—defined as "the maximum number of individuals, not including natural mortalities, that may be removed from a marine mammal stock while allowing the stock to reach or maintain its optimum sustainable population"—for the NARW to be 0.7 whales in any single year. In practical terms this means, according to the NMFS, NARWs cannot afford to suffer the loss of even a single whale above natural mortality due to any type of human cause. One additional whale death in a year makes it likely the endangered NARW species will inevitably slide to extinction.

Collisions with ships are the single biggest anthropogenic cause of death of NARWs.

The potential impacts of the ASOW on the NARW and other marine species protected by the ESA and/or the MMPA could be devastating. In combination with the other industrial offshore wind projects that the Biden administration is pushing for, as currently constituted the IHA for the ASOW could be tantamount to an extinction level event for the Right Whales. According to NOAA's own analysis, the survey site for ASOW is in the middle of or at the edges of NARWs' migration route and where they congregate seasonally. More recently, NOAA has determined some NARW's have a "continuous year-round right whale presence across their entire habitat range (for at least some individuals)."

The 2022 IHA for ASOW, which is lapsing, allowed the potential incidental take through harassment of approximately 243 times more NARWs than the NMFS has determined is safe under its maximum PBR if the whales are to recover to sustainable levels. The proposed Level B harassment authorization in ASOW's proposed IHA for 2023, although considerably lower than that 2022 IHA, still allows approximately 43 times more NARWs to be harassed, and thus potentially incidentally taken, than is safe if the whales are to recover. And, of course, ASOW is just one of many offshore wind projects conducting or proposing to conduct acoustic site characterization surveys at present in critical habitat, migration corridors, feeding grounds, and/or breeding areas for the NARW.

With these facts as background, it would be arbitrary and capricious for NOAA to approve the ASOW's proposed IHA as currently characterized.

During the survey, multiple ships will be traversing NARWs' migration route undertaking acoustic surveys. The NARW, like other whale species, is highly sensitive to sound, which they use to navigate and locate prey. Even if the sound does not directly harm the whales, which would require a Level A harassment approval would virtually guarantee to force the few remaining NARWs out of their critical migration routes and into one of the busiest shipping corridors in the world. Indeed, since the pandemic, the Port of New York and New Jersey has become the busiest in the nation.

This will make an already bad situation worse.

In addition, recent research has revealed a previously unknown threat that offshore wind farms, like the ASOW pose to the NARW. Numerical modeling indicates that the "wind wake" effect of offshore wind farms could dampen annual primary production in the area encompassed and beyond by the wind farms by as much or more than 10 percent. Less food for endangered whales is not a good thing. The same modeling indicates the offshore industrial wind projects slow ocean currents result in the decreased cycling of dissolved oxygen in the affect areas, resulting in low oxygen concentrations. Whales, being mammals, should not be directly affected by reduced oxygen concentrations, but their prey species and the food chain they rely upon for survival certainly would be.

More sound, more ships, and less food is a deadly combination for NARWs as well as other protected marine mammals.

Even if the whales somehow prove able to adapt to and tolerate the sound, it is almost certainly going to take time, time the whales don't have it the NMFS's determination concerning the safe number of human-caused NARW mortality per year, under 0.7 whales, is correct.

In conclusion, granting ASOW's IHA as currently proposed, allowing the Level B harassment and, thus, potential incidental take of three NARWs poses a clear and present danger to the continued survival of the species. Granting this IHA without further study would be arbitrary and capricious and open NOAA and ASOW to lawsuits challenging the IHA, if it is approved as currently proposed.

H. Sterling Burnett, Ph.D.
Director of the Arthur B. Robinson Center on Climate and Environmental Policy
Managing Editor, ECN
Heartland Institute
(214) 909-2368



Comments on Atlantic Shores Offshore Wind marine mammals take permit renewal (2).docx
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Comments on the ‘Taking Marine Mammals Incidental to Marine Site Characterization Surveys off New Jersey and New York for Atlantic Shores Offshore Wind, LLC’

Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Springs, MD 20910
ITP.Potlock@noaa.gov

*Submitted by H. Sterling Burnett, Ph.D.
Director of the Arthur B. Robinson Center on Climate and Environmental Policy
at The Heartland Institute*

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itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores Offshore Wind, LLC - IHA request - RODA comment

1 message

Mike Conroy <mike@rodafisheries.org>
To: ITP.Potlock@noaa.gov

Mon, May 1, 2023 at 8:39 PM

Hi Kelsey,

Attached, please find a comment letter submitted by the Responsible Offshore Development Alliance on the request from Atlantic Shores Offshore Wind, LLC (Atlantic Shores) for authorization to take marine mammals incidental to marine site characterization offshore of New Jersey and New York in the Bureau of Ocean Energy Management (BOEM) Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS) Lease Area OCS-A 0499 and OCS-A 0549 and associated export cable route (ECR) area.

If you could please send a quick reply acknowledging receipt of the attached, that would be much appreciated.

Thanks in advance and hope you have a great week.

MC

--

Mike Conroy
Responsible Offshore Development Alliance
562-761-7176
rodafisheries.org

**230501_IHA_AtlanticShores_RODA.pdf**
205K



Responsible Offshore Development Alliance

May 1, 2023

Jolie Harrison, Chief
Permits and Conservation Division
NMFS Office of Protected Resources
1315 East-West Highway
Silver Spring, MD 20910
Via email: ITP.Potlock@noaa.gov

Re: Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys in the New York Bight

Dear Ms. Harrison,

The Responsible Offshore Development Alliance (RODA) submits the following comments regarding the National Marine Fisheries Service (NMFS) incidental harassment authorization (IHA) to take marine mammals incidental to site characterization surveys requested by Atlantic Shores Offshore Wind, LLC (ASOW).¹ RODA is a national coalition of independent fishing businesses, associations, companies and community members committed to ensuring the compatibility of new offshore development with their businesses. Members of our coalition operate in federal and state waters and shoreside throughout the New England, Mid-Atlantic, and Pacific coasts.

There are two active Unusual Mortality Events for whales in the Atlantic region: the Atlantic Humpback Whale and the North Atlantic right whale (NARW).² At least 32 large whales and 38 small cetaceans have washed up on the Atlantic Coast between Dec. 1 and mid-April. While there is no conclusive evidence that recent whale deaths off the Atlantic Coast are related to activities supporting offshore wind (OSW) development,³ NMFS must diligently consider if authorization of additional harassment activities should be allowed, given the recent mortalities and active UMEs.

¹ 88 FR 19075 (March 30, 2023).

² See <https://www.fisheries.noaa.gov/national/marine-life-distress/active-and-closed-unusual-mortality-events> (Accessed Feb. 7, 2023).

³ See - <https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-life-distress/frequent-questions-offshore-wind-and-whales#what-is-the-cause-of-recent-whale-deaths-off-new-york-and-new-jersey?-is-it-related-to-offshore-wind-development?> (Accessed Feb 10, 2023)

Local elected officials have called for an immediate moratorium on activities in support of OSW development until scientists can assure the public that OSW activities do not pose threats to whales.⁴ Environmental groups are calling for similar federal action for a federal probe to better understand the recent whale deaths in the region.⁵ This necessarily requires full necropsies on any marine mammals which strand in the area and the release of those findings to the public. With increases in strandings coinciding with activities in support of OSW development, the public is rightfully concerned and asking questions. At a minimum, NMFS should soberly consider if additional authorization for Level B harassment should be permissible given the current circumstances.

Fishermen are extremely concerned about potential impacts to protected resources arising from the development of OSW facilities. The fishing industry has submitted numerous comments expressing concerns regarding the process for authorization of marine mammal takes in OSW activities, particularly: (1) in contrast to the strict regulations for marine mammal harassment and takes applied to the fishing industry; and (2) authorizations that are segmented throughout OSW project phases without a cumulative, holistic analytical approach. As you know, many Atlantic fisheries are severely constrained by regulations designed to minimize North Atlantic right whale (NARW) and other protected resource interactions, and any increase in take or harassment of these species will very likely result in further impacts to fishing operations.

Lack of Cumulative Effects Analysis and Segmented Process

Every phase of the OSW development process has the potential to impact marine mammals and other protected species. Each of the activities associated with pre-construction surveys, construction, operations, monitoring surveys, and decommissioning will require some type of permit or authorization for interaction with protected species. To our knowledge, there are no resources easily accessible to the public to understand what authorizations are required for each of these activities. This is detrimental not only to having a well-informed public who are then asked to provide comment and input, but suggests a lack of cumulative perspective of OSW development activities from numerous projects to our protected resources. **We recommend that NMFS improve the transparency of this process and move away from a segmented**

⁴ See Congressman Christopher Smith (NJ-4) - https://chrissmith.house.gov/uploadedfiles/2023-01-30_letter_to_secretary_raimondo.pdf; (Accessed Feb 10, 2023)
Congressman Jefferson Van Drew (NJ-2) - <https://vandrew.house.gov/media/press-releases/congressman-van-drew-demands-all-offshore-wind-activity-end-immediately-until> (Accessed Feb 10, 2023)

Twelve Jersey Shore mayors - <https://www.msn.com/en-us/news/us/12-jersey-shore-mayors-call-for-moratorium-on-offshore-wind-following-whale-deaths/ar-AA16UMg9> (Accessed Feb 10, 2023)

⁵ See - https://cleanoceanaction.org/fileadmin/editor_group1/Issues/Wind/Updated_Biden_Letter_and_IHA_Factsheet_Demanding_investigation_of_dead_whales.pdf (Accessed Feb 10, 2023)

phase-by-phase and project-by-project approach to IHAs.

The request submitted by ASOW is for one of the six lease sites in the New York Bight auctioned in February of 2022. ASOW is requesting to take, by Level B Harassment, a total of 4,190 marine mammals. A recent calculation showing a total of 53,345 requested takes of marine mammals by Level B Harassment in the following leases: OCS-A-482, OCS-A-486 & 487, OCS-A-498, OCS-A-499, OCS-A-501, OCS-A-508, OCS-A-517, OCS-A-519, OCS-A-521 and OCS-A-532. **This aggregated information should be made available to the public in an easily accessible format.**

Increased Uncertainty for Marine Mammal Surveys

The Bureau of Ocean Energy Management (BOEM) has previously determined that the effects on aerial survey coverage for marine mammals, including the North Atlantic Right Whale (NARW), will substantially impact NMFS' ability to continue using current methods to fulfill its mission of precisely and accurately assessing protected species stock status. This will result in an unacceptable level of uncertainty in protected resource management. It will also potentially result in an event that may otherwise be a "harassment" becoming a mortality event, if entanglement response is delayed, hampered, or made impossible and injured whales cannot be successfully disentangled. So too is the cessation of NMFS protected resource surveys a threat to climate science itself; assessment of protected resources and fish stocks over long time series is a key factor in understanding ecosystem health, function and shifts and responses to climate change.

Concerns Regarding Treatment of Whales in OSW Permitting

A major concern is the high amount of increased vessel traffic associated with the lease sites and WEAs throughout the region in areas transited or utilized by certain protected resources. BOEM has also estimated that construction of each future OSW project would require an additional 25-46 vessels per project operating in the proximal geographic area at any given time, and that up to four projects would be under construction at the same time in the next few years.⁶ This large increase in traffic would greatly increase the risk of ship strikes to protected and endangered species, including the critically endangered NARW. NMFS has stated that slowing down vessel traffic and reducing ocean noise, as well as reducing risks of entanglements are key to regulation and management plans. However, vessel speed restrictions are not fully mandated or enforced for OSW vessels.

While this federal notice is for site characterization activities, it is important to point out that associated increases in vessel noise could contribute to the suite of ongoing stressors impacting the NARW population. Noise has been found to interfere with right whale communication and increase their stress levels. In turn, "females that undergo energetic stress from reproduction may

⁶ Vineyard Wind SEIS, p. 3-111.

be more susceptible than males to dying from chronic injuries such as those from entanglement or vessel strikes.”⁷ Noise from human activities, such as that which would occur with activities associated with wind energy surveys, installation and operation of the proposed project, can disrupt normal behavior of NARWs and may further reduce their ability to identify physical surroundings, find food, navigate, and find mates. In a letter to BOEM dated May 13, 2022, the Chief of Protected Species of NOAA’s Northeast Fisheries Science Center noted “[t]he development of offshore wind poses risks to” the NARW.⁸

The Marine Mammal Commission (MMC) has raised several concerns on other proposed IHAs for OSW development. As they are more knowledgeable on impacts of pile driving and acoustics to marine mammals, we defer to their expertise and recommend NMFS fully review the concerns identified in their public comments.⁹ In particular, MMC cites poor analyses such as underestimation of harassment takes from impact and vibratory pile driving, noise, insufficient and incomplete monitoring measures and reporting requirements. As identified, those issues may result in costly closures or strict management restrictions for fisheries. We urge NMFS to use the best available science including the most comprehensive models for estimating marine mammal take and developing robust mitigation measures.

On September 9, 2020, seventeen environmental NGOs submitted a public comment letter outlining several concerns and recommendations related to the IHA for site characterization surveys required for OSW projects. Again, we defer to their expertise but echo their concerns regarding: a) the lack of sufficient data and observations of NARWs and other protected species in the WEAs and associated cable routes that are not sufficiently described by the models used by NMFS, b) the failure to take a cumulative look at take and harassment as there are numerous areas to be developed and each project will submit an IHA, c) the untested proposed mitigation and insufficient monitoring measures intended to minimize impacts to protected species, and d) no long term monitoring plans for marine mammals and protected species. This coalition provided concrete recommendations for improving mitigation measures for surveys, including: (1) to incorporate additional data sources including real-world observational data into calculations of marine mammal density and take; (2) not adjust take numbers downward for large whales based on unproven mitigation measures; (3) require mitigation measures that meet the least practicable adverse impact standard; and (4) strengthen its vessel speed restrictions. We urge NMFS to ensure that each of these important topics raised by whale experts are fully addressed.

Fishermen Will be Affected by Any Protected Resource Take

⁷ See <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale>. (Accessed Feb 10, 2023)

⁸ See - https://newbedfordlight.org/wp-content/uploads/2022/11/UR1-2023-000009_10_17_2022.pdf. (Accessed Feb 10, 2023)

⁹ RODA has cited these comments in previous comment letters.

Negative impacts to local fishermen and coastal communities as a result of a potentially adverse impacts to marine mammals (e.g. vessel strike resulting in death or severe injury) are not mentioned nor evaluated in the IHA request for this project, and should be included in a comprehensive analysis. The lack of an adequate analysis of individual and cumulative impacts to these protected mammal species is concerning, given that fishermen are already highly restricted in their ability to harvest due to NARWs protections.

The entire fishing industry pays the price to protect highly migratory NARWs, not just those closest to the project area. An impact to NARWs off the South Atlantic will result in impacts to fisheries in Maine, impacts in Cape Cod Bay, impact fishermen in Southern New England, and so on. These reverberating impacts are not addressed in this request.

Robust Mitigation and Clarified Accountability Measures

RODA is appreciative of the efforts OSW developers, NMFS, and others have conducted to develop and adopt mitigation measures to minimize construction impacts to marine mammals. However, the adequacy of these measures, as all information provided to the government by interested private parties, requires robust independent review. For example, multiple studies exist suggesting that Passive Acoustic Monitoring (PAM) has limited success in detecting NARWs due to their infrequent vocalization. The effectiveness of visual observation in detecting NARW is similarly uncertain, particularly since at-sea conditions rarely meet ideal standards (i.e. crew breaks, rough seas, location of spotter vessels, low light, or other factors that limit visual detection). We encourage NMFS to evaluate the proposed IHA with utmost care utilizing the best available science. Similarly, the proposed IHA requires two protected species observers (PSOs) to be on duty during nighttime operations. Significant questions arise regarding the ability to differentiate cetaceans of similar size during nighttime activities. **We recommend a 500m Exclusion Zone for ALL marine mammals during nighttime hours.**

Mitigation measures in this IHA request include marine mammal shutdown zones, specific to the activity and marine mammal present in the survey area. For the NARW, the shutdown zone of 500 meters. Even in the most favorable weather conditions, it can be difficult to spot a whale when it is roughly a third-of-a-mile away. In inclement weather, this can be much more so. Because observations will determine if survey activity may commence and/or continue in these zones, further clarification should be included in the IHA that explicitly states if weather or other conditions that limit the range of observation will initiate a shutdown zone.

Atlantic Shores is required to report any discovery of an injured or dead marine mammal to NMFS as soon as feasible. Upon receiving such notification, a scientist with expertise in marine mammals should be deployed to the mammal to gather samples that may provide insights to the cause of the injury or death. The FAQ on Necropsies of Marine Mammals cautions that “the quality of necropsy results can depend on the amount of decomposition in the animal, so timely reporting may allow Network members to conduct a necropsy before a carcass decomposes too

much.”¹⁰

If there is a ship strike of a marine mammal by any vessel involved in the activities covered by the IHA, Atlantic Shores must report the incident to NMFS as soon as feasible. We recommend Atlantic Shores also be required to notify the United States Coast Guard via VHF Channel 16 for the safety of other mariners in the area.

Fundamental questions still remain regarding what happens if harm exceeds the threshold under the proposed IHA: what can be done if take or harassment surpasses expected levels? Can a project realistically stop after taxpayers have spent billions of dollars on its development? Fisheries are subject to accountability measures by law – up to and including cessation of all activity – if scientifically-based catch limits are exceeded. What accountability measures will apply to ensure that OSW developers are likewise responsible for their own impacts, and the burdens of those are not also assigned to fishermen, should they occur?

Possible one-year renewal

NMFS also seeks comments on a possible one-year renewal IHA that could be issued under certain circumstances and if all requirements are met. The requirements all seem centered on the activities described in the Description of the Proposed Activity and Anticipated Impacts section of the notice. Perhaps it is implied; but the permit should not be renewed if there are takes not authorized by the notice - Level A or takes of species not contemplated in the IHA. Similarly, if there is new information gathered during this IHA period showing equipment utilized in conducting high-resolution geophysical (HRG) marine site characterization surveys is causing harm to marine mammals, additional scrutiny will be placed on subsequent request to renew this, or any, IHA.

The fishing industry wants to see the protection of marine mammals and protected species and thus asks that NMFS consideration of IHAs and LOAs for offshore wind developers be applied fairly. First and foremost to protect the marine ecosystems upon which we all rely. Secondly, the OSW industry must be accountable for incidental takes from construction and operations separately from the take authorizations for managed commercial fish stocks. Lastly, there must be a clear IHA threshold for OSW activities regionally and across project phases. With dozens of projects conducting surveys, construction, operation, and decommissioning now and in the next 30+ years, there appears to be no forward-looking plan to address all this new activity that poses a threat to marine mammals and protected species.

¹⁰ See -

<https://www.fisheries.noaa.gov/national/marine-life-distress/frequent-questions-necropsies-animal-autopsies-marine-mammals#How%20You%20Can%20Help>

Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Conroy".

Mike Conroy, West Coast Director

A handwritten signature in blue ink, appearing to read "Lane Johnston".

Lane Johnston, Programs Manager
Responsible Offshore Development Alliance



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Clean Ocean Action comments: Docket Number: RTID 0648-XC667,

1 message

Kari Martin (Clean Ocean Action) <KMartin@cleanoceanaction.org>

Mon, May 1, 2023 at 11:09 PM

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Cc: "Cindy Zipf (Clean Ocean Action)" <Zipf@cleanoceanaction.org>, "Kari Martin (Clean Ocean Action)" <KMartin@cleanoceanaction.org>

Please find attached Clean Ocean Action's comments regarding **Agency/Docket Number: RTID 0648-XC667, "Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York for Atlantic Shores Offshore Wind."**

Please confirm receipt of these comments and contact Clean Ocean Action with any questions regarding our comments.

Sincerely,

Kari Martin

Advocacy Campaign Manager

Clean Ocean Action

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May 1, 2023

Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

**RE: Taking Marine Mammals Incidental to Marine Site Characterization Surveys
Offshore of New Jersey and New York for Atlantic Shores Offshore Wind, Agency/Docket
Number: RTID 0648-XC667**

Dear Chief Harrison:

Clean Ocean Action (“COA”) is a regional, broad-based coalition of conservation, environmental, fishing, boating, diving, student, surfing, women’s, business, civic, and community groups with a mission to improve the water quality of the marine waters off the New Jersey/New York coast. COA submits the following comments to the National Oceanic and Atmospheric Administration’s (“NOAA”) National Marine Fisheries Service (“NMFS”) in opposition to the request for an Incidental Harassment Authorization (“IHA”) from Atlantic Shores Offshore Wind (henceforth, the “Applicant”) for marine characterization surveys for offshore wind (“OSW”) energy power plants off the coast of New Jersey.

From the outset, the Bureau of Ocean Energy Management (“BOEM”) recently acknowledged that there is no permitting authority for renewable energy geotechnical and geophysical surveys and activities. This is shocking and deeply concerning, especially due to the extent and frequency of these preconstruction activities off the NY/NJ coast, as well as off other states’ coasts. Further, numerous companies are receiving Incidental Take Authorizations that allow the harassment of tens of thousands of marine mammals.

According to the “Draft IHA” by NMFS for the Applicant, “This IHA authorizes take incidental to marine site characterization surveys offshore of New Jersey and New York, as specified in Atlantic Shores’ IHA application, in “BOEM” Lease Areas OCS-A-0499 and OCS-A0549 and associated export cable routes (ECR) area.”¹ The Applicant proposes to “take” by Level B Harassment **4,190 marine mammals** of 15 different species including the following endangered species: 2 Sperm whales, 6 Fin whales, 3 North Atlantic right whales (“NARW”), and 2 Sei

¹ Federal Register, Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York, publication date: 3/30/2023, <https://www.federalregister.gov/documents/2023/03/30/2023-06594/takes-of-marine-mammals-incidental-to-specified-activities-taking-marine-mammals-incidental-to>

whales. Per the Marine Mammal Protection Act (“MMPA”), other federally protected whales included in the Applicant’s take amounts include 24 Minke whales, 5 Humpback whales, and notably 2,317 common bottlenose dolphins, and 1,472 seals, as well as other protected dolphins and porpoise species.

The Applicant’s proposed marine site characterization surveys include high-resolution geophysical (HRG) sources. According to the Applicant’s IHA application, “NOAA Fisheries has advised that sound-producing survey equipment operating below 180 kHz has the potential to cause both Level A and/or Level B acoustic harassment to marine mammals (pers comm. Benjamin Laws, NOAA Fisheries, 2021b).” Also, the Applicant notes in the IHA request that “the sparkers and non-impulsive, nonparametric sub-bottom profilers generate the sound with characteristics that have the potential to result in the non-lethal take of exposed marine mammals.”²

NOAA Fisheries assumes the success of mitigation measures by stating, it “has also confirmed that Level A harassment is not expected with the use of mitigation measures and advised Atlantic Shores not to calculate Level A takes in IHA applications for HRG surveys (pers comm. Benjamin Laws, NOAA Fisheries, 2021a).” What if mitigation measures fail? What if mitigation measures are not enough to prevent harassment to marine mammals during the survey work? How and when would it be determined that additional harassment is occurring, and work must stop?

In sum, COA requests that NMFS deny this IHA request because it:

- (1) is an incomplete evaluation due to the lack of new information and new protection strategies under development by federal agencies, particularly for the critically endangered North Atlantic right whale (“NARW”),
- 2) would allow thousands of Level B takings of endangered, threatened, and/or protected marine mammal species, including the NARW, which will have significant and more than “negligible” impacts on a species on the precipice of extinction;
- (3) will unacceptably add impacts to the already detrimental cumulative impacts of the numerous IHA requests from the Applicant’s previous activities and projects in the region, as well as by other offshore wind industry companies’ previous, current, and forthcoming Incidental Take Authorizations for preconstruction, construction, operation, and decommissioning of offshore wind facilities, and
- (4) raises other issues of importance, including lack of fairness, transparency, and accountability.
- (5) fails to address the cumulative impacts and effects of previous pre-construction surveys and construction activities in the region.

COA also notes that this application to “take” nearly 4,200 marine mammals is in addition to the Applicants’ numerous previous IHA authorizations for preconstruction work related several offshore wind power plants off the NJ/NY coast. Indeed, it appears there are no NMFS limits to

² Atlantic Shores Offshore Wind Request for an Incidental Take Authorization to Bureau of Ocean Energy Management, Communication, December 21, 2021, https://www.fisheries.noaa.gov/s3/2023-03/AtlanticShoresHRG_2023_Proposed_App_OPR1.pdf.

the allowance of incidental take impacts from the current application as well as for the full scope of pending OSW proposals as provided by the NMFS:

*By 2030 the Northeast large marine ecosystem will be occupied by over 2.4 million acres of leases, 3,400 turbines, and 10,000 miles of submarine cables; and an additional 5.7 million acres is also under consideration for further development.*³

It is impossible for marine mammals to adapt to such massive industrial scope and scale of offshore wind development with each project at minimum causing the excessive impacts described by just one applicant's project. The Applicant's request is for "the incidental Level B harassment of small numbers of marine mammals during site characterization surveys, including high resolution geophysical ("HRG") sources."⁴ The activities described in the application have been documented to result in species harassment, hence the need for incidental take authorizations.

The mission of the NOAA NMFS Office of Protected Species is "responsible for the protection, conservation, and recovery of more than 160 endangered and threatened marine and anadromous species under the Endangered Species Act. The goal of the ESA is to conserve these species and the ecosystems they depend on."⁵ The government is obligated to provide assessments of the potential and real marine ecosystem impacts, and then stipulate policies and regulations to avoid and reduce negative impacts and ensure appropriate and meaningful mitigation of the unavoidable impacts. This also requires, at minimum, a fair, comprehensive, and independently reviewed pilot project for this unproven, large-scale industry in US waters. Indeed, this also requires sound science supported by robust baseline ecological assessments and independent and peer-reviewed studies which are currently planned, only just begun, or underway and incomplete.

Instead, the government is fast-tracking projects, including Atlantic Shores' multiple projects. This project, for which this application is being considered, is a designated federal "Fast-41 project." In 2015, "the Fixing America's Surface Transportation Act (FAST Act) was signed into law. Title 41 of this Act (42 U.S.C. § 4370m et seq.), referred to as 'FAST-41,' created a new governance structure, set of procedures, and funding authorities to improve the Federal environmental review and authorization process for covered infrastructure projects."⁶ However, fast-tracking projects is not protective of marine species. The government's fast-tracking of this proposed massive ocean industrialization is inconsistent with good governance of public

³ Andy Lipsky, NOAA Fisheries. "Fisheries, Wildlife, and Ecosystem Science in a New Era of Offshore Wind Energy Development." NOAA Ecosystem Based Management and Ecosystem Based-Fisheries Management Seminar Series, March 9, 2022, <https://www.youtube.com/watch?v=Dh7yBEDHzL8>.

⁴ Atlantic Shores Offshore Wind Request for an Incidental Take Authorization to Bureau of Ocean Energy Management, Communication, December 21, 2021, https://www.fisheries.noaa.gov/s3/2023-03/AtlanticShoresHRG_2023_Proposed_App_OPR1.pdf.

⁵ National Oceanic & Atmospheric Administration, "About Us: Office of Protected Resources," as seen on 12/9/2022, <https://www.fisheries.noaa.gov/about/office-protected-resources>

⁶ United States Government, "Permitting Dashboard," Federal Infrastructure Projects, as seen 12/9/2022, <https://www.permits.performance.gov/documentation/fast-41-fact-sheet>

resources, the precautionary principle, and most importantly, laws including the Endangered Species Act (“ESA”). From the outset:

Section 7(a)(2) of the ESA requires BOEM, in consultation with NOAA Fisheries, to ensure that any action the agencies authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered species or result in the destruction or adverse modification of designated critical habitat; this coordination is accomplished through ESA section 7 consultations. BOEM and NOAA Fisheries are required by the ESA to use the best scientific and commercial data available when carrying out these consultations.⁷

Further, COA notes that this IHA request is for two separate offshore wind energy projects: Atlantic Shores 1 and 2 and the associated export cable areas. Considering the physical, biological, and chemical complexities of the ocean environment, the locations of these projects, as well as the differing review timelines for the two projects, the IHA requests should be submitted and reviewed separately. The combination of these IHA requests into one suggests it is a fast-tracking technique to move quickly toward approval and construction of these facilities.

It is unacceptable to be moving forward with incidental take authorizations at the current scope and scale of offshore wind energy development without sound science, transparency, due diligence, and meaningful public engagement. Clean Ocean Action urges NMFS to reject the Applicant’s IHA for marine site characterization surveys for Atlantic Shores’ offshore wind power plants for the reasons outlined below in these comments.

I. Deny and Rescind all Applicant’s IHA Authorizations and requests due to: A.) the Five-Year Strategy to Protect NARW under development, B.) Lack of Basic Research About Impacts to Large Whales, C.) Unprecedented number of whale deaths occurring in a short period of time along the NJ/NY coast starting in December 2023.

A. Five-Year Strategy to Protect NARW is Under Development

The Bureau of Ocean Energy Management (“BOEM”) and NOAA Fisheries’ “Draft North Atlantic Right Whale and Offshore Wind Strategy” (hereafter “Draft Strategy”) was proposed for public review but has not yet been finalized. This five-year protection plan for the North Atlantic right whale (“NARW”), while flawed and incomplete, is currently under development and stipulates the dire status of the NARW and need for additional protection. To ensure the best chance of survival, incidental take authorizations for Atlantic Shores 1 & 2 must be halted until the strategy is complete and measures to avoid, minimize or eliminate harm are determined so they can be applied to this project.

The NARW is one of the most critically endangered species. Based on the population status, the outlook for the survival of the NARW is grim, especially with new threats, including offshore

⁷ NOAA Fisheries, “Section 7: Types of Endangered Species Act Consultations in the Greater Atlantic Region,” as seen 4/30/2023, <https://www.fisheries.noaa.gov/insight/section-7-types-endangered-species-act-consultations-greater-atlantic-region>.

wind energy development. The NMFS' last five-year review of the NARW, published in 2017, notes that the species' population grew from 270 to 483 whales between 1990 and 2010; but the number of individuals remaining declined to 440-458 by 2017.⁸ The 2017 five-year review further notes that NMFS declared an unusual mortality event ("UME") under the Marine Mammal Protection Act ("MMPA") in August 2017 after 15 known NARW deaths occurred within a four-month span. The NARW population has continued to decline. In October 2021, the North Atlantic Right Whale Consortium announced that just 336 individual NARWs remain.⁹ The Draft Strategy affirms this dire status in Section 2.3 where it states:

*"The potential biological removal (PBR) level for the species, defined as the maximum number of animals that can be removed annually while allowing the stock to reach or maintain its optimal sustainable population level, is less than 1 (Hayes et al. 2022)."*¹⁰ (Emphasis added)

To be clear, ***not one*** of the remaining NARW can be lost, an unambiguous and stern statement. It goes on to state: "The species has low genetic diversity, as would be expected based on its low abundance, and the species' resilience to future perturbations is expected to be very low (Hayes et al. 2018)."¹¹ This information suggests that harassments can have population impacts and must be avoided or significantly reduced to protect the NARW population. These types of "perturbations" would likely trigger Level B Harassment impacts. Thus, for the protection of the NARW, all industrial full-scale construction for offshore wind energy should be paused until the federal agencies determine how best to eliminate or avoid all impacts, Level A or B, on the NARW.

B. Lack of Basic Research About Impacts to Large Whales

There is a lack of basic research of the impacts of offshore wind energy development on large whale species in U.S. waters, particularly in the mid-Atlantic region. It is reckless to move forward without the scientific baseline assessments for what harm may or could occur to whales, before issuing any permits and authorizations, including IHAs.

1. Failure to include crucial scientific assessments and consultations

In a May 2022 letter obtained under the Freedom of Information Act by Bloomberg Law, Dr. Sean Hayes, PhD, Chief of Protected Species, NOAA NEFSC, clearly documents and confirms the NARW's fragile hold on existence. First, the Chief of Protected Species notes that there are

⁸ North Atlantic Right Whale (*Eubalaena glacialis*) 5-year Review: Summary and Evaluation, NATL. MARINE FISHERIES SERV. GREATER ATLANTIC REGIONAL FISHERIES OFFICE (2017), <https://www.fisheries.noaa.gov/resource/document/5-year-review-north-atlantic-right-whale-eubalaena-glacialis> [hereafter "2017 5-Year Review"].

⁹ H.M. Pettis, et al., *North Atlantic Right Whale Consortium 2021 Annual Report Card: Report to the North Atlantic Right Whale Consortium* (2022), https://www.narwc.org/uploads/1/1/6/6/116623219/2021report_cardfinal.pdf.

¹⁰ U.S. Department of Interior Bureau of Ocean Energy Management and U.S. Department of Commerce National Oceanic and Atmospheric Administration NOAA Fisheries, *Draft BOEM and NOAA Fisheries North Atlantic Right Whale and Offshore Wind Strategy*. October 2022, page 5.

¹¹ See *id.*

less than 350 remaining NARW animals.¹² Again, COA notes, the Draft Strategy states that **not one** animal can be lost.

Looking later in the development phases of OSW facilities, the letter from Dr. Hayes states:

*The development of offshore wind poses risks to these species, which is magnified in southern New England waters due to species abundance and distribution. These risks occur at varying stages, including construction and development, and include increased noise, vessel traffic, habitat modifications, water withdrawals associated with certain sub-stations and resultant impingement/entrainment of zooplankton, changes in fishing effort and related potential increased entanglement risk, and oceanographic changes that may disrupt the distribution, abundance, and availability of typical right whale food (e.g., Dorrell et al 2022).*¹³

It is clear that any further disturbance of the NARW species will have an impact on this critically endangered species. Some scientists estimate that the species will go extinct within 20 years with current threats.¹⁴

2. Threats to Marine Mammal Health & Survival

The threats to marine mammals, including NARW, from OSW energy development include:

*negative impacts to whale habitat which may take the form of development, pollution, noise, overfishing, and climate change. Shipping channels, aquaculture, offshore energy development, and recreational use of marine areas may destroy whale habitat or displace whales which would normally use the area. Oil spills and other chemical pollutants are also a threat to whales and the prey which they feed on.*¹⁵

Offshore wind, in the current proposed scale, scope, and magnitude significantly added to the threats to marine mammals, including noise, vessel strikes, and impacts to prey.

Access to food sources for large whales is essential. The importance of the waters off New Jersey as feeding grounds for all marine mammals is increasing.

It is documented that North Atlantic right whales are in the region are in the project region and area at all times of the year. Recent data from WhaleMap and the Mid-Atlantic Ocean Data Portal indicate an abundance of NARWs off the NJ coast throughout the year¹⁶. Further, a Right

¹² Letter from Sean A. Hayes, PhD, Chief of Protected Species, NOAA NEFSC, to Brian R. Hooker, Lead Biologist Bureau of Ocean Energy Management, Office of Renewable Energy Programs, dated May 13, 2022.

¹³ See *id.*

¹⁴ Pennisi, Elizabeth. "The North Atlantic right whale faces extinction." Science, November 7, 2017, <https://www.science.org/content/article/north-atlantic-right-whale-faces-extinction>.

¹⁵ Conserve Wildlife Foundation of New Jersey, "New Jersey Endangered and Threatened Species Field Guide: North Atlantic Right Whale," as seen 12/9/2022, <http://www.conservewildlifenj.org/species/fieldguide/view/Eubalaena%20glacialis/>

¹⁶ See <https://whalemap.org>; <https://portal.midatlanticocean.org>.

Whale Slow Zone southeast of Atlantic City was effective in December 2021¹⁷. According to the Conserve Wildlife Foundation of New Jersey:

*Within the western North Atlantic Ocean, right whales feed during spring, summer, and fall in temperate and subpolar latitudes near eastern Canada and the northeastern U.S. During the winter, many individuals from this population can be found off the northeast coast of Florida and Georgia, their breeding and calving grounds. Some right whales, however, may remain at their northern feeding grounds during the winter.*¹⁸

Other studies concur finding “year round presence of right whales in the mid-Atlantic (Whitt et al Atlantic. This may indicate that right whales are present in the mid-Atlantic more often than previously believed.”¹⁹

The Applicant’s activities will also increase the number of vessels in the ocean in the project area, leading to an increased threat of harm by vessel strikes to marine mammals. Specifically, “collisions with ships are an increasing threat to right whales...Right whales are especially slow-moving, compared to other large whales, and therefore more susceptible to being struck by ships.”²⁰ COA urges NMFS to specifically assess the cumulative impacts on marine mammals, particularly the NARW, from all the vessels associated with the Applicant’s projects as well as other offshore wind projects proposed or underway in this region.

3. Excessive Takes of Marine Mammals

Under the Marine Mammal Protection Act (“MMPA”), citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region may request authorization for incidental, but not intentional, takes of “**small numbers**” (*emphasis added*) of marine mammals pursuant to that activity for a period of no more than five years.²¹ The NMFS, which has been delegated the authority to administer the relevant legal framework, may allow takes under the MMPA only if the agency determines that the total number of authorized incidental takes during the five-year period will have a “negligible impact” on the relevant species or stock.²² “Negligible impact” is, in turn, defined as an impact that is not reasonably likely or expected to “adversely affect the species or stock through effects on annual rates of recruitment or survival.”²³ Finally, the applicable legal framework distinguishes between “Level A” takes and “Level B” takes. In the context of offshore wind energy development and related

¹⁷ National Oceanic & Atmospheric Administration, Fisheries, “Extension of Right Whale Slow Zone Southeast of Atlantic City, NJ.” As seen, 11/15, 2022:

<https://content.govdelivery.com/accounts/USNOAAFISHERIES/bulletins/2fef565>.

¹⁸ Conserve Wildlife Foundation of New Jersey, “New Jersey Endangered and Threatened Species Field Guide: North Atlantic Right Whale,” as seen 12/9/2022,

<http://www.conservewildlifenj.org/species/fieldguide/view/Eubalaena%20glacialis/>

¹⁹ New York State Department of Environmental Conservation, “Species Status Assessment,” as seen 12/9/2022, https://www.dec.ny.gov/docs/wildlife_pdf/sgcnnatrightwhale.pdf.

²⁰ Conserve Wildlife Foundation of New Jersey, “New Jersey Endangered and Threatened Species Field Guide: North Atlantic Right Whale,” as seen 12/9/2022,

<http://www.conservewildlifenj.org/species/fieldguide/view/Eubalaena%20glacialis/>

²¹ 16 U.S.C. § 1371(a)(5)(A)(i).

²² *Id.* § 1371(a)(5)(A)(i)(I).

²³ 50 C.F.R. § 18.27(c).

activities, “Level B harassment” refers to “any act of pursuit, torment, or announcement which has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.”²⁴ “Level A” takings, on the other hand, refer to “any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild.”²⁵

a) COA rejects the numbers proposed in the application as “Small”

The number of takes in this application for Atlantic Shores 1 & 2 and associated cable export areas is **4,190 marine mammals**. These take numbers are not “small;” however, of greater concern is the cumulative impacts of all the projects concurrently under siting and characterization, construction, and operation, and later, decommissioning. The take numbers are outrageous and fail to meet the legal requirements for mammal protection, much less for endangered species.

North Atlantic Right Whales

The harm that offshore wind energy development may inflict upon NARWs throughout site assessment, construction, and operation, is widely recognized.²⁶ Offshore wind projects will significantly exacerbate the existing threats posed to NARWs by ship collisions and entanglements. With such low population numbers, and, as noted earlier, based on the recommendation by a federal scientist that not one NARW can be lost, cumulative impacts must be considered for NARWs and other endangered species.

Moreover, the impacts of activities that may be authorized for the proposed IHA will compound those that already occurred under the terms of the Applicant’s previous IHAs for site characterization, assessment, and construction. Moreover, the aforementioned sum must be considered alongside other takes of marine mammal species, including the critically endangered NARWs, that NMFS has authorized for other wind activities along the species’ migratory range from North Carolina to Maine. Such authorizations include those for site characterization, assessment, and construction activities that are simultaneously occurring for offshore wind energy development lease sites.

Currently, there are **14 Active Incidental Take Authorizations** (for marine site characterizations) and **15 “in process” Incidental Take Authorizations** (for marine site characterizations and construction) for offshore wind projects from Maine to South Carolina. It is also important to note that this IHA by Atlantic Shores Offshore Wind’s request follows **four** previous IHA applications to take marine mammals for Atlantic Shores 1 and 2 projects and precedes the future take authorizations needed for construction and operation, as well as decommissioning.

²⁴ 16 U.S.C. § 1362(18).

²⁵ *Id.*

²⁶ See Conservation Law Foundation, et al., *Strong Mitigation Measures Are Essential to Protect the North Atlantic Right Whale During All Phases of Offshore Wind Energy Development* (Feb. 2022), https://www.nrdc.org/sites/default/files/narw-mitigation_feb2022.pdf; Vineyard Wind – NGO Agreement (Jan. 22, 2019), <https://www.nrdc.org/sites/default/files/vineyard-wind-whales-agreement-20190122.pdf>.

Of all species under consideration in this application, the NARW population is the most susceptible to even the slightest harm. Also, COA notes that vessel strikes pose one of the largest threats to NARWs. According to NOAA, “vessels of nearly any size can injure or kill a right whale²⁷.” For accountability and fairness, how and who will determine which vessel struck a NARW or other species if that should happen? Especially given the threat posed to NARWs as a species by even one instance of a vessel collision, and the existence of NARW in the project area, NMFS should reject/deny the Applicant’s request.

In addition, noise is a significant threat to the survival of whales:

Noise pollution created by ship traffic or offshore construction may negatively impact whales by disrupting otherwise normal behaviors associated with migration, feeding, alluding predators, rest, breeding, etc. Any changes to these behaviors may decrease survival, simply by increasing efforts directed at avoidance of the noise and the perceived threat.²⁸

A growing source of noise pollution that interferes with NARWs’ most vital social functions is offshore wind-related activities. More specifically, low frequency noise from large ships involved in offshore wind-related activities overlaps with the acoustic signals used by right whales. These large whales rely on sound to breed, navigate coastlines, and find food. Right whales communicate with one another by making calls, which can cover distances of more than 20 miles.²⁹ The calls let whales stay in touch, share information about food, help mates find each other, and keep groups together while traveling.

Rising levels of ocean noise are interfering with whales’ ability to communicate. Anthropogenic noise interferes with their ability to eat, mate, and navigate; therefore, it is essential to their survival that these sounds travel the ocean undisturbed.³⁰ North Atlantic right whales have been observed increasing their call amplitude with the rise of background noise, and noise pollution has been correlated with an increase in stress-related fecal hormone metabolites.³¹

b. Excessive Takes of Other Marine Mammal Species, including Endangered & Threatened

Clean Ocean Action finds the variety of species and total number of individual Level B takes proposed by the Applicant unsupportable. The Applicant’s request is for the “incidental, but not

²⁷ See *id.*

²⁸ Conserve Wildlife Foundation of New Jersey, “New Jersey Endangered and Threatened Species Field Guide: North Atlantic Right Whale,” as seen 12/9/2022, <http://www.conservewildlifenj.org/species/fieldguide/view/Eubalaena%20glacialis/>

²⁹ Woods Hole Oceanographic Institution, “Right Whales,” as seen 11/15/2022, <https://www.whoi.edu/know-your-ocean/ocean-topics/ocean-life/marine-mammals/right-whales/>.

³⁰ National Oceanic & Atmospheric Administration, Fisheries, “North Atlantic Right Whale,” as seen 11/15/2022, <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale>.

³¹ *North Atlantic Right Whale 5-Year Review*, NOAA FISHERIES SERV. NE. REG’L OFFICE 11-12 (Aug. 2012), http://www.nmfs.noaa.gov/pr/pdfs/species/narightwhale_5yearreview.pdf

intentional, take”³² of a small number of 15 marine mammal species by Level B harassment. Further, COA draws attention to the 2,317 Level B takes of the Common bottlenose dolphins that the Applicant seeks to harass. Bottlenose dolphins are highly social, and arguably the most recognized and beloved small cetacean.³³ In addition to their inherent value to the American public, the dolphins are an increasingly important driver of economic growth for tourism and related industries.³⁴ The cumulative impact of harassing thousands of bottlenose dolphins may be considerable and irreversible, but these impacts are not considered in the application as currently proposed. Likewise, missing from the application is consideration of how the identified MMPA-protected species will be affected by the ecosystem changes that will necessarily occur when nearly thousands of marine mammals are harassed or taken within a short timeframe, especially given the unique importance of bottlenose dolphins for keeping their ecosystem in balance.³⁵ How can NMFS justify the taking this number of the coastal bottlenose dolphins, or any animal for that matter, for construction of one private company’s offshore wind projects? These shortcomings merit the rejection of the Applicant’s IHA request.

Furthermore, COA strongly encourages NMFS to reject the application due to deficiencies in its analysis concerning the proposed activities’ effects on harbor seals. Frequently spotted along both the East and West Coasts of the U.S., harbor seals are known for resting on floating ice with their head and rear flippers elevated in a “banana-like” position, leading to their popularity with excited winter beach-goers.³⁶ Besides their wide recognition among the American public, harbor seals also play a major role in maintaining balance in marine food webs as well.³⁷ Despite the unique importance of this species, however, COA maintains there is not sufficient baseline information about how harbor seals use the waters at the Applicant’s lease sites to conclude that the activities covered by the application will have a negligible impact on harbor seals. More specifically, a COA employee attended a virtual “Science Saturday” event in early 2022 at which a representative of the New Jersey Department of Environmental Protection (“NJDEP”) indicated that, to date, no one has tracked harbor seals to understand the species’ pre-construction use of offshore wind energy lease areas off the NJ coast.³⁸ This admission strongly

³² Federal Register, Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York, publication date: 3/30/2023, <https://www.federalregister.gov/documents/2023/03/30/2023-06594/takes-of-marine-mammals-incidental-to-specified-activities-taking-marine-mammals-incidental-to>

³³ *Common Bottlenose Dolphin*, MARINE MAMMAL CENTER (visited Feb. 28, 2022), <https://www.marinemammalcenter.org/animal-care/learn-about-marine-mammals/cetaceans/common-bottlenose-dolphin>.

³⁴ *The Economic of Marine Mammals*, MARINE MAMMAL COMMISSION (visited Feb. 28, 2022), <https://www.mmc.gov/priority-topics/value-marine-mammals/>.

³⁵ *Bottlenose Dolphins: Our Smart, Sociable Friends of the Sea*, WORLD WILDLIFE FUND UK (visited Feb. 28, 2022), <https://www.wwf.org.uk/learn/wildlife/dolphins#:~:text=Dolphins%20play%20an%20important%20role,have%20as%20much%20to%20eat>.

³⁶ *Harbor Seal*, NATL. MARINE FISHERIES SERV. (visited Feb. 28, 2022), <https://www.fisheries.noaa.gov/species/harbor-seal>.

³⁷ *Seals*, INTL. FUND FOR ANIMAL WELFARE (visited Feb. 22, 2022), <https://www.ifaw.org/animals/seals#:~:text=As%20one%20of%20the%20keystone,%2C%20polar%20bears%2C%20and%20sharks>.

³⁸ “Science Saturday: Offshore Wind,” LONG BEACH ISLAND FOUNDATION OF ARTS AND SCIENCES (Feb. 19, 2022). Specifically, the NJDEP representative identified the tracking of harbor seals off the NJ coast to understand their use

suggests that decisionmakers do not yet have sufficient information about the role of these lease areas in harbor seals' life-cycles to substantiate the numbers of harassments expected to occur by this application. With this in mind, the Applicant requests the taking of 736 harbor seals and 736 gray seals, both by Level B takes, for a harassment total of 1,472 seals. With so little baseline information available about seals and their use of the project area and waters off New Jersey, NMFS should therefore reject this IHA application.

C. Unprecedented number of whale deaths occurring in a short period of time along the NJ/NY coast starting in December 2023.

Especially in light of the NARW's critically endangered status, the ongoing Unusual Mortality Event that this species is experiencing and, consequently, the existential threat posed to the species by obstacles to even one individual's survival, the best scientific literature cannot justify harassing even one of the 336 remaining individuals in a short timeframe for the Applicant's activities. Harassing one NARW is not negligible; it is significant. This is particularly true upon consideration of the multitude of additional NARW takings that the Applicant will be pursuing for the construction, operation, and decommissioning phases of its projects. Notably, the Applicant is already seeking an Incidental Take Regulation and association Letter of Authorization for marine mammal takes due to construction activities for projects.³⁹ Again, not one NARW can be lost, as previously noted.

Further, according to reports of dead marine mammals to Clean Ocean Action to date, 13 whales and at least two dozen dolphins and porpoises have washed ashore dead in the NY/NJ region since December 2022. COA, along with members of the public, including over 356,000 citizens, have called for a pause in any offshore shore wind related activities until an investigation is conducted on the potential causes of the whale and dolphin deaths. Based on the NMFS list of impacts caused by offshore wind, which includes noise and ship strikes, it is plausible that the preconstruction offshore wind activities can be connected with these marine mammal deaths and must be thoroughly investigated.

In response to this request, NMFS, BOEM and Marine Mammal Commission have denied a possible link; however, no evidence has been presented to detail these findings by the agencies, to date. Following the denials, these agencies stated that the whale deaths were due to increased ship strikes and increased whale populations in the region. However, no substantiating data was provided on either alleged cause. Can the NMFS provide studies and evidence that whales are increasing in the region during the winter?

It should be noted that less than 50% of the whales had evidence of ship strikes, and ship strikes do not necessarily determine cause of death. Whales may have been hit after death or been

of lease areas prior to the construction of offshore wind turbines as a project concept that NJDEP is currently considering.

³⁹ Federal Register, "Taking Marine Mammals Incidental to the Atlantic Shores Offshore Wind Energy Projects Offshore of New Jersey; Extension of Public Comment Period," Publication date: 10/28/2022, <https://www.fisheries.noaa.gov/action/incidental-take-authorization-atlantic-shores-offshore-wind-llcs-site-characterization>.

impaired by another cause, and then secondarily hit by a ship. Also, due to their erratic and frequent activity, survey ships should not be discounted as a cause without evidence.

To fact check the increased shipping narrative, COA reviewed the data from the Port Authority of NY/NJ Twenty Equipment Unit (TEU) data, which shows commerce was down over 20% in December, when whales first started frequently washing-up, and commerce declined about 25% to date from January - March of 2023.⁴⁰ Therefore, it is not accurate to say increased shipping was the definitive cause of ship strikes on whales during this time.

II. Other Issues of Importance, including Lack of Fairness, Transparency, and Accountability

The COA concerns discussed in the previous section is not exhaustive; as the MMPA recognizes, every marine mammal is important, and the effects of the proposed activities on other species—including those that are also actively included in the recent unprecedented whale deaths and the Unusual Mortality Events, such as the North Atlantic right whale and humpback whale—should encourage NMFS to demand more baseline data and severely restrict the Applicant’s authorized takes for the activities in question. COA consequently urges NMFS to reject and deny the Applicant’s IHA request.

Further, a serious issue of concern is a lack of accountability. Again, as referenced above,

*By 2030 the Northeast large marine ecosystem will be occupied by over 2.4 million acres of leases, 3,400 turbines, and 10,000 miles of submarine cables; and an additional 5.7 million acres is also under consideration for further development.*⁴¹

Never has an ecosystem been under such massive industrial development pressure and impact over a span of less than decade. Given this unimaginable and unprecedented scope and scale of industrial offshore wind development in the Northeast region, and off the New Jersey and New York coasts in particular, NMFS must provide clarity and due process *now* for the determination of accountability. At what point will there be too many accumulated Level A and Level B harassments from offshore wind energy development or other activities? What are the guardrails to determine how many takes will be too many? How will NMFS distinguish between impacts, such as those from the wind industry as compared to those from other shipping traffic, especially as wind facilities are built-out and marine life and ships are concentrated into more narrow corridors? Who will be responsible and how will the accountability be managed? How will the number of takes be lowered over time to address the additional, cumulative stress to marine life? Or will it be?

⁴⁰ The Port Authority of New York and New Jersey, “Facts and Figures,” as seen 4/30/2023, <https://www.panynj.gov/port/en/our-port/facts-and-figures.html>.

⁴¹ Andy Lipsky, NOAA Fisheries. “Fisheries, Wildlife, and Ecosystem Science in a New Era of Offshore Wind Energy Development.” NOAA Ecosystem Based Management and Ecosystem Based-Fisheries Management Seminar Series, March 9, 2022, <https://www.youtube.com/watch?v=Dh7yBEDHzL8>.

On another matter, how will population dynamics be measured as species populations decline from stress or injury from offshore wind development? Or food scarcity as migratory fish populations move or as fish structure changes? Or will the agencies simply place blame on “climate change” as a catch-all to lower populations of marine mammals? How many marine mammals can be harassed and injured before the populations, and associated ecosystems, collapse, all for the current unfounded benefits of the new offshore wind energy industry? How many takes, for individual projects or requests or cumulatively, are too many? The current process by which takes are evaluated must include cumulative impacts to populations from all incidental take requests and authorizations. These questions and issues, among others, must be addressed at the outset to ensure transparency and accountability for the impacts to the living marine ecosystem from this wholesale, rapid industrial development of the ocean.

Further, numerous IHAs have already been issued, and ITRs and NOAs will be forthcoming for the construction of many offshore wind energy projects. The extensive offshore activities for which these authorizations were approved are underway along the entire coast of New Jersey and offshore. It is essential that systems are in place to monitor for impacts from these activities in these areas. Impacts must be documented and fully investigated to inform forthcoming incidental take requests and authorizations. Monitoring reports are not enough. It is necessary for on-the-ground independent scientists and response teams to be in the areas under included in incidental take authorization areas to monitor for impacts so immediate response or investigation can occur.

As an example, on December 5, 2022, an infant endangered Sperm Whale washed-up on the beach in Keansburg, NJ.⁴² Thankfully, volunteers at the Marine Mammal Stranding Center were able to be on the scene. Given that massive, large-scale offshore wind project activities are already underway in this region, an organization charged with responding to an endangered marine mammal incident should be fully funded by the state and federal agencies to collect the animal, if possible, or be provided the means to conduct a thorough and immediate investigation, including a comprehensive necropsy, to determine that cause of death. The investigation should include what, if any, offshore wind energy related activities, or other offshore activities, were ongoing within the window of time the animal was potentially impacted. An immediate response and thorough investigation of such incidents is necessary to ensure accountability and the protection of marine mammal species.

Of further note, COA protests the double standard that has developed for the offshore wind industry when it comes to protecting marine mammals. COA acknowledges the importance of reducing other common harms to NARWs and other marine mammals, such as entanglements and vessel strikes, but these efforts to help the species will be of limited benefit if they coincide with an increased tolerance for other activities that torment and annoy these invaluable creatures. The noise, electromagnetic fields, and drilling associated with offshore wind development and the site characterization activities that precede them, as well as the construction, operation, and decommissioning activities that are forthcoming, must be treated as the serious and amplifying threats to the NARW, and other marine mammals, that they are—no different than

⁴²Radel, Dan. “Infant 12-foot sperm whale washes up dead on Keansburg beach.” Asbury Park Press, 12/5/2022. <https://www.app.com/story/news/local/animals/2022/12/05/keansburg-nj-infant-sperm-whale-washes-up-dead-beach/69703142007/>

entanglements or vessel strikes. NMFS should seize the opportunity to set a strong precedent for protecting NARWs and all whales by denying the Applicant's IHA request.

Finally, it recently became apparent that there is no legal authority for permitting offshore geotechnical and geophysical survey activities under BOEM. According to the recently proposed BOEM Renewable Energy Modernization Rule:

Although BOEM requires a lessee to submit the results of certain surveys to BOEM in order to obtain approval of its COP, those regulations do not require BOEM's approval of a permit for such surveys. Instead, BOEM has provided guidance on conducting such surveys ^[49] and also includes terms and conditions in renewable energy leases that require lessees to submit survey plans to BOEM for review in advance of their survey activities.^[50] BOEM's review of the plans, while not an approval process, does provide BOEM an opportunity to communicate with lessees to ensure the lessees' survey results will meet BOEM's information needs and to ensure certain environmental conditions are met in conducting the surveys.⁴³

This also speaks volumes about the unprecedented allowance of survey activity off the New Jersey/New York with no apparent oversight, limitation, or coordination. Given this, it raises more questions about how it is possible that BOEM definitively asserted without question that there is absolutely “no evidence” that offshore wind preconstruction survey activities had any connection to the unprecedented number of dead whales that recently washed-up on beaches in the NY/NJ region. It is now clear there are no regulations; there are no “rules of the road” regarding survey work. Without such regulations, how can BOEM possibly make such a definitive claim? Is the only requirement for survey vessels currently under the Marine Mammal Protection Act (“MMPA”) requiring IHA authorizations, which are limited in scope?

Indeed, COA agrees with the Delaware Department of Natural Resources and Environmental Control which stated, “*permit-based mechanism to regulate surveys would help limit the number of surveys occurring in an area at any given time to reduce the potential for ship strikes to marine mammals and sea turtles, as well as minimize impacts to the fishing industry.*”⁴⁴ Of course, it is imperative that the survey activities be governed, managed, and regulated; however, COA is conflicted about how and by which agency would be best suited for regulating the activities. Given the National Marine Fisheries Service already has some regulatory authority under the Marine Mammal Protection Act, and has responsibility under the Endangered Species Act, fisheries and marine life protection, the NMFS should oversee governance of surveys. Rules must be established to ensure activities are regulated including compliance rules and enforcement requirements. Oversight and enforcement measures must be unequivocal and given the vastness of the ocean, systems must be electronic, tamper-proof and nonnegotiable. Allowance for the lessees to be responsible for compliance is unacceptable as they will lead to

⁴³ Federal Register, “Renewable Energy Modernization Rule,” Bureau of Ocean Energy Management, Interior, Publication Date 1/30/2023.

⁴⁴ Letter to BOEM Office of Regulations from Shawn M. Garvin, Secretary of the Delaware Department of Natural Resources and Environmental Control, RE: Request for Comments on notice of Proposed Rulemaking for Renewable Energy Modernization Rule (FDMS Docket No. BOEM-2023-0005). Not dated.

short cuts and non-compliance. This lack of permitting for geotechnical and geophysical survey activities is concerning and raises more questions in the context of Incident Take Authorizations, including the Applicant's current IHA request.

III. Conclusion

In sum, COA urges the NMFS to reject and deny the Applicant's request for an IHA for preconstruction activities associated with Atlantic Shores 1, Atlantic Shores 2, and the associated export cable areas. It is clear the Applicant's activities would cause an unacceptable number of Level B harassments of extremely at-risk and endangered North Atlantic right whales, as well as other marine mammal species, including other federally protected whales, dolphins, porpoises, and seals.

The activities in question are reasonably likely or expected to adversely affect NARWs—both individuals and the stock as a whole—through effects on the species' annual rates of recruitment and survival; this impact cannot reasonably be merely minimal or negligible. It is imperative that NMFS engage in all means possible to avoid harassment and harm to all the uniquely significant species protected by the MMPA, especially the NARW, and protect ecosystems.

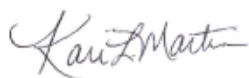
In addition, the cumulative impacts from all incidental take requests and authorizations for offshore wind projects in the same region, as well as for other uses, must be considered when reviewing each application for "takes" of marine mammal species. The total takes for all species affected must be considered alongside takes that NMFS has authorized for other wind activities including for site characterization, assessment, and construction activities (and later, operation and decommissioning activities) that are simultaneously occurring in the region and migration areas.

For the foregoing reasons, COA strongly urges NMFS to deny the request for an Incidental Harassment Authorization from Atlantic Shores Offshore Wind for the Atlantic Shores 1 and Atlantic Shores 2 projects, as well as the associated export cable routes. Should you have any questions or would like to further discuss the concerns that COA has identified above, please feel free to contact us.

Respectfully submitted,



Cindy Zipf
Executive Director



Kari Martin
Advocacy Campaign Manager



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Re: Atlantic Shores Offshore Wind IHA

1 message

H. Sterling Burnett <hsburnett@heartland.org>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Tue, May 2, 2023 at 10:21 AM

I apologize but I need to correct my comments. If the correction can't be accepted, let the original ones stand:

Comments on the 'Taking Marine Mammals Incidental to Marine Site Characterization Surveys off New Jersey and New York for Atlantic Shores Offshore Wind, LLC'

Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Springs, MD 20910
ITP.Potlock@noaa.gov

Submitted by H. Sterling Burnett, Ph.D.
Director of the Arthur B. Robinson Center on Climate and Environmental Policy
at The Heartland Institute

The National Marine Fisheries Service (NMFS) and the National Oceanic and Atmospheric Administration (NOAA) have issued a call for public comments on Atlantic Shores Offshore Wind's (ASOW) request to renew or extend its previously granted incidental harassment authorization (IHA) for North Atlantic Right Whales (NARW) and other marine mammals. There are two types of harassment recognized under 1994 amendments to the Marine Mammals Protection Act (MMPA);

- (Level A Harassment) has the potential to injure a marine mammal or marine mammal stock in the wild; or,
- (Level B Harassment) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering but which does not have the potential to injure a marine mammal or marine mammal stock in the wild.

During ASOW's application for an IHA in 2022, NOAA determined that ASOW's acoustic site characteristic survey would likely not result in Level A harassment, causing direct injury to protected species, particularly NARWs. It did, however, find Level B harassment was possible and allowed ASOW to potentially take, through Level B harassment, as many as 17 NARWs, amounting to approximately 4.62 percent of the population. In the IHA being considered for by NOAA now, for which these comments are being offered, NOAA has significantly scaled back the "Potential Incidental Take," of NARWs via Level B harassment to no more than 3 NARWs.

The NARW has been categorized as "Endangered," under the 1973 Endangered Species Act, since its inception. The NARW has also been categorized "depleted," under the 1972 Marine Mammals Protection Act, since it was enacted.

In ensuing years, despite the regulatory protections supposedly afforded by these two laws to the NARWs and millions of dollars spent on recovery efforts, NARW numbers have continued to decline, to the extent that there are only an estimated 350 whales in existence, with fewer than 100 of those being breeding females.

In 2021, the NMFS determined that the maximum Potential Biological Removal (PBR) standard—defined as "the maximum number of individuals, not including natural mortalities, that may be removed from a marine mammal stock while allowing the stock to reach or maintain its optimum sustainable population"—for the NARW to be 0.7 whales in any single year. In practical terms this means, according to the NMFS, NARWs cannot afford to suffer the loss of even a single whale above natural mortality due to any type of human cause. One additional whale death in a year makes it likely the endangered NARW species will inevitably slide to extinction.

Collisions with ships are the single biggest anthropogenic cause of death of NARWs.

The potential impacts of the ASOW on the NARW and other marine species protected by the ESA and/or the MMPA could be devastating. In combination with the other industrial offshore wind projects that the Biden administration is pushing for, as currently constituted the IHA for the ASOW could be tantamount to an extinction level event for the Right Whales.

According to NOAA's own analysis, the survey site for ASOW is in the middle of or at the edges of NARWs' migration route and where they congregate seasonally. More recently, NOAA has determined some NARW's have a "continuous year-round right whale presence across their entire habitat range (for at least some individuals)."

The 2022 IHA for ASOW, which is lapsing, allowed the potential incidental take through harassment of approximately 24 times more NARWs than the NMFS has determined is safe under its maximum PBR if the whales are to recover to sustainable levels. The proposed Level B harassment authorization in ASOW's proposed IHA for 2023, although considerably lower than that 2022 IHA, still allows approximately 4.3 times more NARWs to be harassed, and thus potentially incidentally taken, than is safe if the whales are to recover. And, of course, ASOW is just one of many offshore wind projects conducting or proposing to conduct acoustic site characterization surveys at present in critical habitat, migration corridors, feeding grounds, and/or breeding areas for the NARW.

With these facts as background, it would be arbitrary and capricious for NOAA to approve the ASOW's proposed IHA as currently characterized.

During the survey, multiple ships will be traversing NARWs' migration route undertaking acoustic surveys. The NARW, like other whale species, is highly sensitive to sound, which they use to navigate and locate prey. Even if the sound does not directly harm the whales, which would require a Level A harassment approval would virtually guarantee to force the few remaining NARWs out of their critical migration routes and into one of the busiest shipping corridors in the world. Indeed, since the pandemic, the Port of New York and New Jersey has become the busiest in the nation.

This will make an already bad situation worse.

In addition, recent research has revealed a previously unknown threat that offshore wind farms, like the ASOW pose to the NARW. Numerical modeling indicates that the "wind wake" effect of offshore wind farms could dampen annual primary production in the area encompassed and beyond by the wind farms by as much or more than 10 percent. Less food for endangered whales is not a good thing. The same modeling indicates the offshore industrial wind projects slow ocean currents result in the decreased cycling of dissolved oxygen in the affect areas, resulting in low oxygen concentrations. Whales, being mammals, should not be directly affected by reduced oxygen concentrations, but their prey species and the food chain they rely upon for survival certainly would be.

More sound, more ships, and less food is a deadly combination for NARWs as well as other protected marine mammals.

Even if the whales somehow prove able to adapt to and tolerate the sound, it is almost certainly going to take time, time the whales don't have it the NMFS's determination concerning the safe number of human-caused NARW mortality per year, under 0.7 whales, is correct.

In conclusion, granting ASOW's IHA as currently proposed, allowing the Level B harassment and, thus, potential incidental take of three NARWs poses a clear and present danger to the continued survival of the species. Granting this IHA without further study would be arbitrary and capricious and open NOAA and ASOW to lawsuits challenging the IHA, if it is approved as currently proposed.

H. Sterling Burnett, Ph.D.
Director of the Arthur B. Robinson Center on Climate and Environmental Policy
Managing Editor, ECN
Heartland Institute
(214) 909-2368

From: H. Sterling Burnett
Sent: Monday, May 1, 2023 3:52:38 PM
To: ITP.Potlock@noaa.gov
Subject: Atlantic Shores Offshore Wind IHA

Per directions on NOAA's website below and attached are my public comments on the "Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York"

Comments on the 'Taking Marine Mammals Incidental to Marine Site Characterization Surveys off New Jersey and New York for Atlantic Shores Offshore Wind, LLC'

Jolie Harrison, Chief
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Collisions with ships are the single biggest anthropogenic cause of death of NARWs.

The potential impacts of the ASOW on the NARW and other marine species protected by the ESA and/or the MMPA could be devastating. In combination with the other industrial offshore wind projects that the Biden administration is pushing for, as currently constituted the IHA for the ASOW could be tantamount to an extinction level event for the Right Whales. According to NOAA's own analysis, the survey site for ASOW is in the middle of or at the edges of NARWs' migration route and where they congregate seasonally. More recently, NOAA has determined some NARWs have a "continuous year-round right whale presence across their entire habitat range (for at least some individuals)."

The 2022 IHA for ASOW, which is lapsing, allowed the potential incidental take through harassment of approximately 243 times more NARWs than the NMFS has determined is safe under its maximum PBR if the whales are to recover to sustainable levels. The proposed Level B harassment authorization in ASOW's proposed IHA for 2023, although considerably lower than that 2022 IHA, still allows approximately 43 times more NARWs to be harassed, and thus potentially incidentally taken, than is safe if the whales are to recover. And, of course, ASOW is just one of many offshore wind projects conducting or proposing to conduct acoustic site characterization surveys at present in critical habitat, migration corridors, feeding grounds, and/or breeding areas for the NARW.

With these facts as background, it would be arbitrary and capricious for NOAA to approve the ASOW's proposed IHA as currently characterized.

During the survey, multiple ships will be traversing NARWs' migration route undertaking acoustic surveys. The NARW, like other whale species, is highly sensitive to sound, which they use to navigate and locate prey. Even if the sound does not directly harm the whales, which would require a Level A harassment approval would virtually guarantee to force the few remaining NARWs out of their critical migration routes and into one of the busiest shipping corridors in the world. Indeed, since the pandemic, the Port of New York and New Jersey has become the busiest in the nation.

This will make an already bad situation worse.

In addition, recent research has revealed a previously unknown threat that offshore wind farms, like the ASOW pose to the NARW. Numerical modeling indicates that the "wind wake" effect of offshore wind farms could dampen annual primary production in the area encompassed and beyond by the wind farms by as much or more than 10 percent. Less food for endangered whales is not a good thing. The same modeling indicates the offshore industrial wind projects slow ocean currents result in the decreased cycling of dissolved oxygen in the affect areas, resulting in low oxygen concentrations. Whales, being mammals, should not be directly affected by reduced oxygen concentrations, but their prey species and the food chain they rely upon for survival certainly would be.

More sound, more ships, and less food is a deadly combination for NARWs as well as other protected marine mammals.

Even if the whales somehow prove able to adapt to and tolerate the sound, it is almost certainly going to take time, time the whales don't have it the NMFS's determination concerning the safe number of human-caused NARW mortality per year, under 0.7 whales, is correct.

In conclusion, granting ASOW's IHA as currently proposed, allowing the Level B harassment and, thus, potential incidental take of three NARWs poses a clear and present danger to the continued survival of the species. Granting this IHA without further study would be arbitrary and capricious and open NOAA and ASOW to lawsuits challenging the IHA, if it is approved as currently proposed.

H. Sterling Burnett, Ph.D.
Director of the Arthur B. Robinson Center on Climate and Environmental Policy
Managing Editor, ECN
Heartland Institute
(214) 909-2368



Comments on Atlantic Shores Offshore Wind marine mammals take permit renewal (2).docx

32K

Comments on the ‘Taking Marine Mammals Incidental to Marine Site Characterization Surveys off New Jersey and New York for Atlantic Shores Offshore Wind, LLC’

Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Springs, MD 20910
ITP.Potlock@noaa.gov

*Submitted by H. Sterling Burnett, Ph.D.
Director of the Arthur B. Robinson Center on Climate and Environmental Policy
at The Heartland Institute*

The National Marine Fisheries Service (NMFS) and the National Oceanic and Atmospheric Administration (NOAA) have issued a call for public comments on Atlantic Shores Offshore Wind’s (ASOW) request to renew or extend its previously granted incidental harassment authorization (IHA) for North Atlantic Right Whales (NARW) and other marine mammals. There are two types of harassment recognized under 1994 amendments to the Marine Mammals Protection Act (MMPA);

- (Level A Harassment) has the potential to injure a marine mammal or marine mammal stock in the wild; or,
- (Level B Harassment) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering but which does not have the potential to injure a marine mammal or marine mammal stock in the wild.

During ASOW’s application for an IHA in 2022, NOAA determined that ASOW’s acoustic site characteristic survey would likely not result in Level A harassment, causing direct injury to protected species, particularly NARWs. It did, however, find Level B harassment was possible and allowed ASOW to potentially take, through Level B harassment, as many as 17 NARWs, amounting to approximately 4.62 percent of the population. In the IHA being considered for by NOAA now, for which these comments are being offered, NOAA has significantly scaled back the “Potential Incidental Take,” of NARWs via Level B harassment to no more than 3 NARWs.

The NARW has been categorized as “Endangered,” under the 1973 Endangered Species Act, since its inception. The NARW has also been categorized “depleted,” under the 1972 Marine Mammals Protection Act, since it was enacted.

In ensuing years, despite the regulatory protections supposedly afforded by these two laws to the NARWs and millions of dollars spent on recovery efforts, NARW numbers have continued to decline, to the extent that there are only an estimated 350 whales in existence, with fewer than 100 of those being breeding females.

In 2021, the NMFS determined that the maximum Potential Biological Removal (PBR) standard—defined as "the maximum number of individuals, not including natural mortalities, that may be removed from a marine mammal stock while allowing the stock to reach or maintain its optimum sustainable population"—for the NARW to be 0.7 whales in any single year. In practical terms this means, according to the NMFS, NARWs cannot afford to suffer the loss of even a single whale above natural mortality due to any type of human cause. One additional whale death in a year makes it likely the endangered NARW species will inevitably slide to extinction.

Collisions with ships are the single biggest anthropogenic cause of death of NARWs.

The potential impacts of the ASOW on the NARW and other marine species protected by the ESA and/or the MMPA could be devastating. In combination with the other industrial offshore wind projects that the Biden administration is pushing for, as currently constituted the IHA for the ASOW could be tantamount to an extinction level event for the Right Whales. According to NOAA's own analysis, the survey site for ASOW is in the middle of or at the edges of NARWs' migration route and where they congregate seasonally. More recently, NOAA has determined some NARWs have a "continuous year-round right whale presence across their entire habitat range (for at least some individuals)."

The 2022 IHA for ASOW, which is lapsing, allowed the potential incidental take through harassment of approximately 24 times more NARWs than the NMFS has determined is safe under its maximum PBR if the whales are to recover to sustainable levels. The proposed Level B harassment authorization in ASOW's proposed IHA for 2023, although considerably lower than that 2022 IHA, still allows approximately 4.3 times more NARWs to be harassed, and thus potentially incidentally taken, than is safe if the whales are to recover. And, of course, ASOW is just one of many offshore wind projects conducting or proposing to conduct acoustic site characterization surveys at present in critical habitat, migration corridors, feeding grounds, and/or breeding areas for the NARW.

With these facts as background, it would be arbitrary and capricious for NOAA to approve the ASOW's proposed IHA as currently characterized.

During the survey, multiple ships will be traversing NARWs' migration route undertaking acoustic surveys. The NARW, like other whale species, is highly sensitive to sound, which they use to navigate and locate prey. Even if the sound does not directly harm the whales, which would require a Level A harassment approval would virtually guarantee to force the few remaining NARWs out of their critical migration routes and into one of the busiest shipping corridors in the world. Indeed, since the pandemic, the Port of New York and New Jersey has become the busiest in the nation.

This will make an already bad situation worse.

In addition, recent research has revealed a previously unknown threat that offshore wind farms, like the ASOW pose to the NARW. Numerical modeling indicates that the "wind wake" effect of offshore wind farms could dampen annual primary production in the area encompassed and

beyond by the wind farms by as much or more than 10 percent. Less food for endangered whales is not a good thing. The same modeling indicates the offshore industrial wind projects slow ocean currents result in the decreased cycling of dissolved oxygen in the affect areas, resulting in low oxygen concentrations. Whales, being mammals, should not be directly affected by reduced oxygen concentrations, but their prey species and the food chain they rely upon for survival certainly would be.

More sound, more ships, and less food is a deadly combination for NARWs as well as other protected marine mammals.

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In conclusion, granting ASOW's IHA as currently proposed, allowing the Level B harassment and, thus, potential incidental take of three NARWs poses a clear and present danger to the continued survival of the species. Granting this IHA without further study would be arbitrary and capricious and open NOAA and ASOW to lawsuits challenging the IHA, if it is approved as currently proposed.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

88 FR 19075 Document Number 2023-06594

1 message

John Fearheller <jfeairheller@gibsonassoc.com>
To: ITP.Potlock@noaa.gov

Tue, May 2, 2023 at 12:36 PM

It is my opinion that allowing concurrent use of multiple survey ships increases the likely hood of a Taking actually occurring. Only one ship at a time should be permitted to actively emit sound for survey data collection, additional receivers would be relatively passive. The operation of the active survey ship should not be allowed to occur concurrently with other survey ships withing 200 nautical miles working other lease areas.

The societal benefit of reducing global warming is not achieved by wind energy for two reasons. The supporting argument of "renewable energy sources" is overrated in that typical residences far exceed the 4 Kilowatt demand frequently used by the state of new Jersey and the 3 Kilowatt demand recently used by the Federal Government, given that a typical water heater is 4.3 KW and the Ford Home Electric Vehicle Charger is 16 Kw. Secondly, dispatchable electric generation needed for when the wind generation is not producing must be kept operating since it frequently takes in excess of 20 hours to bring online.

John A Fearheller, Jr, PE, PP

Ocean City, New Jersey



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

NOAA Doc 2023-06594-agcy Doc RTID 0648-XC667

1 message

Maria Mangi <m7145@hotmail.com>

Mon, May 1, 2023 at 11:21 PM

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

The North American right whale is critically endangered; only an estimated 200-250 individuals with fewer than 95 reproductive-age females in a declining population. Additional noise, vessel traffic, and habitat modifications due to OSW will likely cause added stress that could result in additional population consequences to a species that is already experiencing rapid decline (30% in the last 10 years)

They migrate along the East Coast between Florida and the Labrador Sea in Canada. Sources of noise include human activities such as surveying the sea floor for potential wind turbine sites and the construction and operation of wind turbines. This noise impairs essential whale behaviors such as feeding, reproduction, migrating, and communication, including that between mother and calf. Hearing impairment from human-created noise also interferes with echolocation and can reduce whales' ability to detect and avoid ships that could hit them. Females currently bear one calf an average of every nine years, much less frequently than the every-three-year birth rate in the 1980s. Its biological removal rate is less than one, meaning that even a single unnatural fatality will prevent it from reaching an optimal sustainable population. There is well founded concern these turbines may cause serious damage to marine ecosystems and building offshore wind farms will also cause too much disruption and harm to our already critically endangered marine life. They may become extinct in the coming days due to this industrialization of our oceans on the East Coast. These turbines will have irreversibly damage to the ocean causing irreparable harm. The government including BOEM and NOAA is relaxing endangered species requirements for offshore wind. This administration's violation of the [Endangered Species Act] should be taken into consideration to all of these projects. I think this is a very dangerous project to a fragile Ocean. The current mitigation plan does not give much assurance that the species at risk that are endangered or critically endangered will be protected.

Biologically important areas (BIA's) are areas of calving, foraging, resting, migration and nursing. (all of a whales essential life functions)

These mammals require their habitat to remain in existence free from threats of windfarm noise – chronic and acute industrial noise of pile driving and seismic noise. I am against the industrialization of our ocean. I am strongly against these projects and extremely worried for entire ecosystem due to the preparation, construction, utilization, and decommissioning of these wind farms. I feel the risks outweigh the benefits. Please keep our Ocean an Ocean save our birds, bats, whales, dolphins, porpoise, seals, fisheries, fragile ecosystem, our human health, our way of life. Furthermore, we must consider the following with or without a possible hurricane in the future on our Atlantic coast.

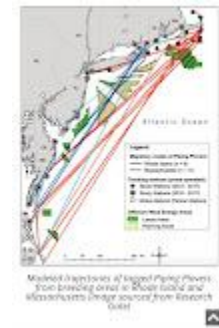
Each offshore wind turbine holds within it 80 gallons of oil, including hydraulic fluid, gear box grease, and other lubricants. Clearly those items, in the case of a catastrophic breakdown or crack within the holding tanks, would pollute the water and all of all marine mammals that include those with threatened or endangered status. Not to mention tighter shipping lanes in the NY area around turbines with potential (weather fog and conditions for a catastrophic accident). OSW projects need to have a proven final environmental impact statement as they do not adequately address the impact on marine life in the event of a surface oil spill or mitigation plan in the event of a weather event that would contribute to it.

I strongly oppose the Takes of Marine Mammals for these projects.

Thank you for your consideration,
Maria Mangi

Sent from [Mail](#) for Windows

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itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Agency/Docket Number: RTID 0648-XC667. Document Number: 2023-06594

1 message

Sylvia Lockwood <wellbeingawareness@yahoo.com>
To: ITP.Potlock@noaa.gov

Mon, May 1, 2023 at 11:23 AM

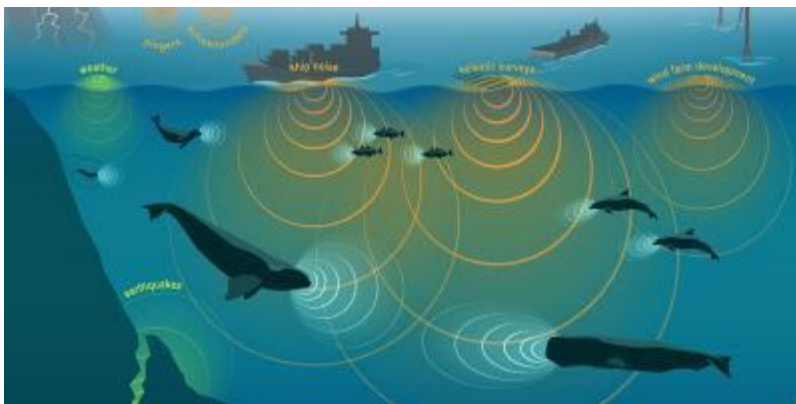
Jolie Harrison, Chief, Permits and Conservation Division
Office of Protected Resources, National Marine Fisheries Service

I am adamantly opposed to ongoing and continued offshore wind surveying and construction activities for the following reasons:

These surveys have been authorized by NMFS in conjunction with BOEM along the East coast directly in protected and endangered whale migratory habitats since the first offshore wind project began. This timeframe coincides with the unusual mortality events of 2016 and 2017 yet necropsies are either inconclusive or stop once a vessel strike is deemed the cause of death. Healthy whales do not normally collide with vessels and the reduction in ship traffic as a result of Covid protocols all beg the need for more detailed investigations. Environmental guidelines require studies to be done prior to, not during or after activities which may affect the environment. Compliance with the MMPA, the ESA, plus state NJDEP guidelines are a requirement, not an option. North Atlantic Right Whale numbers are declining as noted in this IHA (368 to 338). For IHA to be permitted they need to assure takes are in "small numbers", have no more than a "negligible impact", and do not have an "unmitigable adverse impact". With only 72 females capable of reproducing and the combined IHA numbers permitted for the east coast you are permitting the extinction of this federally protected species.

I would like to know how NMFS conducts assessments on the potential affects of the marine characterization surveys to ensure they do not exceed lawful guidelines. If assessments are completed are they done by independently funded organizations?

I urge you to decline this extension and halt all approvals pending further independent investigations. The fate of our marine eco system and by extension our overall environment is in your hands.
See supporting links below.

[Ocean Noise](#)**Ocean Noise**

Sound is the most efficient means of communicating underwater, especially for many marine species. NOAA Fisheries works to better understand how marine animals use sound and the potential impacts of man-made noise on the underwater environment.

<https://www.neaq.org/about-us/news-media/press-kit/press-releases/new-research-reveals-fewer-critically-endangered-female-right-whales-capable-of-reproducing/>

Sylvia Lockwood
Cape May Court House, NJ

Sent from Yahoo Mail for iPad



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

STOP LEVEL B HARASSMENT OF 4,190 MARINE MAMMALS FOR ATLANTIC SHORES OFFSHORE WIND'S NJ/NY SURVEYS

1 message

Devin Waldron <drwaldron95@gmail.com>
To: ITP.Potlock@noaa.gov

Mon, May 1, 2023 at 8:57 AM

Jolie Harrison
Chief, Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
ITP.Potlock@noaa.gov

Dear Jolie Harrison,

I write to you as a New Jerseyan with regard to the offshore wind projects off New Jersey and New York. Myself and others demand a hard stop on the current construction, developments and any new permits and authorizations until the whale deaths can be properly investigated and until a comprehensive, scientifically independent pilot project can be conducted to fully understand the current and future impacts to marine life. This message is becoming more urgent as the Atlantic Shores Offshore Wind, LLC is applying for a one-year IHAs from NOAA Fisheries for marine site characterization activities up and down off New York and New Jersey in two leased areas—Atlantic Shores North (BOEM Lease Area 0549) and Atlantic Shores South (Lease Area 0499). The Level B harassment authorizations of 4,190 marine mammals for these surveys off of New York and New Jersey must be stopped.

We are not opposed to clean energy, only to the current location, size and speed of these projects, especially when better and already-approved locations exist (like the Hudson South Call Area) that would pose less danger and damage to marine life and coastal communities. A pilot project is needed—the information that would be gained is necessary to ensure this unprecedented massive industrialization is done in a safe and responsible way. With these IHAs, NOAA Fisheries acknowledges the harassment of marine mammals, including endangered species, with these pre-construction activities, specifically high-resolution geophysical (HRG) equipment (e.g., sonar, “sparkers”) and drilling equipment. What’s the point in doing something for the environment if the environment will be paying the greatest toll?

Far too many marine mammals have already paid the price. Between December and February, 23 whales washed up along the East Coast, with 12 (and a 13th spotted) in New York and New Jersey alone. Six of these whales washed up in New Jersey, where the annual average is usually only 7 a year. Many of these majestic creatures now find themselves buried beneath our beaches or in a landfill. This is not to mention the dolphins that have been dying too.

The only relevant change groups such as SaveLBI and Clean Ocean Action are aware of is the large number of wind energy vessel surveys being conducted off the coast, which use high intensity noise devices to survey the seabed. As I am sure you know, the offshore wind projects for which they are surveying are immense (and will do irreparable damage): The plans for them in the northeast alone over just the next 6 years will impact 2.4 million acres with 3,400 turbines as tall as the Chrysler building and 10,000 miles of cable ripping through the seafloor. Plus an additional 5.7 million acres are under consideration.

There were those who did try to be proactive. SaveLBI told the NMFS over a year ago that the noise impact from these devices was being underestimated. And Bloomberg News had to file a request under the Freedom of Information Act to retrieve a May 2022 letter from a NOAA scientist sent to BOEM highlighting the anticipated impacts from this development on the critically endangered North Atlantic right whale. (Only about 350 are left.) Congressman Van Drew is currently leading an investigation into whether a response was issued to this letter and if changes were made to the plans as a result.

It is also known that some of the current lease areas are in the migration path of the aforementioned whale, as well as in the path of the threatened Piping Plover. And more generally, the entire ocean realm off New Jersey/New York is one of the most diverse in the world with 33 species of whales, dolphins and a porpoise (5 endangered and all protected species), 4 species of seals (all protected) and 5 species of sea turtles (all endangered and protected). We must do more to protect them.

As you know, these IHAs allow "the potential to disturb (but not injure) a marine mammal or marine mammal stock in the wild by disrupting behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering." The idea that someone can think an animal will not be injured (or worse) but can have its migration, breathing, nursing, breeding, feeding, and/or sheltering affected is disturbing and backwards. As of January 2022, 11 companies held IHAs allowing the harassment of 63,820 marine mammals off NY and NJ, and more are pending which propose to harm an additional 90,000 mammals. Any further authorizations must not be approved.

Considering all of this, it is both disturbing that there hasn't been an investigation or assessment of the impact of these projects and it is incredibly disappointing that even more harassment authorizations are being applied for and considered. It is reckless and irresponsible and without any thought to life in the oceans or on land that a comprehensive pilot project has not been conducted. Any further work should be paused until investigations identify the cause and, should there be a link, appropriate changes must be made. As we do so much to tackle harassment and mistreatment in our society and workplace, it is sad what we are allowing to be done to these mammals.

How industrialization of this scale can be moving forward so quickly without any concern for whether the marine life is affected or survives is unfathomable to me. Marine life—creatures that sing, dance, play and feel emotions too—is already paying the toll and those still alive are being placed at grave risk without scientific due diligence, monitoring and protection to ensure they survive this massive industrialization happening way too rapidly. Over 355,000 people have signed the Change.org PETITION TO DEMAND INDEPENDENT INVESTIGATION OF WHALE DEATHS. Please help protect any further mammals from harm and stop the Level B harassment of these 4,190 marine mammals. We're all counting on you to help protect one of the most beautiful parts of not only the coast but of the country too and all those who call it home (on land and in the sea). Thank you for your time!

Sincerely,
Devin

--

Devin Waldron
(201) 602-7417
drwaldron95@gmail.com



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment to Takes of Marine Mammals Incidental to Specified Activities offshore in NY & NJ1 message

George Humphris <geohump@yahoo.com>
To: "ITP.Potlock@noaa.gov" <itp.potlock@noaa.gov>

Sun, Apr 30, 2023 at 4:56 PM

Comments attention Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

NOAA is permitting a "small" taking and harassment of mammals in our oceans with no number listed. What does "small" mean especially when there are some whales on the endangered list off our coast?

There are fewer than 70 females North Atlantic right whales left that could reproduce today and NOAA acknowledged their unusual mortality since 2017.

So for NOAA to seemingly declare "Full Speed Ahead" on offshore wind now when some are saying climate change may be driving the whale's food source closer to shore seems very short sighted.

Whales need their hearing especially when they are near the shore. It's a sad fact falling on deaf ears with NOAA.

NOAA published Ocean Wind I take request of mammals over a five year period in October 2022. The take and harassment of these mammals would be "small".

31 dead whales and 26 dead dolphins since December 2022 does not seem small to me but then who actually knows what the "small" number is.

I am concerned for the ocean creatures & wonder if NOAA will do in the ocean what the government has done with on land wind turbines e.g. authorizing the taking of endangered eagles for 30 years.

It's time to put a stop to this needless killing.

George Humphris
2 Parkway Dr
Toms River NJ 08753



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores IHA renewal

1 message

Mike Dean <mikerdean@verizon.net>

Sun, Apr 30, 2023 at 4:41 PM

To: "itp.potlock@noaa.gov" <itp.potlock@noaa.gov>

To whom it may concern,

I oppose any such renewal of the Atlantic Shores IHA.

The recent spike in whale deaths in proximity to Atlantic Shores survey activities here in NJ is too important to be dismissed as "no evidence".

NOAA needs to do it's job and determine the impact of seismic surveying is having on marine mammals behaviors.

Now is not the time to blindly renew any permits that were in force when this unusual event took place without finding real answers, not talking points, for the cause.

Also, Atlantic Shores is required by per NOAA to provide a comprehensive report of activities that took place under its expiring IHA at the time of filing for its new permit. Please advise when and where this comprehensive report will be available to the public.

Sincerely,

Michael Dean
646-505-8614



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Incidental Harassment Authorization

1 message

Bob Birdsall <bobbirdsall@gmail.com>

Fri, Apr 28, 2023 at 1:52 PM

Reply-To: bobbirdsall@gmail.com

To: "itp.potlock@noaa.gov" <itp.potlock@noaa.gov>

I would like to comment on the request by Atlantic Shores for an increase in Incidental Harassment on top of the authorization they currently have.

The number of deaths of marine mammals has increased significantly since the beginning of survey activities. At a minimum there should be a "time out" so independent investigators can determine if there is a cause and effect. The number of Incidental takes, both Level A and B is staggering. Atlantic Shores claims there is no proof their survey blasting is causing the deaths, yet they admit both permanent and temporary hearing loss, and coincidentally most of the recent whale deaths have been categorized as hit by boat. The magnitude of this project and long term effects on marine life warrants at a minimum that a truly independent assesment be done. The potential of irreversible, unintended consequences cries out that this study be conducted before we reach the point of no return.,

Respectfully,

Robert E. Birdsall



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Wind exploration at Atlantic Shores

1 message

Kathleen Griffin <katgriffin411@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 12:35 PM

Dear Members of NOAA,

I am concerned that planned and ongoing exploration for wind projects at Atlantic Shores will cause harm, in some cases irreparable, to marine life animals and habitats. Some of the animals who live there are endangered but all of them are valuable. Please cease and desist operations in this area.

I am not even sure this is better, but can they possibly do this further out where there might be less impact to marine habitats and feeding areas.

That might have the added benefit of being less unsightly from the vacation beaches on the shoreline as well.

I am an Ocean County homeowner but I am also a US and world citizen and think we need to be more cautious about damaging our natural resources.

Thank you for your attention.

Best regards,

Kathleen Griffin
Houlihan Lawrence
914-806-6255
Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Concerns about wind exploration at Atlantic Shored

1 message

Kathleen Griffin <kathleenmgriffin@hotmail.com>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Fri, Apr 28, 2023 at 12:33 PM

Dear Members of NOAA,

I am concerned that planned and ongoing exploration for wind projects at Atlantic Shores will cause harm, in some cases irreparable, to marine life animals and habitats. Some of these animals are endangered but all of them are valuable. Please have them cease and desist.

I am not even sure this is better, but can they possibly do this further out where there might be less impact to marine habitats and feeding areas.

That might have the added benefit of being less unsightly from the vacation beaches on the shoreline as well.

I am an Ocean County homeowner but I am also a US and world citizen and think we need to be more cautious about damaging our natural resources.

Thank you for your attention.

Best regards,

Kathleen Griffin
914-806-6255
Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Please don't allow more taking of marine mammals

1 message

Judith Carpenter <judithcarpenter@gmail.com>
To: ITP.Potlock@noaa.gov

Tue, Apr 25, 2023 at 3:59 PM

I am a resident in Ocean City NJ and I'm very concerned about the unusual whale mortality event that began at the time of the preparation of the RI wind farm in 2016 and has continued to the present with a peak in time and location with the current South Jersey wind farm preparation. While we cannot interview marine mammals we know that sonar can torture, confuse, or permanently damage their hearing and sometimes this results in their deaths by going off course and grounding themselves or hitting a vessel. This request for renewal of permission to 'take' kill dozens more whales and thousands more dolphins is evidence in itself that they expect to cause more deaths. I have read enough to know that the operation of the wind farms is likely to continue to put whales in harms way as they attempt to avoid the sound and the structures and are forced into shipping lanes. The NY Times tried to blame the whale death spike on NY/NJ becoming the busiest shipping ports since COVID. Well then don't build wind farms in this area. It's like building on a whale highway during rush hour. I am still a Democrat and I remember when Democrats would have fought hard to protect whales from destruction of their habitats and migration pathways. I am currently putting solar panels on my house in Pa. But I do not want these NJ wind farms to destroy our coast and our beautiful dolphins and whales. Build them in a safer place on land or choose another green energy solution. I strongly oppose this request for further takes of marine mammals. Please don't approve it. Thank you for your consideration.

Sincerely,
Judith T Carpenter MD

Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Docket #RTID 0648-XC667

1 message

Mary Smith <mlsmith2904@gmail.com>
To: ITP.Potlock@noaa.gov

Tue, Apr 25, 2023 at 2:25 PM

I do not want NOAA to approve any further authorization to Atlantic Shores for incidental takes for their New Jersey project. We still do NOT have the necropsy results back on ALL of the mammals that have beached! This is premature and permission must not be granted. Vessel strikes are not a believable answer as these mammals have excellent navigational skills. It is probable that their sonar skills are being damaged by offshore testing and that is leading to the vessel strikes. And, I wonder how many never wash ashore.

Over 30 shore town mayors and others have requested a moratorium on offshore testing. NOAA has obligations to uphold first and foremost under the Marine Mammal Protection Act and the Endangered Species Act. I question if these obligations are being met, or merely shoved aside in the unnecessary rush to industrialize the ocean with turbines that have a short lifespan, are already obsolete, offer no return on investment and will destroy the ecosystem.

Furthermore, New Jersey residents and those that own property and/or enjoy the beautiful beaches, are spreading word of this detrimental project and more and more people are aghast at what has been allowed to date, and what is anticipated in being "permitted" for the future.

Naval studies have confirmed that sonar testing and geothermal testing hold great danger to the ocean inhabitants. NOAA needs to halt any further issue or extension on permits to offshore wind companies.

I implore you to deny Atlantic Shore's request on the grounds that NOAA will be violating the very sources of life that it should be protecting. The ocean is sacred! Uphold your obligations and decline their request and decline any future renewals or such harassment/takes permits.

If this project is so good for the environment, why is it destroying sea life, which includes mammals that remove carbon from the atmosphere. Protect nature, NOAA and refuse the Atlantic Shores request.

Sincerely,

Mary Smith
2904 West Brigantine Ave
Brigantine NJ 08203



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores Take Request

1 message

Brian Duff <duffb07@gmail.com>

Tue, Apr 18, 2023 at 8:07 PM

To: "itp.potlock@noaa.gov" <itp.potlock@noaa.gov>

Jolie Harrison
Chief, Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Services

Dear Ms. Harrison,

My family and I, and all of the neighbors I know who are proud to live on Long Beach Island, are adamantly opposed to the idea of granting Atlantic Shores additional Take Authorizations related to the development of offshore wind farms in the region, until a thorough, and and independent investigation of the recent whale and dolphin deaths in the region is completed.

The political rhetoric and diversion of "unusual mortality events" is offensive to those of us who live on the shore and see what's happening to marine life with our own eyes. "Following the science" has led to no explanations for what is happening. It's time for leaders like yourself to push back against the political pressure you undoubtedly face, and SLOW DOWN the development of offshore wind.

Regards,
Brian Duff & Family
Residents LBI



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Re: NOAA Proposes to Ignore Whales Killed by Offshore Wind

1 message

Darryl Hofe <darryl.hofe@reagan.com>
To: ITP.Potlock@noaa.gov

Mon, Apr 17, 2023 at 5:39 PM

Crickets.

Darryl

> On Apr 14, 2023, at 16:54, Darryl Hofe <darryl.hofe@reagan.com> wrote:
>
> Your agency is responsible for this? FAIL.
>
> <https://townhall.com/columnists/davidwojick/2023/04/12/noaa-proposes-to-ignore-whales-killed-by-offshore-wind-n2621801>
>
>
>
>
> Darryl



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comments on "...Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York"

1 message

jtitus@risingsea.net <jtitus@risingsea.net>
To: ITP.Potlock@noaa.gov

Mon, Apr 17, 2023 at 11:32 AM

Concerning: "Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York"

You can probably justify finding that approving the application would not violate the MMPA. The question about categorical exclusion under NEPA, however, is another matter—at least not without a detailed justification that looks at the overall compliance of the project with NEPA. That is, categorical exclusions that might be otherwise justified are not allowed under NEPA if they facilitate projects that themselves violate NEPA for other reasons.

The proposed project being facilitated violates NEPA because there has been no serious alternatives analysis of alternate locations. The alternative that needs to be evaluated is whether the proposed windmills should be a significantly greater distance from the shore. When deciding which areas to lease, the agency justified the lack of an alternatives analysis that would include windmills farther off shore, based on the fact that the decision under consideration was just leases—a lease does not kill any fish or marine mammals. It's just a piece of paper! Then, once the actual windmills are proposed for construction, the agency fails to consider locations farther off shore on the grounds that the purpose and need only refers to building on the areas that were leased

In effect, in step 1 the agency says that the time to evaluate alternatives is when actual construction is proposed, and in step 2, the agency says that the time to evaluate alternatives would have been in step 1. While this is a very clever way to avoid NEPA requirements, you should be aware that by approving any application under this scheme, you are also a knowing participant in the circumvention of NEPA—at least without a careful analysis of the legality of facilitating actions cleverly designed to avoid the alternatives analysis. Cf. independent utility doctrine.

The need for renewable energy may be worth disregarding NEPA's requirement for a "hard look" at alternatives and killing more mammals for the sake of expediency, if indeed the impact would be less by building farther out to sea as some have suggested. If so, such a decision needs to be consciously made by a high level official, rather than circumventing NEPA to enable projects to move forward without an evaluation. Would you really be this cavalier about NEPA if the proposal was for oil drilling?

James G Titus

5813 Bayview Avenue

Brant Beach, NJ 08008



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

NOAA Proposes to Ignore Whales Killed by Offshore Wind

1 message

Darryl Hofs <darryl.hofs@reagan.com>

Fri, Apr 14, 2023 at 4:54 PM

To: ITP.Potlock@noaa.gov

Your agency is responsible for this? FAIL.

<https://townhall.com/columnists/davidwojick/2023/04/12/noaa-proposes-to-ignore-whales-killed-by-offshore-wind-n2621801>

Darryl



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Wind Farm and Marine Mammal Deaths

1 message

Doug Borden <douglascborden@gmail.com>

Fri, Apr 14, 2023 at 12:51 PM

To: "itp.potlock@noaa.gov" <itp.potlock@noaa.gov>

Jolie Harrison and To Whom it May Concern,

The marine mammal deaths that have occurred in the last six months are horrifying and it saddens me. The Wind Farm permitting must be stopped.

There has been so much progress to create a much healthier environment off the Jersey shore in the last forty years and whose progress has been enjoyed for a decade or so with the return of large populations of marine mammals, whales dolphin and seals.

Endangering this is fool hearty and cruel. The irony, that the destruction of the environment and killing of marine mammals is being done to protect the environment is not lost on many.

It is foolish. End this program, please.

Sincerely
Douglas C Borden



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment on proposed Atlantic Shores IHA

1 message

David <david@circumspace.com>
To: ITP.Potlock@noaa.gov

Thu, Apr 13, 2023 at 2:36 AM

To: Jolie Harrison

Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

This survey should not be allowed to go forward due to its hugely harmful effects on whales generally and migratory right whales in particular.

The math in the proposal is seriously flawed. It posits that since the directly affected area is only 2.11% of general whale habitat, there's plenty of other areas for whales to move into. However, the 2.11% is located in the quietest areas that are outside of shipping lanes, so the if the whales survive the initial sonic blasting, they will be forced into shipping lanes to die from ship strikes.

The math gets even worse for right whales. The sonic blasting zone spans the entire width of the right whale migratory path, creating a blockade that again forces this endangered species out into shipping lanes to die.

There is no compelling need for the wind turbines. Wind is an unreliable energy source, with hours and often days without the ability generate electricity (both because of calm winds **and** when they are shut down because winds exceed the turbines' capacity.) Electricity from backup batteries is about 1,000 times more expensive per kwhr than actively generated power (from wind, solar, or gas), which is why backup battery "solutions" cannot solve the intermittency problem of wind.

I cannot imagine what got into you folks, to contemplate even greater areas of sonic blasting when existing zones are wreaking such havoc!

David Gump

-

David Gump
Lake Forest, CA
703-623-9616



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Whales

1 message

Simeon Cumberbatch <simnevelle@icloud.com>

Wed, Apr 12, 2023 at 9:40 AM

To: ITP.Potlock@noaa.gov

To whom it may concern,

As a New Jersey resident, I am very concerned about the health and welfare of our marine population. I implore you to please postpone the erecting of wind turbines until further studies are performed. Thank you.

Simeon N. Cumberbatch

Sent from my iPad



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Stop NOAA IHAs & offshore wind development1 message

Reutter, Edith <Edith.Reutter@cincinnati-oh.gov>

Wed, Apr 12, 2023 at 8:54 AM

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Dear Jolie Harrison,

Save the whales, dolphins, porpoises & seals! To do this, you must stop the survey noise for off shore wind development. The survey areas use sonar blasting that causes whales deaths. Whales flee the noise, either strike ships, fishing gear and/or are beaching themselves. The noise can also cause deafness which prevents the whales from hearing ships, thus striking them. The huge 2016 jump in annual humpback mortality coincides with the jump in NOAA IHAs. These surveys & the off shore wind development has to STOP!

Regards,

Edith Reutter



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Wind Farm

1 message

Courtney H <courtney.hanscom@gmail.com>
To: ITP.Potlock@noaa.gov

Wed, Apr 12, 2023 at 12:34 AM

I am an NJ resident who is extremely concerned over the environmental and economic impacts of the fast-tracked development of wind projects off our coast. Please thoroughly consider a moratorium on the projects until further studies can be done. I feel as though the views of NJ residents are NOT being listened to, and concerned citizens are being pushed aside.

Courtney



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment on proposed Atlantic Shores IHA

1 message

Mary Ann Rollano <rollanom@gmail.com>

Mon, Apr 10, 2023 at 12:59 PM

To: "itp.potlock@noaa.gov" <itp.potlock@noaa.gov>

Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

You can argue for or against off-shore wind turbines and find evidence for the pros and cons ad infinitum, depending on which side of the climate debate you are on. But, the most significant push for off-shore wind development is vast government subsidies funded by taxpayers, paying big wind corporations, which make inside connections to government agencies, agents, and environmental groups.

However, you can't argue against saving the North American right whale from extinction. Only 334 remain, of which 100 are breeding females. As you know, North American right whales live, breed, feed, and migrate up and down the Atlantic coast.

"The data reveals that NOAA has either granted or is in the final stages of granting Level B takes for 915 critically endangered North Atlantic right whales, of which only 334 remaining animals are alive. Either this means NOAA and the wind companies expect repeated harassment (including recurrent hearing impairment) of numerous right whales, or they have not taken the trouble to realize they have granted more "takes" than the number of live whales who exist today."
- <https://www.eastbayri.com/stories/letter-take-authorizations-prove-noaa-is-lying-about-whale-deaths,111587>

It is beyond hubris to promulgate the notion that human industrial oceanic activity does not adversely affect marine life. It is not something to be played with, and it has already been proven and documented that it does lead to their demise.

[Stranded Whales Were Deaf - Raising More Questions Over Off-shore Wind Farms](#)

We are all stewards of nature, whether we want to accept that charge or not. We have the responsibility to preserve our marine ecosystem and ecological environment.

Killing nature to save the planet is oxymoronic. You have lost sight of protecting marine mammals in the chaos of the off-shore wind stampede. I hope you reconsider your mission and reason for being.

Do you protect marine mammals and their habitat and maintain healthy marine ecosystems, or are you industrial predators with over-aggressive incidental take authorizations?

It appears you are authorizing purposeful takes with the continuation of level A and level B harassment with their known adverse effects. It's an excellent way of saying, "We know we're killing marine life, but it's okay. We are not culpable if we deny the truth before our eyes."

The truth is, you are culpable for your actions.

Pursuing off-shore wind development along the North and Mid-Atlantic coast is an "unmitigable impact on subsistence uses" of the Atlantic migratory corridor that will directly lead to the extinction of the North American right whale.

I am 100 percent against off-shore wind development at any level. I am also against any off-shore oil drilling. Please stop this and all projects immediately before it's too late.

Sincerley,
Mary Ann Rollano



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Ref Lease Area OCS-A 0499 and OCS-A 0549 and associated export cable route (ECR) area.

1 message

TRUDY GETLER <tagbs@aol.com>
To: ITP.Potlock@noaa.gov

Thu, Apr 6, 2023 at 6:18 AM

No, just no! Stop selling our ocean! How can our US government allow this, to “take” the most intelligent creatures in the sea, to decimate the right whale population which is highly endangered as it is. This is outright murder and I am ashamed. We worked for decades to rebuild the whale population and except for the right whales have been successful. We need to continue, not give a foreign company permission to kill more. This is a travesty. The New York/New Jersey waters are within the known migratory route that right whales follow as they travel between their feeding areas and calving grounds; however, no year-round, dedicated marine mammal studies have previously been conducted in this portion of the mid- Atlantic. We need fine scale studies of these waters, the migratory routes and both dolphin and whale behavior before work for the wind farm continues. Not a license to kill.

Trudy Getler
Sent from my iPad



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Attn Jolie Harrison, Comments on Take Permit Incidental to Marine Site Characterization Surveys Offshore NJ and NY, NOAA Notice 3,30,231 message

James Binder <jbinder6974@yahoo.com>

Mon, Apr 3, 2023 at 3:27 PM

Reply-To: James Binder <jbinder6974@yahoo.com>

To: "ITP.Potlock@noaa.gov" <itp.potlock@noaa.gov>

On November 7, 2022, I submitted the following comments on what may be a related notice by NOAA.

"RE: Comments re Takes of Marine Mammals Incidental to Specified Activities: Taking Marine Mammals Incidental to Marine Site Characterization Surveys in the New York Bight and Central Atlantic, Federal Register Notice 87 FR 66658, published November 4, 2022.

I am a resident of Long Beach Island (LBI), NJ and directly impacted by the proposed permit. The NARW migrates through the waters off LBI and will be negatively impacted by the proposed action. In making comments on a BOEM document (ID BOEM -2022-0021-0001, JULY 2022) for review of the DEIS for the proposed Ocean Wind offshore windmill project, I noted that in the DEIS BOEM made a statement as follows: Section 3.15.3.3 Conclusions- In regard to the North American Right Whale "As stated above, the low population numbers of the NARW result in the potential to compromise the viability of the species due to the loss of a single individual." Any action to approve an incidental permit by NMFS could result in the killing of a single or multiple whales. Thus issuance of an incidental permit by NMFS says that it is ok to kill one or more Right Whales, thus it is ok to compromise the viability of the species. Is not the purpose of NMFS to protect endangered species, not find ways to accommodate offshore wind development? As noted in my comment document for the DEIS- Comment Tracking Number: I52-irpt-gbce- there are viable, land based clean energy alternatives that would negate the need to issue a take permit for wind energy development. NMFS , please focus on protecting this endangered species.

Thank you.

Jim Binder, P.E."

Sadly, I assume that NOAA issued the take permit requested. Nevertheless, the same comments apply for the current NOAA notice, and are driven home by the numerous whale deaths that occurred in NJ and NY since December 2022.

The recent high number of whale deaths in NJ and NY since December 2022 have caused grave concern amongst residents of Long Beach Island and elsewhere along the Jersey Shore and NY. It appears that experts disagree on the cause of the deaths, but all seem to acknowledge the need to investigate. Several in the Congress and mayors of shore communities have called for a moratorium on offshore development work, including the marine site characterization surveys, until an investigation is done and we know the cause of death. For many of the whales that have died since December there is still ongoing laboratory work to determine extent of injury and cause of death. If NOAA is to protect the whales and other impacted mammals, it is not right to allow a harassment authorization/ take permit until the results of investigations are published and reviewed.

Please place a moratorium on this action until that happens, and then, only if potential impacts do not threaten the whales and other marine mammals. If an IHA permit is issued/extended without completion of such investigations, the horse has left the barn before the door was closed. Monitoring whale deaths thereafter is not a solution. As BOEM states, we can not afford to lose 1 north american right whale w/o endangering the species. The proposed incidental harassment authorization and possible renewal will allow harassment and incidental taking of endangered marine mammals. This should not be acceptable. Let's pause, place a moratorium and catch our breath before we continue.

Thank You.

Jim Binder, P.E.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Please do not build emails off Jersey coast

1 message

j strack <tsestrack@gmail.com>
To: ITP.Potlock@noaa.gov

Mon, Apr 3, 2023 at 7:40 AM

Please do not build emails off Jersey coast



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Marine wildlife vs windmills

1 message

Rae Solimine <rlsol@icloud.com>

Mon, Apr 3, 2023 at 10:09 AM

To: ITP.Potlock@noaa.gov

Please do not renew Atlantic ShoresOffshore Wind LLC the ability of building offshore wind mills off the coast of New Jersey and New York coast Whales and dolphins are washing up dead on our shores because of the windmills.

Lots of people have invested in those windmills, so this is a money driven project

Please protect our marine wildlife and stop this offshore project of windmills.

Rae Solimine

Clifton NJ

Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Fwd: save the whales, dolphins from these agencies that partner with profiteers

1 message

jean public <jeanpublic1@gmail.com>

Mon, Apr 3, 2023 at 9:00 PM

To: itp.harrison@noaa.gov, itp.potlock@noaa.gov, jeff.vandrew@mail.house.gov, tom.kean@mail.house.gov, frank.pallone@mail.house.gov

Cc: info@peta.org, info@idausa.org, info@cok.net, info@mercyforanimals.org, info@defenders.org, info@nycclass.org

public commetn on federal register

plese do not give any authroization to this wind tower company to keep killing in th ny bight area. their horrific results have been shown in all the dead bodies of whales, dolphins and seals that have been washingt up on nj and ny beaches for the last several months. they killed. you gave them the right to kill l5 already. we cannot allow this horror to continue. i am dead set against this application by the wind towers.their use of high resolution teotechs are killers.yes they are exceeding. this plan is unacceptable to the people. ever hear of govt by thepeople for the people. the people area against thia plan. you shoudl listen. this commentis for the pubilc record.please receipt. jeanpbuliee jeanpublic1@gmail.com

[Federal Register Volume 88, Number 61 (Thursday, March 30, 2023)]

[Notices]

[Pages 19075-19088]

From the Federal Register Online via the Government Publishing Office [www.gpo.gov]

[FR Doc No: 2023-06594]

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XC667]

Takes of Marine Mammals Incidental to Specified Activities;
Taking Marine Mammals Incidental to Marine Site Characterization
Surveys Offshore of New Jersey and New York

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments on proposed authorization and possible renewal.

SUMMARY: NMFS has received a request from Atlantic Shores Offshore Wind, LLC (Atlantic Shores) for authorization to take marine mammals incidental to marine site characterization offshore of New Jersey and New York in the Bureau of Ocean Energy Management (BOEM) Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS) Lease Area OCS-A 0499 and OCS-A 0549 and associated export cable route (ECR) area. The activities described in Atlantic Shores' request, the overall survey duration, the project location, and the acoustic sources proposed for use are identical to what was previously analyzed in support of the IHA issued by NMFS to Atlantic Shores for the 2022 site characterization surveys (2022 IHA). All proposed mitigation, monitoring, and reporting requirements remain the same. While Atlantic Shores' planned activity would qualify for renewal of the 2022 IHA, due to the availability of updated marine mammal density data (<https://seamap.env.duke.edu/models/Duke/EC/>),

which NMFS has determined represents the best available scientific data. NMFS has determined it appropriate to provide a 30-day period for the public to comment on this proposed action. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an IHA to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-year renewal IHA that could be issued under certain circumstances and if all requirements are met, as described in Request for Public Comments at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and

[[Page 19076]]

agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than May 1, 2023.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Written comments should be submitted via email to ITP.Potlock@noaa.gov.

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments, including all attachments, must not exceed a 25-megabyte file size. Attachments to comments will be accepted in Microsoft Word, Excel, or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted online at <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act> without change. All personal identifying information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Kelsey Potlock, Office of Protected Resources, NMFS, (301) 427-8401. Electronic copies of the original application and supporting documents (including NMFS Federal Register notices of the original proposed and final authorizations, and the previous IHA), as well as a list of the references cited in this document, may be obtained online at: <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>. In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the ``take'' of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 et seq.) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed incidental take authorization may be provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other ``means of effecting the least practicable adverse impact'' on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stocks for

taking for certain subsistence uses (referred to in shorthand as ``mitigation''); and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 et seq.) and NOAA Administrative Order (NAO) 216-6A, NMFS must review our proposed action (i.e., the issuance of an IHA) with respect to potential impacts on the human environment. This action is consistent with categories of activities identified in Categorical Exclusion B4 (IHAs with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

We will review all comments submitted in response to this notification prior to concluding our NEPA process or making a final decision on the IHA request.

History of Request

On August 16, 2021, NMFS received a request from Atlantic Shores for an IHA to take marine mammals incidental to high-resolution geophysical (HRG) marine site characterization surveys offshore of New Jersey and New York in the area of BOEM Commercial Lease of Submerged Lands for Renewable Energy Development on the OCS-A 0499 and associated ECR area. Atlantic Shores requested authorization to take small numbers of up to 15 species of marine mammals, comprising 13 cetacean species and two pinniped species, by Level B harassment only. NMFS published a notice of the proposed IHA in the Federal Register on January 27, 2022 (87 FR 4200). After a 30-day public comment period and consideration of all public comments received, we subsequently issued the IHA on April 22, 2022 (87 FR 24103), which is effective from April 20, 2022 through April 19, 2023. A minor correction notice was published on May 5, 2022 (87 FR 26726).

Atlantic Shores conducted the required marine mammal mitigation and monitoring and did not exceed the authorized levels of take under previous IHAs issued for surveys offshore of New York and New Jersey (see 85 FR 21198, April 16, 2020 and 86 FR 21289, April 22, 2021). These previous monitoring results are available to the public on our website: <https://www.fisheries.noaa.gov/action/incidental-take-authorization-atlantic-shores-offshore-wind-llc-marine-site-characterization>.

On December 27, 2022, NMFS received a request from Atlantic Shores for an IHA to take marine mammals incidental to HRG marine site characterization surveys offshore of New Jersey and New York in the areas of BOEM Commercial Lease of Submerged Lands for Renewable Energy Development on the OCS Lease Area OCS-A 0499 and OCS-A 0549 and associated ECR area (Note BOEM segmented Lease Area OCS-A 0499 into Lease Areas OCS-A 0499 and 0549; thus, the physical lease area is the same as described in the 2022 IHA. More information can be found on BOEM's website (<https://www.boem.gov/renewable-energy/state-activities/new-jersey/atlantic-shores-north-ocs-0549>)). Following NMFS' review of

the application, Atlantic Shores submitted a revised request. The application was deemed adequate and complete on January 10, 2023 (the 2023 Request). Atlantic Shores' request is for take of 15 species of marine mammals, comprising 13 cetacean and 2 pinniped stocks, by Level B harassment only. Neither Atlantic Shores nor NMFS, expect serious injury or mortality to result from this activity, and therefore, an IHA is appropriate. Take by Level A harassment (injury) is considered unlikely, even absent mitigation, based on the characteristics of the signals produced by the acoustic sources planned for use.

This request is identical to the 2022 IHA. However, NMFS has determined a renewal of the 2022 IHA is not appropriate due to Duke University's Marine Geospatial Ecology Laboratory's

[[Page 19077]]

updated marine mammal density information (June 20, 2022) for all species in the project area (<https://seamap.env.duke.edu/models/Duke/EC/>). NMFS relies substantially herein, as appropriate, on the information previously presented in notices associated with issuance of the 2022 IHA (87 FR 4200, January 27, 2022; 87 FR 24103, April 22, 2022).

Description of the Proposed Activity and Anticipated Impacts

Overview

Atlantic Shores proposes to conduct geotechnical and HRG marine site characterization surveys in BOEM Lease Areas OCS-A 0499 and OCS-A-0549 and along potential submarine ECRs (ECRs North and South) to landfall locations in either New York or New Jersey. The purpose of the proposed surveys are to support the site characterization, siting, and engineering design of offshore wind project facilities, including wind turbine generators, offshore substations, and submarine cables within the Lease Areas and along the ECRs. As many as three survey vessels may operate concurrently as part of the proposed surveys. During survey effort, the vessels would operate at a maximum speed of 3.5 knots (4 miles per hour). Underwater sound resulting from Atlantic Shores' proposed activities has the potential to result in incidental take of marine mammals in the form of Level B harassment.

Dates and Duration

The proposed activity is planned to begin once an IHA is issued and estimated to require up to 360 survey days across a maximum of three vessels operating concurrently over the course of the one year period of effectiveness of the proposed IHA (Table 1). A ``survey day'' is defined as a 24-hour activity period in which active acoustic sound sources are used. This schedule is inclusive of any inclement weather downtime and crew transfers. It is expected that each vessel would cover approximately 55 kilometers (km) of track line per day based on Atlantic Shores' data acquisition efficiency expectations.

Table 1--Number of Survey Days That Atlantic Shores Plans To Perform the Described HRG Survey Activities

Survey area		Number of active survey days expected	
		\1\	
Lease Areas.....		OCS-A-0499.....	50
		OCS-A-0549.....	70
Export Cable Route North (ECR North).....		180..	
Export Cable Route South (ECR South).....		60..	

\1\ Surveys in each area may temporally overlap; therefore, actual number of days of activity in a given year may be less than 360.

Specific Geographic Region

Atlantic Shores' proposed activities would occur in the Northwest Atlantic Ocean within Federal and state waters offshore of New York and New Jersey in BOEM Lease Area OCS-A 0499 and OCS-A 0549 and associated ECR area to landfall locations in New York or New Jersey (see Figure 1). Overall, the survey area is approximately 1,450,006 acres (5,868

square kilometers (km²) and extends approximately 24 nautical miles (44 km) offshore. Water depths in the Lease Areas and surrounding ECRs are estimated to be approximately 5 to 40 meters (m; 16 to 131 feet (ft)).

NMFS notes that while this proposed IHA would occur on two Lease Areas (0499 and 0549) and the 2022 IHA occurred on only one Lease Area (0499), this is the result of the BOEM's segregation of 0499 into two lease areas (i.e., 0499 and 0549). However, the planned survey activity would occur in the same location as the 2022 IHA (see Figure 1). Furthermore, the survey area is the same size as the survey area under the 2022 IHA (87 FR 4200, January 27, 2022; 87 FR 24103, April 22, 2022). More information can be found on BOEM's website (<https://www.boem.gov/renewable-energy/state-activities/new-jersey/atlantic-shores-north-ocs-0549>).

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Figure 1--Map of the Proposed Survey Area

Detailed Description of the Action

A detailed description of the proposed specified activities can be found in the previous Federal Register notices (87 FR 4200, January 27, 2022; 87 FR 24103, April 22, 2022) and supplementary documents. The specific geographic region; duration (360 total

[[Page 19079]]

survey days); and nature of the specified activities, including the types of HRG equipment planned for use (sparkers and CHIRPs), daily trackline distances (55 km per day), and number of survey vessels (up to three operating concurrently), are identical to those described in the previous notices.

Atlantic Shores plans to conduct geotechnical surveys, which consists of identical activities (i.e., drilling of sample boreholes, deep cone penetration tests (CPTs), and shallow CPTs) previously described in its application for the 2022 IHA (87 FR 4200, January 27, 2022 and 87 FR 24103, April 22, 2022);. Consistent with NMFS' previous analysis of these activities, no take of marine mammals is expected to occur as a result of geotechnical survey activities. As a result, these activities will not be discussed further herein.

Description of Marine Mammals

A description of the marine mammals in the area of the activities can be found in the previous documents and notices for the 2022 IHA (87 FR 4200, January 27, 2022; 87 FR 24103, April 22, 2022), which remains applicable to this proposed IHA. NMFS reviewed the most recent draft Stock Assessment Reports (SARs, found on NMFS' website at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments>), up-to-date information on relevant Unusual Mortality Events (UMEs; <https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-unusual-mortality-events>), and recent scientific literature and determined that no new information affects our original analysis of impacts under the 2022 IHA.

NMFS notes that, since issuance of the 2022 IHA, a new SAR is available for the North Atlantic right whale (NARW). Estimated abundance for the species declined from 368 to 338. However, this change does not affect our analysis of impacts, as described under the 2022 IHA. Additionally, on August 1, 2022, NMFS announced proposed changes to the existing NARW vessel speed regulations to further reduce the likelihood of mortalities and serious injuries to endangered NARWs from vessel collisions, which are a leading cause of the species' decline and a primary factor in an ongoing Unusual Mortality Event (87 FR 46921). Should a final vessel speed rule be issued and become effective during the effective period of this IHA (or any other MMPA

incidental take authorization), the authorization holder would be required to comply with any and all applicable requirements contained within the final rule. Specifically, where measures in any final vessel speed rule are more protective or restrictive than those in this or any other MMPA authorization, authorization holders would be required to comply with the requirements of the rule. Alternatively, where measures in this or any other MMPA authorization are more restrictive or protective than those in any final vessel speed rule, the measures in the MMPA authorization would remain in place. The responsibility to comply with the applicable requirements of any vessel speed rule would become effective immediately upon the effective date of any final vessel speed rule and, when notice is published of the effective date, NMFS would also notify Atlantic Shores if the measures in the speed rule were to supersede any of the measures in the MMPA authorization such that they were no longer applicable

Potential Effects on Marine Mammals and Their Habitat

A description of the potential effects of the specified activities on marine mammals and their habitat may be found in the documents supporting the 2022 IHA (87 FR 4200, January 27, 2022; 87 FR 24103, April 22, 2022). At present, there is no new information on potential effects that would impact our analysis.

Estimated Take

A detailed description of the methods used to estimate take anticipated to occur incidental to the project is found in the previous Federal Register notices (87 FR 4200, January 27, 2022; 87 FR 24103, April 22, 2022). The methods of estimating take are identical to those used in the 2022 IHA. We updated the marine mammal densities based on new information (Roberts et al., 2016; Roberts and Halpin, 2022), available online at: <https://seamap.env.duke.edu/models/Duke/EC/>. We refer the reader to Table 4 in the ITA Request from Atlantic Shores for specific density values used in the analysis. The ITA request is available online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable>.

The take that NMFS proposes for authorization can be found in Table 2 below. Table 2 presents the results of Atlantic Shores' density-based calculations for the combined Lease Area (0499 and 0549) and the two ECRs (North and South). For comparative purposes, we have provided the 2022 IHA authorized take (87 FR 24103, April 22, 2022; 87 FR 26726, May 5, 2022). NMFS notes that take by Level A harassment was not requested nor does NMFS anticipate that it could occur. Therefore, NMFS has not proposed to authorize any take by Level A harassment. Mortality or serious injury is neither anticipated to occur nor proposed for authorization.

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[[Page 19082]]

Proposed Mitigation

The proposed mitigation measures are identical to those included in the Federal Register notice announcing the final 2022 IHA (87 FR 24103, April 22, 2022; 87 FR 26726, May 5, 2022) and the discussion of the least practicable adverse impact included in that document remains

accurate. The measures proposed for inclusion in this IHA are found below.

Atlantic Shores must also abide by all the marine mammal relevant conditions in the NOAA Fisheries Greater Atlantic Regional Office (GARFO) programmatic consultation (specifically Project Design Criteria (PDC) 4, 5, and 7) regarding geophysical surveys along the U.S. Atlantic coast in the three Atlantic Renewable Energy Regions (NOAA GARFO, 2021; <https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-take-reporting-programmatics-greater-atlantic#offshore-wind-site-assessment-and-site-characterization-activities-programmatic-consultation>), pursuant to Section 7 of the Endangered Species Act.

Marine Mammal Exclusion Zones and Level B Harassment Zones

Marine mammal Exclusion Zones will be established around the HRG survey equipment and monitored by PSOs. These PSOs will be NMFS-approved visual PSOs. Based upon the acoustic source in use (impulsive: sparkers; non-impulsive: non-parametric sub-bottom profilers), a minimum of one PSO must be on duty, per source vessel, during daylight hours and two PSOs must be on duty, per source vessel, during nighttime hours. These PSO will monitor Exclusion Zones based upon the radial distance from the acoustic source rather than being based around the vessel itself. The Exclusion Zone distances are as follows:

A 500 m Exclusion Zone for NARWs during use of specified acoustic sources (impulsive: sparkers; non-impulsive: non-parametric sub-bottom profilers).

A 100 m Exclusion Zone for all other marine mammals (excluding NARWs) during use of specified acoustic sources (except as specified below).

All visual monitoring must begin no less than 30 minutes prior to the initiation of the specified acoustic source and must continue until 30 minutes after use of specified acoustic sources ceases.

If a marine mammal were detected approaching or entering the Exclusion Zones during the HRG survey, the vessel operator will adhere to the shutdown procedures described below to minimize noise impacts on the animals. These stated requirements will be included in the site-specific training to be provided to the survey team.

Ramp-Up of Survey Equipment and Pre-Clearance of the Exclusion Zones

When technically feasible, a ramp-up procedure will be used for HRG survey equipment capable of adjusting energy levels at the start or restart of survey activities. A ramp-up of sources will begin with the powering up of the smallest acoustic HRG equipment at half power for five minutes and then proceed to full power. The ramp-up procedure will be used in order to provide additional protection to marine mammals near the survey area by allowing them to vacate the area prior to the commencement of survey equipment operation at full power. When technically feasible, the power will then be gradually turned up and other acoustic sources would be added. All ramp-ups shall be scheduled so as to minimize the time spent with the source being activated.

Ramp-up activities will be delayed if a marine mammal(s) enters its respective Exclusion Zone. Ramp-up will continue if the animal has been observed exiting its respective Exclusion Zone or until an additional time period has elapsed with no further sighting (i.e., 15 minutes for small odontocetes and seals; 30 minutes for all other species).

Atlantic Shores will implement a 30-minute pre-clearance period of the Exclusion Zones prior to the initiation of ramp-up of HRG equipment. The operator must notify a designated PSO of the planned start of ramp-up where the notification time should not be less than 60 minutes prior to the planned ramp-up. This will allow the PSOs to monitor the Exclusion Zones for 30 minutes prior to the initiation of ramp-up. Prior to ramp-up beginning, Atlantic Shores must receive confirmation from the PSO that the Exclusion Zone is clear prior to proceeding. During this 30-minute pre-start clearance period, the entire applicable Exclusion Zones must be visible. The exception to this would be in situations where ramp-up may occur during periods of poor visibility (inclusive of nighttime) as long as appropriate visual monitoring has occurred with no detections of marine mammals in 30 minutes prior to the beginning of ramp-up. Acoustic source activation may only occur at night where operational planning cannot reasonably avoid such circumstances.

During this period, the Exclusion Zone will be monitored by the

PSOs, using the appropriate visual technology. Ramp-up may not be initiated if any marine mammal(s) is within its respective Exclusion Zone. If a marine mammal is observed within an Exclusion Zone during the pre-clearance period, ramp-up may not begin until the animal(s) has been observed exiting its respective Exclusion Zone or until an additional time period has elapsed with no further sighting (i.e., 15 minutes for small odontocetes and pinnipeds; 30 minutes for all other species). If a marine mammal enters the Exclusion Zone during ramp-up, ramp-up activities must cease and the source must be shut down. Any PSO on duty has the authority to delay the start of survey operations if a marine mammal is detected within the applicable pre-start clearance zones.

The pre-clearance zones will be:

500 m for all ESA-listed species (North Atlantic right, sei, fin, sperm whales); and
100 m for all other marine mammals.

If any marine mammal species that are listed under the ESA are observed within the clearance zones, the 30-minute clock must be paused. If the PSO confirms the animal has exited the zone and headed away from the survey vessel, the 30-minute clock that was paused may resume. The pre-clearance clock will reset to 30 minutes if the animal dives or visual contact is otherwise lost.

If the acoustic source is shut down for brief periods (i.e., less than 30 minutes) for reasons other than implementation of prescribed mitigation (e.g., mechanical difficulty), it may be activated again without ramp-up if PSOs have maintained constant visual observation and no detections of marine mammals have occurred within the applicable Exclusion Zone. For any longer shutdown, pre-start clearance observation and ramp-up are required.

Activation of survey equipment through ramp-up procedures may not occur when visual detection of marine mammals within the pre-clearance zone is not expected to be effective (e.g., during inclement conditions such as heavy rain or fog).

The acoustic source(s) must be deactivated when not acquiring data or preparing to acquire data, except as necessary for testing. Unnecessary use of the acoustic source shall be avoided.

Shutdown Procedures

An immediate shutdown of the impulsive HRG survey equipment will be required if a marine mammal is

[[Page 19083]]

sighted entering or within its respective Exclusion Zone(s). Any PSO on duty has the authority to call for a shutdown of the acoustic source if a marine mammal is detected within the applicable Exclusion Zones. Any disagreement between the PSO and vessel operator should be discussed only after shutdown has occurred. The vessel operator would establish and maintain clear lines of communication directly between PSOs on duty and crew controlling the HRG source(s) to ensure that shutdown commands are conveyed swiftly while allowing PSOs to maintain watch.

The shutdown requirement is waived for small delphinids (belonging to the genera of the Family Delphinidae: *Delphinus*, *Lagenorhynchus*, *Stenella*, or *Tursiops*) and pinnipeds if they are visually detected within the applicable Exclusion Zones. If a species for which authorization has not been granted, or, a species for which authorization has been granted but the authorized number of takes have been met, approaches or is observed within the applicable Level B harassment zone, shutdown will occur. In the event of uncertainty regarding the identification of a marine mammal species (i.e., such as whether the observed marine mammal belongs to *Delphinus*, *Lagenorhynchus*, *Stenella*, or *Tursiops* for which shutdown is waived, PSOs must use their best professional judgement in making the decision to call for a shutdown.

Specifically, if a delphinid from the specified genera or a pinniped is visually detected approaching the vessel (i.e., to bow ride) or towed equipment, shutdown is not required.

Upon implementation of a shutdown, the source may be reactivated after the marine mammal has been observed exiting the applicable Exclusion Zone or following a clearance period of 15 minutes for harbor porpoises and 30 minutes for all other species where there are no

further detections of the marine mammal.

Shutdown, pre-start clearance, and ramp-up procedures are not required during HRG survey operations using only non-impulsive sources (e.g., parametric sub-bottom profilers) other than non-parametric sub-bottom profilers (e.g., CHIRPs). Pre-clearance and ramp-up, but not shutdown, are required when using non-impulsive, non-parametric sub-bottom profilers.

Seasonal Operating Requirements

As described in the in the Federal Register notice announcing the final 2022 IHA (87 FR 24103, April 22, 2022; 87 FR 26726, May 5, 2022), a section of the survey area partially overlaps with a portion of a North Atlantic right whale seasonal management area (SMA) off the port of New York/New Jersey. This SMA is active from November 1 through April 30 of each year. All survey vessels, regardless of length, would be required to adhere to vessel speed restrictions (<10 knots) when operating within the SMA during times when the SMA is active. In addition, between watch shifts, members of the monitoring team would consult NMFS' NARW reporting systems for the presence of NARWs throughout survey operations. Members of the monitoring team would also monitor the NMFS NARW reporting systems for the establishment of Dynamic Management Areas (DMA). NMFS may also establish voluntary right whale Slow Zones any time a right whale (or whales) is acoustically detected. Atlantic Shores should be aware of this possibility and remain attentive in the event a Slow Zone is established nearby or overlapping the survey area (Table 3).

Table 3--North Atlantic Right Whale Dynamic Management Area (DMA) and Seasonal Management Area (SMA) Restrictions Within the Survey Areas

Survey area restrictions	Species	DMA restrictions	Slow zones	SMA
Lease Area.....	North Atlantic	If established by NMFS, all of		N/A.
ECR North.....	right whale	Atlantic Shores' vessels will abide		November 1
through				
ECR South.....	(Eubalaena	by the described restrictions.		July 31
(Raritan	glacialis).			Bay).
				N/A.

Note: More information on Ship Strike Reduction for the North Atlantic right whale can be found at NMFS' website: <https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales>.

There are no known marine mammal rookeries or mating or calving grounds in the survey area that would otherwise potentially warrant increased mitigation measures for marine mammals or their habitat (or both). The survey activities would occur in an area that has been identified as a biologically important area for migration for NARWs. However, given the small spatial extent of the survey area relative to the substantially larger spatial extent of the right whale migratory area and the relatively low amount of noise generated by the survey, the survey is not expected to appreciably reduce the quality of migratory habitat nor to negatively impact the migration of NARWs, thus mitigation to address the survey's occurrence in NARW migratory habitat is not warranted.

Vessel Strike Avoidance

Vessel operators must comply with the below measures except under extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question. These requirements do not apply in any case where compliance would create an imminent and serious threat to a person or vessel or to the extent that a vessel is restricted in its ability to maneuver and, because of the restriction, cannot comply.

Survey vessel crewmembers responsible for navigation duties will receive site-specific training on marine mammals sighting/reporting and

vessel strike avoidance measures. Vessel strike avoidance measures would include the following, except under circumstances when complying with these requirements would put the safety of the vessel or crew at risk:

Atlantic Shores will ensure that vessel operators and crew maintain a vigilant watch for cetaceans and pinnipeds and slow down, stop their vessels, or alter course, as appropriate and regardless of vessel size, to avoid striking any marine mammal. A single marine mammal at the surface may indicate the presence of additional submerged animals in the vicinity of the vessel; therefore, precautionary measures should always be exercised. A visual observer aboard the vessel must monitor a vessel strike avoidance zone around the vessel (species-specific distances detailed below). Visual observers monitoring the vessel strike avoidance zone may be third-party observers (i.e., PSOs) or crew members, but crew members responsible for these duties must be provided sufficient training to (1) distinguish marine mammal from other phenomena, and (2)

[[Page 19084]]

broadly to identify a marine mammal as a right whale, other whale (defined in this context as sperm whales or baleen whales other than right whales), or other marine mammals. All vessels, regardless of size, must observe a 10-knot speed restriction in specific areas designated by NMFS for the protection of NARWs from vessel strikes, including seasonal management areas (SMAs) and dynamic management areas (DMAs) when in effect. See www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-ship-strikes-north-atlantic-right-whales for specific detail regarding these areas.

All vessels must reduce their speed to 10-knots or less when mother/calf pairs, pods, or large assemblages of cetaceans are observed near a vessel;

All vessels must maintain a minimum separation distance of 500 m (1,640 ft) from right whales and other ESA-listed species. If an ESA-listed species is sighted within the relevant separation distance, the vessel must steer a course away at 10-knots or less until the 500 m separation distance has been established. If a whale is observed but cannot be confirmed as a species that is not ESA-listed, the vessel operator must assume that it is an ESA-listed species and take appropriate action.

All vessels must maintain a minimum separation distance of 100 m (328 ft) from non-ESA-listed baleen whales.

All vessels must, to the maximum extent practicable, attempt to maintain a minimum separation distance of 50 m (164 ft) from all other marine mammals, with an understanding that, at times, this may not be possible (e.g., for animals that approach the vessel, bow-riding species).

When marine mammal are sighted while a vessel is underway, the vessel shall take action as necessary to avoid violating the relevant separation distance (e.g., attempt to remain parallel to the animal's course, avoid excessive speed or abrupt changes in direction until the animal has left the area, reduce speed and shift the engine to neutral). This does not apply to any vessel towing gear or any vessel that is navigationally constrained.

Members of the monitoring team will consult NMFS NARW reporting system and Whale Alert, daily and as able, for the presence of NARWs throughout survey operations, and for the establishment of a DMA. If NMFS should establish a DMA in the survey area during the survey, the vessels will abide by speed restrictions in the DMA.

Training

All PSOs must have completed a PSO training program and received NMFS approval to act as a PSO for geophysical surveys. Documentation of NMFS approval and most recent training certificates of individual PSOs' successful completion of a commercial PSO training course must be provided upon request. Further information can be found at www.fisheries.noaa.gov/national/endangered-species-conservation/protected-species-observers.

Atlantic Shores shall instruct relevant vessel personnel with regard to the authority of the marine mammal monitoring team, and shall ensure that relevant vessel personnel and the marine mammal monitoring

team participate in a joint onboard briefing (hereafter PSO briefing), led by the vessel operator and lead PSO, prior to beginning survey activities to ensure that responsibilities, communication procedures, marine mammal monitoring protocols, safety and operational procedures, and IHA requirements are clearly understood. This PSO briefing must be repeated when relevant new personnel (e.g., PSOs, acoustic source operator) join the survey operations before their responsibilities and work commences.

Survey-specific training will be conducted for all vessel crew prior to the start of a survey and during any changes in crew such that all survey personnel are fully aware and understand the mitigation, monitoring, and reporting requirements. All vessel crew members must be briefed in the identification of protected species that may occur in the survey area and in regulations and best practices for avoiding vessel collisions. Reference materials must be available aboard all survey vessels for identification of listed species. The expectation and process for reporting of protected species sighted during surveys must be clearly communicated and posted in highly visible locations aboard all survey vessels, so that there is an expectation for reporting to the designated vessel contact (such as the lookout or the vessel captain), as well as a communication channel and process for crew members to do so. Prior to implementation with vessel crews, the training program will be provided to NMFS for review and approval. Confirmation of the training and understanding of the requirements will be documented on a training course log sheet. Signing the log sheet will certify that the crew member understands and will comply with the necessary requirements throughout the survey activities.

Proposed Monitoring and Reporting

The proposed monitoring and reporting requirements are identical to those included in the Federal Register notice announcing the final 2022 IHA (87 FR 24103, April 22, 2022; 87 FR 26726, May 5, 2022). The measures proposed for inclusion in this IHA are found below.

Monitoring Measures

Atlantic Shores must use independent, dedicated, trained PSOs, meaning that the PSOs must be employed by a third-party observer provider, must have no tasks other than to conduct observational effort, collect data, and communicate with and instruct relevant vessel crew with regard to the presence of marine mammal and mitigation requirements (including brief alerts regarding maritime hazards), and must have successfully completed an approved PSO training course for geophysical surveys. Visual monitoring must be performed by qualified, NMFS-approved PSOs. PSO resumes must be provided to NMFS for review and approval prior to the start of survey activities.

PSO names must be provided to NMFS by the operator for review and confirmation of their approval for specific roles prior to commencement of the survey. For prospective PSOs not previously approved, or for PSOs whose approval is not current, NMFS must review and approve PSO qualifications. Resumes should include information related to relevant education, experience, and training, including dates, duration, location, and description of prior PSO experience. Resumes must be accompanied by relevant documentation of successful completion of necessary training.

NMFS may approve PSOs as conditional or unconditional. A conditionally-approved PSO may be one who is trained but has not yet attained the requisite experience. An unconditionally-approved PSO is one who has attained the necessary experience. For unconditional approval, the PSO must have a minimum of 90 days at sea performing the role during a geophysical survey, with the conclusion of the most recent relevant experience not more than 18 months previous.

At least one of the visual PSOs aboard the vessel must be unconditionally-approved. One unconditionally-approved visual PSO shall be designated as the lead for the entire PSO team. This lead should typically be the

[[Page 19085]]

PSO with the most experience, would coordinate duty schedules and roles for the PSO team, and serve as primary point of contact for the vessel operator. To the maximum extent practicable, the duty schedule shall be planned such that unconditionally-approved PSOs are on duty with conditionally-approved PSOs.

PSOs must have successfully attained a bachelor's degree from an accredited college or university with a major in one of the natural sciences, a minimum of 30 semester hours or equivalent in the biological sciences, and at least one undergraduate course in math or statistics. The educational requirements may be waived if the PSO has acquired the relevant skills through alternate experience. Requests for such a waiver shall be submitted to NMFS and must include written justification. Alternate experience that may be considered includes, but is not limited to (1) secondary education and/or experience comparable to PSO duties; (2) previous work experience conducting academic, commercial, or government-sponsored marine mammal surveys; and (3) previous work experience as a PSO (PSO must be in good standing and demonstrate good performance of PSO duties).

PSOs must successfully complete relevant training, including completion of all required coursework and passing (80 percent or greater) a written and/or oral examination developed for the training program.

PSOs must coordinate to ensure 360[deg] visual coverage around the vessel from the most appropriate observation posts and shall conduct visual observations using binoculars or night-vision equipment and the naked eye while free from distractions and in a consistent, systematic, and diligent manner.

PSOs may be on watch for a maximum of four consecutive hours followed by a break of at least two hours between watches and may conduct a maximum of 12 hours of observation per 24-hour period.

Any observations of marine mammal by crew members aboard any vessel associated with the survey shall be relayed to the PSO team.

Atlantic Shores must work with the selected third-party PSO provider to ensure PSOs have all equipment (including backup equipment) needed to adequately perform necessary tasks, including accurate determination of distance and bearing to observed marine mammals, and to ensure that PSOs are capable of calibrating equipment as necessary for accurate distance estimates and species identification. Such equipment, at a minimum, shall include:

- At least one thermal (infrared) image device suited for the marine environment;

- Reticle binoculars (e.g., 7 x 50) of appropriate quality (at least one per PSO, plus backups);

- Global Positioning Units (GPS) (at least one plus backups);

- Digital cameras with a telephoto lens that is at least 300 millimeter (mm) or equivalent on a full-frame single lens reflex (SLR) (at least one plus backups). The camera or lens should also have an image stabilization system;

- Equipment necessary for accurate measurement of distances to marine mammal;

- Compasses (at least one plus backups);

- Means of communication among vessel crew and PSOs; and

- Any other tools deemed necessary to adequately and effectively perform PSO tasks.

The equipment specified above may be provided by an individual PSO, the third-party PSO provider, or the operator, but Atlantic Shores is responsible for ensuring PSOs have the proper equipment required to perform the duties specified in the IHA.

During good conditions (e.g., daylight hours; Beaufort sea state 3 or less), PSOs shall conduct observations when the specified acoustic sources are not operating for comparison of sighting rates and behavior with and without use of the specified acoustic sources and between acquisition periods, to the maximum extent practicable.

The PSOs will be responsible for monitoring the waters surrounding each survey vessel to the farthest extent permitted by sighting conditions, including Exclusion Zones, during all HRG survey operations. PSOs will visually monitor and identify marine mammals, including those approaching or entering the established Exclusion Zones during survey activities. It will be the responsibility of the PSO(s)

on duty to communicate the presence of marine mammals as well as to communicate the action(s) that are necessary to ensure mitigation and monitoring requirements are implemented as appropriate.

Atlantic Shores plans to utilize six PSOs across each vessel to account for shift changes, with a total of 18 during these surveys (six PSOs per vessel x three vessels). At a minimum, during all HRG survey operations (e.g., any day on which use of an HRG source is planned to occur), one PSO must be on duty during daylight operations on each survey vessel, conducting visual observations at all times on all active survey vessels during daylight hours (i.e., from 30 minutes prior to sunrise through 30 minutes following sunset) and two PSOs will be on watch during nighttime operations. The PSO(s) would ensure 360[deg] visual coverage around the vessel from the most appropriate observation posts and would conduct visual observations using binoculars and/or night vision goggles and the naked eye while free from distractions and in a consistent, systematic, and diligent manner. PSOs may be on watch for a maximum of four consecutive hours followed by a break of at least two hours between watches and may conduct a maximum of 12 hours of observation per 24-hr period. In cases where multiple vessels are surveying concurrently, any observations of marine mammals would be communicated to PSOs on all nearby survey vessels.

PSOs must be equipped with binoculars and have the ability to estimate distance and bearing to detect marine mammals, particularly in proximity to Exclusion Zones. Reticulated binoculars must also be available to PSOs for use as appropriate based on conditions and visibility to support the sighting and monitoring of marine mammals. During nighttime operations, night-vision goggles with thermal clip-ons and infrared technology would be used. Position data would be recorded using hand-held or vessel GPS units for each sighting.

During good conditions (e.g., daylight hours; Beaufort sea state (BSS) 3 or less), to the maximum extent practicable, PSOs would also conduct observations when the acoustic source is not operating for comparison of sighting rates and behavior with and without use of the active acoustic sources. Any observations of marine mammals by crew members aboard any vessel associated with the survey would be relayed to the PSO team.

Data on all PSO observations would be recorded based on standard PSO collection requirements (see Reporting Measures). This would include dates, times, and locations of survey operations; dates and times of observations, location and weather; details of marine mammal sightings (e.g., species, numbers, behavior); and details of any observed marine mammal behavior that occurs (e.g., noted behavioral disturbances).

Reporting Measures

Atlantic Shores shall submit a draft comprehensive report on all activities and monitoring results within 90 days of the completion of the survey or expiration of the IHA, whichever comes

[[Page 19086]]

sooner. The report must describe all activities conducted and sightings of marine mammals, must provide full documentation of methods, results, and interpretation pertaining to all monitoring, and must summarize the dates and locations of survey operations and all marine mammal sightings (dates, times, locations, activities, associated survey activities). The draft report shall also include geo-referenced, time-stamped vessel tracklines for all time periods during which acoustic sources were operating. Tracklines should include points recording any change in acoustic source status (e.g., when the sources began operating, when they were turned off, or when they changed operational status such as from full array to single gun or vice versa). GIS files shall be provided in ESRI shapefile format and include the UTC date and time, latitude in decimal degrees, and longitude in decimal degrees. All coordinates shall be referenced to the WGS84 geographic coordinate system. In addition to the report, all raw observational data shall be made available. The report must summarize the information submitted in interim monthly reports (if required) as well as additional data collected. A final report must be submitted within 30 days following

resolution of any comments on the draft report. All draft and final marine mammal and acoustic monitoring reports must be submitted to PR.ITP.MonitoringReports@noaa.gov and ITP.Potlock@noaa.gov.

PSOs must use standardized electronic data forms to record data. PSOs shall record detailed information about any implementation of mitigation requirements, including the distance of marine mammal to the acoustic source and description of specific actions that ensued, the behavior of the animal(s), any observed changes in behavior before and after implementation of mitigation, and if shutdown was implemented, the length of time before any subsequent ramp-up of the acoustic source. If required mitigation was not implemented, PSOs should record a description of the circumstances. At a minimum, the following information must be recorded:

1. Vessel names (source vessel and other vessels associated with survey), vessel size and type, maximum speed capability of vessel;
2. Dates of departures and returns to port with port name;
3. The lease number;
4. PSO names and affiliations;
5. Date and participants of PSO briefings;
6. Visual monitoring equipment used;
7. PSO location on vessel and height of observation location above water surface;
8. Dates and times (Greenwich Mean Time) of survey on/off effort and times corresponding with PSO on/off effort;
9. Vessel location (decimal degrees) when survey effort begins and ends and vessel location at beginning and end of visual PSO duty shifts;
10. Vessel location at 30-second intervals if obtainable from data collection software, otherwise at practical regular interval
11. Vessel heading and speed at beginning and end of visual PSO duty shifts and upon any change;
12. Water depth (if obtainable from data collection software);
13. Environmental conditions while on visual survey (at beginning and end of PSO shift and whenever conditions change significantly), including BSS and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon;
14. Factors that may contribute to impaired observations during each PSO shift change or as needed as environmental conditions change (e.g., vessel traffic, equipment malfunctions); and
15. Survey activity information (and changes thereof), such as acoustic source power output while in operation, number and volume of airguns operating in an array, tow depth of an acoustic source, and any other notes of significance (i.e., pre-start clearance, ramp-up, shutdown, testing, shooting, ramp-up completion, end of operations, streamers, etc.).

Upon visual observation of any marine mammal, the following information must be recorded:

1. Watch status (sighting made by PSO on/off effort, opportunistic, crew, alternate vessel/platform);
2. Vessel/survey activity at time of sighting (e.g., deploying, recovering, testing, shooting, data acquisition, other);
3. PSO who sighted the animal;
4. Time of sighting;
5. Initial detection method;
6. Sightings cue;
7. Vessel location at time of sighting (decimal degrees);
8. Direction of vessel's travel (compass direction);
9. Speed of the vessel(s) from which the observation was made;
10. Identification of the animal (e.g., genus/species, lowest possible taxonomic level or unidentified); also note the composition of the group if there is a mix of species;
11. Species reliability (an indicator of confidence in identification);
12. Estimated distance to the animal and method of estimating distance;
13. Estimated number of animals (high/low/best);
14. Estimated number of animals by cohort (adults, yearlings, juveniles, calves, group composition, etc.);
15. Description (as many distinguishing features as possible of

each individual seen, including length, shape, color, pattern, scars, or markings, shape and size of dorsal fin, shape of head, and blow characteristics);

16. Detailed behavior observations (e.g., number of blows/breaths, number of surfaces, breaching, spyhopping, diving, feeding, traveling; as explicit and detailed as possible; note any observed changes in behavior before and after point of closest approach);

17. Mitigation actions; description of any actions implemented in response to the sighting (e.g., delays, shutdowns, ramp-up, speed or course alteration, etc.) and time and location of the action;

18. Equipment operating during sighting;

19. Animal's closest point of approach and/or closest distance from the center point of the acoustic source; and

20. Description of any actions implemented in response to the sighting (e.g., delays, shutdown, ramp-up) and time and location of the action.

If a NARW is observed at any time by PSOs or personnel on any survey vessels, during surveys or during vessel transit, Atlantic Shores must report the sighting information to the NMFS North Atlantic Right Whale Sighting Advisory System (866-755-6622) within two hours of occurrence, when practicable, or no later than 24 hours after occurrence. NARW sightings in any location may also be reported to the U.S. Coast Guard via channel 16 and through the WhaleAlert app (<http://www.whalealert.org>).

In the event that personnel involved in the survey activities discover an injured or dead marine mammal, Atlantic Shores must report the incident to NMFS as soon as feasible by phone (866-755-6622) and by email (nmfs.gar.stranding@noaa.gov and PR.ITP.MonitoringReports@noaa.gov) as soon as feasible. The report must include the following information:

1. Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
2. Species identification (if known) or description of the animal(s) involved;
3. Condition of the animal(s) (including carcass condition if the animal is dead);
4. Observed behaviors of the animal(s), if alive;

[[Page 19087]]

5. If available, photographs or video footage of the animal(s); and
6. General circumstances under which the animal was discovered.

In the unanticipated event of a ship strike of a marine mammal by any vessel involved in the activities covered by the IHA, Atlantic Shores must report the incident to NMFS by phone (866-755-6622) and by email (nmfs.gar.stranding@noaa.gov and PR.ITP.MonitoringReports@noaa.gov) as soon as feasible. The report would include the following information:

1. Time, date, and location (latitude/longitude) of the incident;
2. Species identification (if known) or description of the animal(s) involved;
3. Vessel's speed during and leading up to the incident;
4. Vessel's course/heading and what operations were being conducted (if applicable);
5. Status of all sound sources in use;
6. Description of avoidance measures/requirements that were in place at the time of the strike and what additional measures were taken, if any, to avoid strike;
7. Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, visibility) immediately preceding the strike;
8. Estimated size and length of animal that was struck;
9. Description of the behavior of the marine mammal immediately preceding and/or following the strike;
10. If available, description of the presence and behavior of any other marine mammals immediately preceding the strike;
11. Estimated fate of the animal (e.g., dead, injured but alive, injured and moving, blood or tissue observed in the water, status unknown, disappeared); and
12. To the extent practicable, photographs or video footage of the

animal(s).

Preliminary Determinations

When issuing the 2022 IHA (87 FR 24103, April 22, 2022), NMFS found Atlantic Shores' proposed HRG survey would have a negligible impact to species or stocks annual rates of recruitment and survival and the amount of taking would be small relative to the population size of such species or stocks (less than 6 percent). Atlantic Shores' proposed HRG survey activities are identical to those analyzed in support of the 2022 IHA. Additionally, the potential effects of the activity, taking into consideration the proposed mitigation and related monitoring measures, are identical to those evaluated in support of the 2022 IHA. There is a minor increase in estimated take numbers for six marine mammal species and/or stocks (see Table 2). However, the total amount of takes proposed for authorization are small relative to the best available population size of each species or stock (less than 1 percent for 13 stocks; less than 2 percent for 2 stocks; and less than 19 percent for the remaining stock (Western North Atlantic Migratory Coastal Stock of Bottlenose dolphins)). Additionally, only Level B harassment is proposed for authorization, which NMFS expects would be of a lower severity, predominately in the form of avoidance of the sound sources that may cause a temporary abandonment of the location during active source use that may result in a temporary interruption of foraging activities for some species. NMFS does not expect that the proposed activity will have long-term or permanent impacts as the acoustic source would be mobile and would leave the area within a specific amount of time for which the animals could return to the area. Even considering the increased estimated take for some species, the impacts of these lower severity exposures are not expected to accrue to a degree that the fitness of any individuals would be impacted, and therefore, no impacts on the annual rates of recruitment or survival are expected to result.

As previously discussed in the 2022 IHA (87 FR 24103, April 22, 2022), impacts from the survey are expected to be localized to the specific area of activity and only during periods of time where Atlantic Shores' acoustic sources are active. While areas of biological importance to fin whales, humpback whales, and harbor seals can be found off the coast of New Jersey and New York, NMFS does not expect these activities to affect these areas. This is due to the combination of the mitigation and monitoring measures being required of Atlantic Shores as well as the location of these biologically important areas. All of these important areas are found outside of the range of this survey area, as is the case with fin whales and humpback whales (BIAs found further north), and, therefore, not expected to be impacted by Atlantic Shores' survey activities. Three major haul-out sites exist for harbor seals within ECR North along New Jersey, including at Great Bay, Sand Hook, and Barnegat Inlet (CWFNJ, 2015). As hauled out seals would be out of the water, no in-water effects are expected.

Atlantic Shores' project would occur in a small fraction of the migratory corridor for the North Atlantic right whale and impacts are expected to be limited to low levels of behavioral harassment, resulting in temporary and minor behavioral changes during any brief period of exposure. As noted for the 2022 IHA (87 FR 24103, April 22, 2022), the size of the survey area (5,868 km²) in comparison with the entire migratory habitat for the North Atlantic right whale (BIA of 269,448 km²) is small, representing 2.11 percent of the entire migratory corridor. Given the transitory nature of North Atlantic right whales in this area and due to the lack of year-round ``core'' North Atlantic right whale foraging habitat (Oleson et al., 2020) (such habitat is located much further north in the southern area of Martha's Vineyard and Nantucket Islands where both visual and acoustic detections of North Atlantic right whales indicate a nearly year-round presence (Oleson et al., 2020)), it is unlikely for any exposure to cause chronic effects as any exposure would be short and intermittent. Furthermore, given the small size of the Level B harassment zones (141 m) and the robust suite of mitigation and monitoring measures proposed by NMFS, with specific note on the mitigation zones for North Atlantic right whales (exclusion zone; 500 m), NMFS does not expect adverse impacts on this species. Lastly, NMFS notes the reduction in requested

take from the 2022 IHA (87 FR 4200, January 27, 2022; 87 FR 24103, April 22, 2022) due to the revised Duke University density data (Roberts and Halpin, 2022). Under the 2022 IHA, NMFS authorized 17 instances of take for North Atlantic right whales. Here, NMFS is proposing only three takes by Level B harassment representing less than 1 percent of the overall species abundance. Given the updates to the density for this species in particular during the periods where project activities are expected to be ongoing, NMFS expects low-level impacts (e.g., temporary avoidance of the area) from this proposed project on North Atlantic right whales.

We also note that our findings for other species with active UMEs or species where biologically important areas or haul-outs have been previously described in the 2022 IHA remain applicable to this project. In conclusion, there is no new information suggesting that our analysis or findings should change.

Based on the information contained here and in the referenced documents, NMFS has preliminarily determined the following: (1) the required mitigation measures will effect the least practicable impact on marine mammal species or stocks and their habitat; (2) the proposed authorized takes will have a

[[Page 19088]]

negligible impact on the affected marine mammal species or stocks; (3) the proposed authorized takes represent small numbers of marine mammals relative to the affected stock abundances; (4) Atlantic Shores' activities will not have an unmitigable adverse impact on taking for subsistence purposes as no relevant subsistence uses of marine mammals are implicated by this action, and (5) appropriate monitoring and reporting requirements are included.

Endangered Species Act (ESA)

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA: 16 U.S.C. 1531 et seq.) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally whenever we propose to authorize take for endangered or threatened species.

NMFS is proposing to authorize the incidental take of four species of marine mammals which are listed under the ESA, the North Atlantic right, fin, sei, and sperm whale, and has determined that this activity falls within the scope of activities analyzed in NMFS Greater Atlantic Regional Fisheries Office's programmatic consultation regarding geophysical surveys along the U.S. Atlantic coast in the three Atlantic Renewable Energy Regions (completed June 29, 2021; revised September 2021).

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to Atlantic Shores for conducting HRG marine site characterization surveys off New Jersey and New York for a period of one year, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. A draft of the proposed IHA can be found at <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>.

Request for Public Comments

We request comment on our analyses (included in both this document and the referenced documents supporting the 2022 IHA (ITA application; issued IHA; and Federal Register notices including 87 FR 4200, January 27, 2022; 87 FR 24103, April 22, 2022; 87 FR 26726, May 5, 2022)), the proposed authorization, and any other aspect of this notice of proposed IHA for the proposed HRG marine site characterization surveys. We also request comment on the potential for renewal of this proposed IHA as

described in the paragraph below. Please include with your comments any supporting data or literature citations to help inform our final decision on the request for MMPA authorization.

On a case-by-case basis, NMFS may issue a one-time, one-year renewal IHA following notice to the public providing an additional 15 days for public comments when (1) up to another year of identical or nearly identical activities as described in the Description of the Proposed Activity and Anticipated Impacts section of this notice is planned or (2) the activities as described in the Description of the Proposed Activity and Anticipated Impacts section of this notice would not be completed by the time the IHA expires and a renewal would allow for completion of the activities beyond that described in the Dates and Duration section of this notice, provided all of the following conditions are met:

A request for renewal is received no later than 60 days prior to the needed renewal IHA effective date (recognizing that the renewal IHA expiration date cannot extend beyond one year from expiration of the initial IHA);

The request for renewal must include the following:

(1) An explanation that the activities to be conducted under the requested renewal IHA are identical to the activities analyzed under the initial IHA, are a subset of the activities, or include changes so minor (e.g., reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take); and

(2) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized; and

Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures will remain the same and appropriate, and the findings in the initial IHA remain valid.

Dated: March 24, 2023.

Kimberly Damon-Randall,
Director, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2023-06594 Filed 3-29-23; 8:45 am]

BILLING CODE 3510-22-P



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment on proposed Atlantic Shores IHA

1 message

salbright2@aol.com <salbright2@aol.com>

Thu, Apr 6, 2023 at 2:24 PM

Reply-To: salbright2@aol.com

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

*Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service*

Good Afternoon Chief Harrison,

I am writing to oppose and criticize the comments below from NOAA. The verb "expect", the lack of concrete evidence offered, the suggestion that animals "will get the hell out of the way and come home when the survey is over" is ridiculous speculation. Where is the scientific evidence regarding LACK OF HARM and ability to survive? Where is the evidence they will not be hit by ships as they attempt to relocate? Please do not insult our intelligence and put marine animal lives at risk:

NMFS does not expect that the proposed activity will have long-term or permanent impacts as the acoustic source would be mobile and would leave the area within a specific amount of time for which the animals could return to the area."

In short these thousands of large animals will get the hell out of the way and come home when the survey is over, in a year or so.

*Thank You,
Suzanne Albright
Great Lakes Wind Truth
Rochester, NY*



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment on proposed Atlantic Shores IHA - STOP Industrial Offshore Wind Turbine Power Plant Development

1 message

Garrison, Brooks W. <bwg@garrisonarch.com>

Thu, Apr 6, 2023 at 4:13 PM

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Please STOP the surveys for Industrial Offshore Wind Turbine Power Plant Development!! I am not requesting a pause or delay. The surveys must STOP.

It is clear that excuses of vessel strikes and natural causes are no longer rational or a viable option given the carnage that has washed ashore and at least that many which have not washed ashore. It is irresponsible to continue to deny the direct relationships between the survey vessel locations and resulting mortality.

Please STOP the killing!!

Respectfully,

Brooks W. Garrison

204 15th Street N

Brigantine NJ, 08203

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itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment on proposed Atlantic Shores IHA

1 message

Christina Pescatore <chrisp325@comcast.net>

Thu, Apr 6, 2023 at 4:59 PM

To: ITP.Potlock@noaa.gov

Are you kidding me? Where are all of the environmentalist now? I am not an activist. But when i sees around idea, I must speak up. You are killing our marine life!!! Stop theinsanity. Stop destroying our environment to save the environment. It makes absolutely no sense. Stop the surveying. Stop the offshore wind turbine farms now!!
Christina

Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Harassing sea mammals

1 message

Richard Roach <dick@dickandbevroach.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 7, 2023 at 8:13 PM

We need to stop this craziness in harassing our sea mammals. If we keep on this track we will eventually drive them to extinction. Let's stop this off shore foolishness and get behind making our hydro plants more efficient and developing new nuclear plants. Wind is totally a waste of time.

Richard Roach



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment on Proposed Atlantic Shores IHA

1 message

Stephanie Donato <stephaniedonato5@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 7, 2023 at 11:04 PM

Ms. Harrison,

I OBJECT TO THE OFF SHORE WIND PROJECT!

We own a family home at the New Jersey and every year watch the whales and dolphin swim up and down the coast. I am sick to my stomach to see these poor mammals washing up dead. I am terrified that I will wake up one morning and see one dead on our beach.

My question to you and others at the NOAA, will you be able to live with yourselves when our shore line is littered with these horrific looking wind farms and the North American Endangered Whales are extinct?

Stephanie Donato

Sent from my iPad



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Save our Marine Mammals

1 message

claire annechini <claireannechini@gmail.com>
To: ITP.Potlock@noaa.gov

Mon, Apr 10, 2023 at 9:15 AM

We need you to cancel out this program close to Long beach Island as it is destroying the lives of our marine life



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores request

1 message

Tony Veteri <tveteri@gmail.com>

Mon, Apr 10, 2023 at 9:41 AM

To: ITP.Potlock@noaa.gov

Dear Jolie Harrison '

As Chief of permits and conservation division, and office of protecting resources, and National Marine Fisheries Service, please deny Atlantic Shores requests!

Our environment and marine wildlife are more important to our world than what is being proposed. I truly believe what is proposed will never deliver what is promised.

Please protect what you are responsible for!

We need you to do what is best for our environment, we need for you to be courageous! Wishing you all the best!

Sincerely,

Anthony Veteri

Brant Beach, (LBI), NJ



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Wind Turbines

1 message

George Salvatore <gksalvadore@gmail.com>
To: ITP.Potlock@noaa.gov

Mon, Apr 10, 2023 at 10:04 AM

I am opposed to wind turbines off of Long Beach Island, NJ.
DON'T WE GET A VOTE?

--
Sincerely,

G. Kelly Salvatore
610.574.8570



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

I OBJECT to the authorization to take marine mammals off NJ and NY.1 message

Diane SNELSON <snel2verworth@verizon.net>
To: ITP.Potlock@noaa.gov

Mon, Apr 10, 2023 at 10:07 AM

ITP Potlock:

I OBJECT TO THE authorization to take marine mammals incidental to marine site characterization offshore of New Jersey and New York! I OBJECT TO THE development of massive wind farms off the NJ and NY coast!

All phases of wind energy development can be disrupting and disastrous to marine mammals, from the devices used in surveys that can "generate sound that may affect a marine mammal's behavior" and lead to "serious consequences," to the pile driving during construction to the operational sounds of completed wind turbines in use.

We need better solutions that will not jeopardize the our ecosystem in the long run. These animals that you want to harm and KILL are important in nature. YOU HAVE NO RIGHT TO TAKE THEM!

Diane Snelson
Brant Beach, NJ.

Diane Snelson
Mobile, 201-396-0711
snel2verworth@verizon.net



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores level B Take

1 message

Martha Hafer <mlhafer@me.com>

Mon, Apr 10, 2023 at 10:35 AM

To: ITP.Potlock@noaa.gov

I am writing to express my disapproval of all the off shore wind turbines as currently planned, but more directly, the impact on mammals, most specifically the North Atlantic Right Whales. When does all this progress stop before we no longer have nature as we once knew it, before there are no whales or dolphins? Maybe we need to ask inhabitants of the land to cut back on electric usage. Please think about all this and deny the request by Atlantic Shores for a "B" level take. Thank you.

Martha Hafer



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Windmills

1 message

Beverly Reiting <breit888@comcast.net>
To: ITP.Potlock@noaa.gov

Mon, Apr 10, 2023 at 12:03 PM

I am extremely against putting them out in the ocean. Many of us think you should look into another placement such as the Pine Barrens where it wouldn't affect the environment as much

Beverly Reiting
Brant Beach

Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Re: Windmills

1 message

Beverly Reiting <breit888@comcast.net>
To: ITP.Potlock@noaa.gov

Mon, Apr 10, 2023 at 12:05 PM

To Jolie Harrison

Sent from my iPhone

> On Apr 10, 2023, at 12:03 PM, Beverly Reiting <breit888@comcast.net> wrote:

>

> I am extremely against putting them out in the ocean. Many of us think you should look into another placement such as the Pine Barrens where it wouldn't affect the environment as much

> Beverly Reiting

> Brant Beach

>

> Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Additional takes

1 message

Jamie Steiert <jlsteiert@gmail.com>
To: ITP.Potlock@noaa.gov

Mon, Apr 10, 2023 at 12:33 PM

How can this be happening. How can you continue to authorize takes of mammals? You must decline any further take requests. These projects are a scam and we all know it. Do your job and protect the oceans.
All the best,

Jamie Steiert

608-469-1041

Please excuse typos as this was sent from my iPhone.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores Take Permit

1 message

STEPHEN KARL <garfconect@aol.com>
To: ITP.Potlock@noaa.gov

Mon, Apr 10, 2023 at 12:59 PM

I strongly oppose the granting of any added take permits for Atlantic Shores wind projects. They have killed more than enough fish, whales, dolphins and more.
Thanks for your consideration

Stephen Karl
31 West Holly Drive
Beach Haven, New Jersey 08008

Sent from my iPad



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

NO NO NO to Atlantic Shores further killing our Marine Life!!!!1 message

MTC <MCoughlin@barnegatbaycapm.com>

Mon, Apr 10, 2023 at 1:11 PM

To: "itp.potlock@NOAA.gov" <itp.potlock@noaa.gov>

TO: Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources,
National Marine Fisheries Service

Dear Ms. Harrison,

I understand that most of your bosses have been bought by Big Wind and the farce they are using to desecrate our oceans, so I don't hold you personally responsible but please, FOR THE LOVE OF GOD, stop this.

I am a voting DEMOCRAT, for CRYING OUT LOUD. I support all reasonable means to attempt to eradicate the negative effects of climate change. Offshore wind is NOT one of them.

Please, DO NOT ISSUE any more takes to Atlantic Shores or any other of these Global Conglomerate greedy liars who care nothing about our oceans. The only thing the name Atlantic Shores evokes is the place where more dead whales and dolphins will appear, on our beaches, time and again as long as you continue to fast track these despicable investors. Please stop this.

Thank you.

NOAA has received a new request from Atlantic Shores (as a reminder, this is the wind lease area immediately off LBI, Atlantic City and Brigantine) to Take additional Marine Mammals in order to continue to survey the ocean bottom.

As we now know, a Take is the term used to describe the impact on Marine life.

Level A Take includes permanent hearing loss and other bodily injury.

Level B harassment includes behavioral disturbance (such as frightening an animal from its normal feeding area) and temporary hearing loss.

A deafened whale fleeing into a shipping channel is likely a dead whale.

This new request from Atlantic Shores is a 'B' level Take

The authorization that Atlantic Shores is requesting is for:

- *2317 Bottlenose dolphin*
- *736 Gray Seals*
- *736 Harbor Seals*
- *142 Harbor Porpoises*
- *100 Common Dolphins*
- *50 Atlantic Spotted Dolphins*
- *24 Minke Whales*
- *6 Fin Whales*
- *5 Humpback Whales*
- *3 North Atlantic Right Whales (an endangered species with less than 300 left in the entire world)*

NOAA is accepting comments on this additional application from Atlantic Shores for additional Takes.

Remember, Atlantic Shores has already received authorizations for Takes in this exact area. The numbers above are incremental to their original authorizations.

According to the application (which can be read [here](#)) comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

Written comments should be submitted via email to ITP.Potlock@noaa.gov.

Kind regards,

Mary

Mary Coughlin, Principal

Barnegat Bay Capital Management, LLC

310-496-6543

www.barnegatbaycapm.com/





itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment on proposed Atlantic Shores IHA - corrected version1 message

Mary Ann Rollano <rollanom@gmail.com>

Mon, Apr 10, 2023 at 2:38 PM

To: itp.potlock@noaa.gov

I'm sorry for my autocorrect changing my previous letter from the "North Atlantic right whale" to the "North American right whale."

Here is the corrected version:

Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

You can argue for or against offshore wind turbines and find evidence for the pros and cons ad infinitum, depending on which side of the climate debate you are on. But, the most significant push for offshore wind development is vast government subsidies funded by taxpayers, paying big wind corporations, which make inside connections to government agencies, agents, and environmental groups.

However, you can't argue against saving the North Atlantic right whale from extinction. Only 334 remain, of which 100 are breeding females. As you know, North Atlantic right whales live, breed, feed, and migrate up and down the Atlantic coast.

"The data reveals that NOAA has either granted or is in the final stages of granting Level B takes for 915 critically endangered North Atlantic right whales, of which only 334 remaining animals are alive. Either this means NOAA and the wind companies expect repeated harassment (including recurrent hearing impairment) of numerous right whales, or they have not taken the trouble to realize they have granted more "takes" than the number of live whales who exist today."

- <https://www.eastbayri.com/stories/letter-take-authorizations-prove-noaa-is-lying-about-whale-deaths,111587>

It is beyond hubris to promulgate the notion that human industrial oceanic activity does not adversely affect marine life. It is not something to be played with, and it has already been proven and documented that it does lead to their demise.

[Stranded Whales Were Deaf - Raising More Questions Over Offshore Wind Farms](#)

We are all stewards of nature, whether we want to accept that charge or not. We have the responsibility to preserve our marine ecosystem and ecological environment.

Killing nature to save the planet is oxymoronic. You have lost sight of protecting marine mammals in the chaos of the offshore wind stampede. I hope you reconsider your mission and reason for being.

Do you protect marine mammals and their habitat and maintain healthy marine ecosystems, or are you industrial predators with over-aggressive incidental take authorizations?

It appears you are authorizing purposeful takes with the continuation of level A and level B harassment with their known adverse effects. It's an excellent way of saying, "We know we're

killing marine life, but it's okay. We are not culpable if we deny the truth before our eyes."

The truth is, you are culpable for your actions.

Pursuing offshore wind development along the North and Mid-Atlantic coast is an "unmitigable impact on subsistence uses" of the Atlantic migratory corridor that will directly lead to the extinction of the North Atlantic right whale.

I am 100 percent against offshore wind development at any level. I am also against any offshore oil drilling. Please stop this and all projects immediately before it's too late.

Sincerely,
Mary Ann Rollano



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Wind Lease

1 message

Deborah Pereira Repko <deborahpr24@gmail.com>

Mon, Apr 10, 2023 at 3:52 PM

To: ITP.Potlock@noaa.gov

I am a resident of NJ and I own property in Ship Bottom, NJ. I am opposed to the Wind Lease Program off the NJ coast. This program is detrimental to sea life and human beings. This program is ruining our beautiful beaches and destroying marine life. Please stop this program from moving forward.

Deborah

--

Deborah Pereira Repko



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Additional OSW takes

1 message

Jeanette York <snagglepuss10@msn.com>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Mon, Apr 10, 2023 at 4:08 PM

Sent from [Mail](#) for Windows Please do not approve additional "takes" for OSW and allow for more deaths of the marine life. Thank you,

Jeanette York



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

SAVE OUR MARINE LIFE PLEASE

1 message

bambach@comcast.net <bambach@comcast.net>
To: ITP.Potlock@noaa.gov

Mon, Apr 10, 2023 at 4:44 PM

Can we really afford to risk further damage to our marine life when we know what the damage will be? Responsible action is preserving our marine life and approving technologies that supports that objective. This is outrageous and realistically with our political parties undoing what the other side does as the power changes, we will kills and harm thousands of marine life and see the windmills go away when a Republican gets in the White House. Best case do not approve but worst case at least wait until after Nov 2024 elections to see how it goes.

They need our help to survive:

This new request from Atlantic Shores is a 'B' level Take

The authorization that Atlantic Shores is requesting is for:

- 2317 Bottlenose dolphin
- 736 Gray Seals
- 736 Harbor Seals
- 142 Harbor Porpoises
- 100 Common Dolphins
- 50 Atlantic Spotted Dolphins
- 24 Minke Whales
- 6 Fin Whales
- 5 Humpback Whales
- 3 North Atlantic Right Whales (an endangered species with less than 300 left in the entire world)

Sincerely

John Bambach

28 E 43rd St

6/2/23, 10:14 AM

National Oceanic and Atmospheric Administration Mail - SAVE OUR MARINE LIFE PLEASE

Brant Beach NJ 08008



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

The Endangered Species Act: of 1973

1 message

Trudy Getler <tagbs@aol.com>

Mon, Apr 10, 2023 at 5:13 PM

To: "itp.potlock@noaa.gov" <itp.potlock@noaa.gov>

Jolie Harrison

I beg of you do not allow additional harass and take a 4000+ sea mammals by Atlantic Shores. We can not take the chance of destroying other species in our speedy quest for green energy. I'm old enough to remember the horror of whaling and volunteered in work to enact **The Endangered Species Act: of 1973.** We are suppose to be their protector and our government is breaking our own laws to allow this to happen. It's an atrocity!

Sincerely,
Trudy Getler,
Cape May, NJ

Sent from the all new AOL app for iOS



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic shores wind farm

1 message

STEPHEN KARL <garfconect@aol.com>
To: ITP.Potlock@noaa.gov

Mon, Apr 10, 2023 at 5:25 PM

I strongly urge you and NOAA to deny Atlantic shores additional take permit. They have killed enough whales and dolphins.

Denise GOLD



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores Application

1 message

bklatash <bklatash@aol.com>
To: ITP.Potlock@noaa.gov

Mon, Apr 10, 2023 at 11:15 PM

ATTN: Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

I AM 100 % AGAINST NOAA ALLOWING ATLANTIC SHORES TO "TAKE" A SINGLE ADDITIONAL MARINE MAMMAL.

NOAA SHOULD BE ASHAMED OF ITSELF FOR ALLOWING IT TO BEGIN WITH, ITS A DISGRACE. ALL IN THE NAME OF GREEN ENERGY. THE ONLY THING GREEN ABOUT IT IS THE MONEY EVERYONE'S MAKING AND NO ONE CAN CONVINCE ME OTHERWISE.

The authorization that Atlantic Shores is requesting is for:

2317 Bottlenose dolphin THAT'S 2317 TOO MANY
736 Gray Seals THAT'S 736 TOO MANY
736 Harbor Seals THAT'S 736 TOO MANY
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24 Minke Whales THAT'S 24 TOO MANY
6 Fin Whales THAT'S 6 TOO MANY
5 Humpback Whales THAT'S 5 TOO MANY
3 North Atlantic Right Whales (an endangered species with less than 300 left in the entire world) THAT'S 3 TOO MANY.

I AM SHOCKED AND APPALLED THAT NOAA IS ALLOWING OUR OCEAN TO BE DESTROYED. IF OUR CREATOR MEANT TO HAVE WINDFARMS THAT DESTROY GODS GREAT CREATURES OF THE SEA, GOD WOULD HAVE PUT THEM THERE.

WHERE THE HELL ARE THE ENVIRONMENTALISTS?

ITS A CRIME AND GOD IS WATCHING.

SHOULDN'T NOAA AWAIT THE RESULTS OF CONGRESSMAN CHRIS SMITH'S LEGISLATION?

Rep. Chris Smith, Tom Arnone, the Director of the Monmouth County Board of Commissioners, and other Monmouth County officials call on Governor Murphy and President Biden to pause the development of massive wind turbine farms off New Jersey's coast until answers are provided regarding the significant threats to marine life, commercial and recreational fishing, tourism, and the safety of military and other ships at sea.

Smith is the author of legislation that passed the House last week (244-189) to assess the sufficiency of the reviews and permits used to green light and rush through the industrial wind farms.

"With so much at stake—and out of an abundance of caution and concern—a serious, aggressive and independent analysis of the impacts of these projects is absolutely critical," Smith said.

Sent from my Verizon, Samsung Galaxy smartphone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

RE: Atlantic Shores Application

1 message

bklatash <bklatash@aol.com>

Mon, Apr 10, 2023 at 11:25 PM

To: ITP.Potlock@noaa.gov, bklatash@aol.com

To: ITP.Potlock@noaa.gov

Subject: Atlantic Shores Application

ATTN: Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

I AM 100 % AGAINST NOAA ALLOWING ATLANTIC SHORES TO "TAKE" A SINGLE ADDITIONAL MARINE MAMMAL.

NOAA SHOULD BE ASHAMED OF ITSELF FOR ALLOWING IT TO BEGIN WITH, ITS A DISGRACE. ALL IN THE NAME OF GREEN ENERGY. THE ONLY THING GREEN ABOUT IT IS THE MONEY EVERYONE'S MAKING AND NO ONE CAN CONVINCE ME OTHERWISE.

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"With so much at stake—and out of an abundance of caution and concern—a serious, aggressive and independent analysis of the impacts of these projects is absolutely critical," Smith said.

STOP THESE WIND FARMS NOW!

Brian K. Logan

6/2/23, 10:12 AM

National Oceanic and Atmospheric Administration Mail - RE: Atlantic Shores Application

23 East 48th Street
Brant Beach
Long Beach Township, NJ 08008

Sent from my Verizon, Samsung Galaxy smartphone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores takes

1 message

kris reichey <kristinreichey@gmail.com>
To: ITP.Potlock@noaa.gov

Tue, Apr 11, 2023 at 7:33 AM

No. Stop killing our sea life and destroying our ecosystem. Vile human beings.

Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shore Wind Farm Marine Mammal Takes

1 message

Lorraine Duran <lorraine.duran33@gmail.com>
To: ITP.Potlock@noaa.gov

Tue, Apr 11, 2023 at 8:40 AM

Please **do not allow** the approval for the Atlantic Shore wind farm for marine mammal takes. The amount of deaths for these marine mammals is one too many. These marine mammals do no harm and need to live in their environment without disruption. Some of these species are endangered and with the continuous development of wind farms it will make these majestic creatures extinct. There is no benefit in destroying our environment. There have been proven studies that these mammals are affected in a negative way by this and should be protected.

We need to preserve our oceans so they remain free for these mammals, fish and crustaceans to live without disruption to their environment.

As your mission states under NOAA Fisheries:

Our Mission

NOAA Fisheries is responsible for the stewardship of the nation's ocean resources and their habitat. We provide vital services for the nation, all backed by sound science and an ecosystem-based approach to management:

- Productive and sustainable fisheries
- Safe sources of seafood
- ***Recovery and conservation of protected resources***
- ***Healthy ecosystems***

Please support **"SAY NO"** to this application. Our environment will not be the same if allowed. By allowing this you are not supporting your mission.

Thank you,
Lorraine Duran



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

incidental deaths

1 message

bevtheenfc@comcast.net <bevtheenfc@comcast.net>
To: ITP.Potlock@noaa.gov

Tue, Apr 11, 2023 at 9:30 AM

You are asking for permission to allow the "Incidental deaths" of 40 Whales,
2,536 Dolphins, 142 Porpoises, and 1,472 Seals.
TOTAL = 4,190 Marine Mammal DEATHS.

YOU DO NOT HAVE MY PERMISSION (VOTING CITIZENS OF THE USA)

NO NO NO NO ...you are destroying our oceans w/
wind turbines, this is insane !

Beverly and Harold Marinelli

[28 Flemish Way](#)

[Lumberton NJ](#)

609 261 3346



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Stop the Wind Farm Actions on our shores / Deny the Additional Takes Application for Atlantic Shores

1 message

Gronke, Mark <Mark.Gronke@fnf.com>
To: "ITP.potlock@noaa.gov" <ITP.potlock@noaa.gov>

Tue, Apr 11, 2023 at 9:38 AM

This message was sent securely using Zix®

To the attention of Jolie Harrison – Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

As a resident of the NJ shore, and a witness to the marine mammal death-horrors of the last several months on our shoreline, I respectfully request your consideration.

Please deny the application of Atlantic Shores for additional takes. This misguided effort to create a new energy source at the expense of our marine environment, AND our own socioeconomic wellness of our shores, is appalling.

Thank you.

Mark

Mark A. Gronke, CRP/GMS

President

Fidelity Residential Solutions

89 Headquarters Plaza, North Tower, 12th floor

Morristown, NJ 07960

M: 404.788.2619

Mark.gronke@fnf.com



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itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores Wind Farm

1 message

Comcast <gettimone@comcast.net>
To: ITP.Potlock@noaa.gov

Tue, Apr 11, 2023 at 10:24 AM

I would like to register the following comment:

Do not allow any takings associated with the Atlantic Shores Wind Farm.

The potential marine mammal deaths associated this project are unacceptable. Do not allow the incidental deaths requested for this project.

Maria Savettiere
140 East Pennsylvania Ave
Long Beach Township, NJ 08008



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Stop the Windfarms at the East Coast/ LBI

1 message

Holly Marcello <hojolly@comcast.net>

Tue, Apr 11, 2023 at 11:20 AM

To: ITP.Potlock@noaa.gov

Cc: Diane Snelson <Dianemsnelson@gmail.com>

To whom it may concern,

Is anyone paying attention to what is currently happening on the east coast due to preparations to install wind turbines? Whales, dolphins and marine wildlife are dying and washing up on our beaches. This disturbance to our wildlife has NOT been in this abundance ever! We the people are OPPOSED to this project. Our governor, Murphy has a personal vested interest in this project.

We are asking you, NOAA to help us to put a STOP to this horrific project that is killing our wildlife. Preservation of our ocean wildlife should be a top priority!

Help support us that are opposed to this project immediately.

Sincerely,
Holly & Joe Marcello
Barnegat, NJ

Sent from my iPad



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

NO TAKES

1 message

Deb C <dc00093@gmail.com>

Tue, Apr 11, 2023 at 5:39 PM

To: "itp.potlock@noaa.gov" <itp.potlock@noaa.gov>

This is totally unacceptable for the Jersey Shore or anywhere. Killing our whales and dolphins is totally unacceptable. Let alone the health issues of swimming with cables under our beaches the horrible view of these giant ugly windmills destroying our views and destroying property values, ruining our tourism. Health issues have been reported from the silent low pitched sound which makes people sick without them even hearing it. PLEASE PLEASE STOP THIS NOW!!!! NO MORE WHALES OR DOLPHIN DEATHS due to your greed, where have you left your souls????

Deb Cramer

[99 Dolphin Rd](#)[Tuckerton NJ 08087](#)[Dc00093@gmail.com](#)



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

whales and other conservation items

1 message

Roger Madison <roger.a.madison@protonmail.com>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Wed, Apr 12, 2023 at 7:56 AM

Hello,

Not sure how one is supposed to reconcile one green thing versus another green thing.

Nobody wants these whales dead.

Using the pretext that wind generated electricity is of paramount importance because of some green thing to justify killing these whales has greenpeace in the act.

<https://www.greenpeace.org/usa/news/greenpeace-calls-for-ocean-protection-to-address-whale-deaths/>

I submit that these whales are more important than the windmills; please stop and examine the consequences.

Thank you,

Roger Allen Madison

Christian
Private Pilot
AAL/Sabre Retiree

Sent with [Proton Mail](#) secure email.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores harassment

1 message

Bob Liepa <bob.liepa@gmail.com>
To: ITP.Potlock@noaa.gov

Wed, Apr 12, 2023 at 9:48 AM

Attn: Jolie Harrison, NMFS

The IHA for the Atlantic Shores project would seem to be a whitewash of the extreme harms that vulnerable populations like whales, dolphins and other species will suffer. The incremental benefits of the project, which include no or little power generated when wind speeds are either low or high necessitating back-up power sources anyway, would seem to be minor compared with the negative environmental impacts.

Bob Liepa
Toronto



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Protect marine mammals!

1 message

Heidi Barr <htimage13@gmail.com>
To: ITP.Potlock@noaa.gov

Wed, Apr 12, 2023 at 11:45 AM

Please protect marine mammals. Those of us who worked tirelessly for decades to save whales and other marine mammals are asking for a moratorium on any new IHAs off the East Coast. I can't believe NOAA would allow such a tremendous impact on sea life. Thank you for listening. Heidi Barr

--
heidi



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment on proposed Atlantic Shores IHA

1 message

Barry Flude <bflude@gmail.com>

Wed, Apr 12, 2023 at 2:42 PM

Reply-To: bflude@gmail.com

To: ITP.Potlock@noaa.gov

I oppose this study.

Endangered species are so listed precisely because they are ENDANGERED.

To set aside the risks to such species is quite distressing.
Furthermore, this is a test that is being conducted prior to approval
of the ste for the intended project.

I know that in other parts of the USA windmills have been happily
killing protected raptors and the local bat populations. This killing
survives as the corpses are hidden from public view.

You will find it much harder to hide Right Whale deaths from view.

Please desist from endangering this specis any further.

Sincerely
Barry Flude



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

IHAs

1 message

Kat Hanson <kat.hanson676@gmail.com>
To: ITP.Potlock@noaa.gov

Wed, Apr 12, 2023 at 5:14 PM

Per David Wojick's Townhall Daily April 12, 2023 Article.

""NOAA has issued 46 one-year IHAs for offshore wind sites, each authorizing the harassment of numerous whales. Site characterization typically includes use of what I call "machine gun sonar." This device emits an incredibly loud noise every few seconds, often for hours or days at a time, as it maps the sea floor."

I don't believe human beings could withstand this level of sonar. Please do not further subject the majestic creatures of the sea to this.

Respectfully,

Kathy Hanson



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Attention Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

1 message

Toni Ballurio O'Connell <toniballurio@aim.com>
Reply-To: Toni Ballurio O'Connell <toniballurio@aim.com>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Wed, Apr 12, 2023 at 7:08 PM

Good evening Ms. Harrison,

I am reaching out to you to ask you to decline Atlantic Shores request for permission to allow the incidental deaths of; 40 Whales, 2,536 Dolphins, 142 Porpoises and 1,472 Seals. That is a total of 4,190 Marine Mammal Deaths. In my opinion, even one more death is too many. Testing for OSW should be completely stopped until studies are done to see how it is going to potentially affect ANY marine life now and in the future. I live down the shore and we can see it without the studies. Please have a conscience and DO NOT approve Atlantic Shores request.

Thank you,

Toni O'Connell
210 E 2nd Ave
North Wildwood, NJ 08230
609.364.5130 Cell



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Endangered right whales

1 message

jeffrey jensen <jeffulator@yahoo.com>

Wed, Apr 12, 2023 at 9:07 PM

To: ITP.Potlock@noaa.gov

I respectfully request that you stop the wind farms off of New Jersey that are killing the endangered right whales, it is very wrong what is happening to them.

Thank you
Jeffrey G. Jensen

Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment on proposed Atlantic Shores IHA

1 message

Wendy Kendrick <wkwa@comcast.net>
To: ITP.Potlock@noaa.gov

Thu, Apr 13, 2023 at 2:53 PM

Attention:Jolie Harrison,
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service.

We are GREATLY concerned about the impact on marine mammals of an acoustic survey in the Atlantic Shores area.
And especially since this is a migratory route for North Atlantic Right whales.
Wendy and Hugh Kendrick
Anacortes, WA.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Notice; proposed incidental harassment authorization; request for comments on proposed authorization and possible renewal.1 message

Art Bell <arthurbell3rd@gmail.com>
To: ITP.Potlock@noaa.gov

Sat, Apr 15, 2023 at 6:17 AM

As a US citizen and east coast resident, I have watched positive change on our ocean front over the past 50 years. The preservation of the ocean for use by humans and other mammals and animals has been a necessary focus for all Americans and needs to continue. I am requesting that all permanent, fixed industrialization of our oceans be stopped to protect its ability to provide food and jobs for taxpayers.

Killing important food chain participants who keep the ocean clean and balanced is foolish, especially for a technology that is less efficient and more of an existential environmental threat than existing processes and technologies for energy production.

You are to represent the people of this country. The objective of the NMFS and NOAA is to PROTECT natural resources, not issue killing permits for politically influenced "emergencies" and corresponding over industrialization of our oceans.

Stop the killing of marine life and stop the industrialization of our oceans.

Regards,

Art Bell



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comments on the Atlantic Shores Take

1 message

ggjawdoc@aol.com <ggjawdoc@aol.com>

Sun, Apr 16, 2023 at 8:11 PM

Reply-To: ggjawdoc@aol.com

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

NOAA,

I have been hearing for months that there is no relation between the OSW project and the mammal deaths. If this is the case why are you requesting and anticipating takes. What you are doing is obviously affecting these mammals. I have very strong feeling below

I am in the medical profession and am accustomed to coming to a diagnosis and giving opinions on proposed surgeries based on the facts and statistical probability. I don't arrive at a conclusion, until the signs and symptoms are conclusive. In this case, the symptoms are the whale deaths, the signs are the increased activity of the survey vessels since November 16, 2022. **The data below is from the US Coast Guard and NOAA.** NOAA's own data shows the clear and undisputable correlation between the number of survey vessels and the whale deaths. NOAA is ignoring its own science!!! **This graph is their own proof!!! (See attached)**

I also heard a comment that the opposition is not "following the science" I am a student of science, I have been following this for months and to date I have not seen a shred of any scientific data produced by NOAA, DEP, MMC, or BOEM related to the whale deaths. I have heard plenty of statements that "There is no correlation between the wind project and the whale deaths", or "We find no evidence that the whale deaths are caused by the project, but no science. **A statement made without any back up with scientific data, is not proof but a merely an unsupported opinion.** I challenge any of the agencies above to produce peer reviewed data which supports their assertions. A peer reviewed study is one in which others evaluate the work and research that is produced by the author (in this case NOAA). My challenge to these agencies is to have their research (if there is any) peer reviewed.

"NOAA has provided a public statement explicitly stating that there is no connection between the offshore wind activities. People have a right to evaluate bold statements with full knowledge of the declarant's bias. Is Mayor Davis aware of the inherent bias at the root of NOAA's assertions. Perhaps the public is unaware that in January 2022 NOAA signed a pact/ an agreement with BOEM (Bureau of Ocean Energy Management) to work together for the **ADVANCEMENT of wind energy. (BOEM January 12, 2022 press release "BOEM and NOAA Announce Interagency Collaboration to Advance Offshore wind Energy")**

Further, the article states that the "developers must work in accordance with the marine mammal Protection Act (through the federal Marine Mammal Commission) to have acceptable standards for underwater noise. Yet the **MMC is a federal agency consisting of 3 commissioners and 9 advisors who are appointed by President Biden.** (www.mmc.gov) The President has a clear agenda of 30 Gigawatts of wind energy by 2030. I have no doubt that his commissioners have the same agenda which is the reason why they were likely appointed.

On Monday March 27th, Governor Murphy had a call in show on Channel 12 news. I was fortunate enough to call in and ask the Governor a question at 36:30. The question related to NOAA and the MMC, more specifically about the information/ opinions that they are giving on "no evidence" or "no correlation". I asked Governor Murphy if considering the alignment of these organizations with the federal government and BOEM, the information that they might be producing was unbiased. He did not have an answer for me but did tell me that he "leaves that to the experts" and I would get a call back. **After 3 calls to his office to request that call back, I did get a call. I had a brief call with a person form the DEP and ended requesting information about the surveying equipment being used. Now after several weeks I still have not gotten that information.**

NOAA mentions the necropsies of the whales showing some injuries from boat strikes. Why is it now that all of these whales are being struck, when anyone who has been a lifelong resident of the beach knows that a whale death is an anomaly, an unusual event? These whales were likely made deaf by the activities of the vessel boats.

The ocean is inherently a very quiet place. It has been that way since the beginning of time. Mammals (whales, dolphins, porpoises, etc.) have developed a very sensitive and delicate system of hearing and sounding objects to negotiate these vast expanses of water. This hearing system draws them to food, steers them away from danger and enables them to talk to each other.

The devices being used to sound and map the ocean floor are creating high levels of "noise". It is the mainstay of their surveying system. This amount of "noise" in a totally "quiet" environment and the effect it has on these creatures that have a very delicate hearing system is the equivalent of a jet engine noise in our ears. The damage (likely permanent) that would occur in this delicate vestibular system would alter these mammals ability to navigate, find food, escape predators and likely AVOID ships on their path. This "not pure chance" is the likely reason why there has been an increase in boat strikes resulting in whale deaths.. They don't hear them to be able to get out of the way. **(CNN article**

September 26, 2022 “Noise pollution is killing whales, but this technology could help”) Direct hearing damage from noise is not looked for in most post-mortem examinations. The post-mortem examination also cannot show whether noise was the precipitating factor in a fatality that was caused by disturbing the whale’s behavior and its sound-use capability. Claiming that there is no evidence of survey vessel noise when such evidence isn’t looked for or cannot be found is not helpful.

Consider being made deaf by a loud sound that destroyed your hearing and then set out to navigate your neighborhood in the dark or with limited visual acuity. Imagine crossing streets deaf and not being able to see. Avoiding harmful situations or finding food in your own home in the dark with no hearing would significantly affect your life

The necropsies of these dead whales have not been able to determine how the vestibular system has been affected because the system is already degraded by the time they are discovered. Thus, the "smoking gun" is not clearly evident. Yet a deaf whale is a dead whale. This is a fact! Sound travels for thousands of miles without any loss of considerable energy (Article **by NOAA, How far does sound travel in the ocean?**) Thus the “article stated” MMC observer in the survey boat who is supposed to put a halt to work if he spots a whale must have very good eyesight! NOAA admits in its own publication that ship noise, seismic surveys and WIND FARM DEVELOPMENT! all have measurable effects on whales. I quote the article, **“For whales, exposure to these noises can cause immediate effects such as behavioral disruption and impacts on hearing. They can also result in longer term effects, such as the masking of critical sounds or increased stress.”**

Additionally the NOAA publication reads, **“, increases in background noise can make it more difficult for whales to communicate, navigate, and hear critical sounds from predators and prey. This is called “masking.”**

Finally NOAA concludes **“All of these impacts, if experienced repeatedly over longer durations or together with other types of stressors, can affect the health, reproductive success, and survival of whales and other species.”**

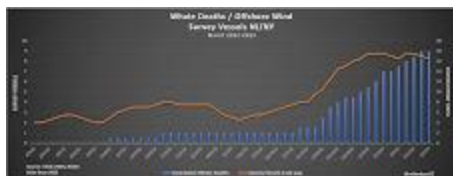
All of this information comes from **NOAA’s publication February, 18,2022 “A Whale’s World of Sound”** NOAA, Governor Murphy, the DEP and the MMC are all ignoring the Data, the Facts, the truth, that this activity is mortally affecting these mammals

I will conclude by stating that when one presents an opinion, it is generally based in facts that can support that opinion. **Every fact stated in this article is backed up by a bolded reference.** The evidence is clear, the association is real, the symptoms and signs are there to reach this conclusion that the vessels are causing irreparable damage to the whales and other mammals and a moratorium should go into effect until peer reviewed research is done to settle this issue.

This project should be halted and it is incumbent upon NOAA to understand that there is reasonable doubt that this project is not affecting our ocean life and act in a manner commensurate of an agency who is supposed to protect our oceans

Dr Glenn Gorab

Glenn Gorab, D.M.D.
Clifton Oral and Maxillofacial Surgery, P.A.
1439 Broad Street
Clifton NJ 07013
973-778-7171
973-916-0696 fax
www.cliftonoms.com



NOAA Vessel - death graph.jpg
104K



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

NA PAW Comment to National Fisheries Marine Services offshore wind "take" permits: federal register 2023/03/30/2023-06594

1 message

Sherri Lange <kodaisl@rogers.com>

Wed, Apr 19, 2023 at 1:47 PM

Reply-To: Sherri Lange <kodaisl@rogers.com>

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

SUBMISSION TO NATIONAL MARINE FISHERIES SERVICE,
OFFSHORE WIND, permitting and incidental takes, federal register
2023/03/30/2023-06594

Permits and Conservation Division

Office of Protected Resources

National Marine Fisheries Service

Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

Dear Chief Jolie Harrison,

Please find attached our comments regarding offshore wind permitting and incidental "take" permissions.

Thank you very much for your consideration of our comments.

Best wishes

Sherri

Sherri Lange

CEO, NA-PAW, North American Platform Against Wind Power

Executive Director, Canada, Great Lakes Wind Truth

VP Canada, Save the Eagles International

kodaisl@rogers.com

www.na-paw.org

Twitter: #torwinaction

*Please note that messages to these lists are intended for the private members and invitees only.
If the material is informational, please feel free to circulate. If posting, please consider copyright laws.
Please note that not all the views contained in circulation of news are those of NA-PAW.
If you have received this in error, please respond to the writer and delete the message.*



2 attachments

NAPAW SUBMISSION national fisheries marine services.docx
100K



NAPAW SUBMISSION national fisheries marine services.pdf
426K



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Document Citation: 88 FR 19075

1 message

Hank Davis <hudavis12@gmail.com>
To: ITP.Potlock@noaa.gov

Wed, Apr 19, 2023 at 3:55 PM

I'd like to let the politicians know and NOAA that it's not okay to kill the cetacians, raptors, and other migratory animals to reduce the US carbon footprint.

Maybe (doubtfully) you'll keep beach houses from washing away quite as soon. Maybe you'll line your pockets with 'green' agenda dollars. But, you will live in an ugly industrialized world devoid of the wonder that the unspoiled natural landscape/oceanscape can provide.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

1 message

Art Gager <ahg3rd@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 21, 2023 at 8:59 AM

To: Jolie Harrison, Chief,
Permits and Conservation Division,
Office of Protected Resources, National
Marine Fisheries Service

I am submitting my comment on the Department of Commerce, National Oceanic and Atmospheric Administration [RTID 0648-XC667], from Atlantic Shores Offshore Wind, LLC (Atlantic Shores) for authorization to take marine mammals incidental to marine site characterization offshore of New Jersey and New York in the Bureau of Ocean Energy Management (BOEM) Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf (OCS) Lease Area OCS-A 0499 and OCS-A 0549 and associated export cable route (ECR) area

I am absolutely opposed to authorization of this request. I have lived on the New Jersey Coast for over 65 years and have five generations of my family that have enjoyed the beauty of our ocean, beaches and marine-life. I have never be confronted with a more hideous proposal than you offer.

Atlantic Shores is requesting Level 'B' Harassment Takes of 40 Whales (11 are Endangered Species), 2,536 Dolphins (2 are Endangered Species), 142 Porpoises, and 1,472 Seals. That's a total of 4,190 'Incidental Deaths. And, there isn't even an estimate of the unaccounted for death and destruction you are allowing to the Atlantic Ocean's Marine Ecosystem.

Though you have already published and approved numerous requests for thousands of Takes of Marine Mammals, all of those approvals are in direct opposition to your own Mission Statements. The first word in the Department of the Interior's Mission is PROTECT – "Protect the Nation's Natural resources". BOEM's Mission Values include 'PROTECT THE ENVIRONMENT'. NOAA's Mission is to 'CONSERVE MARINE ECOSYSTEMS'. None of you are protecting or conserving. You are allowing the permanent destruction of defenseless Marine-life. To put it in maritime terms, 'You have lost your rudder'.

Unlike authorizations for Takes as a result of Bridge building and maintenance or maintenance of Ports of Entry and navigable waterways, all of these Offshore Wind Farm Projects are completely unnecessary to be built in our natural oceans. They pose a direct threat to Marine Life as Atlantic Shores request for takes enumerates.

Wind Turbines are a PART-TIME solution to a permanent problem. They work at the mercy of the natural wind. There is often little or no wind when they will require fossil fuel energy production to maintain the grid. When winds are strong, they are either be shut down to prevent them from tearing themselves apart or they will generate an overcapacity of energy or 'Dirty Electricity' that must be evacuated at a loss to avoid overloading existing transmission and distribution assets. Wind Turbines do not create a 'firm grid'.

The 165 foot deep concrete foundations are full of toxic chemicals that will leech into the sea for eternity. During the operational period of these behemoths, the turbine's vibrations, sonic signals, and ultra-sonic infra-sounds will all effect Marine Life. The rotating blades will cause radar interference that effects marine navigation and meteorological radar signals. The mitigation of our wind patterns will continue to cause stresses to the environment. There are numerous studies of the European wind farms that indicate the devastation they have caused to the commercial fishing industry and the changes they have made to migration patterns of marine species.

Wind Turbines are temporary. With an estimated useful life of 20-25 years, they will be decommissioned and removed which is an additional liability, not an asset. In the original Atlantic Shores 169 page Construction and Operations Plan (COP), there is one(1) page on the Disassembly of Equipment. It states the scowls, if used, will remain in place once this is finished to protect the sea life that may have grown around it. The cables buried offshore and across Absecon Island and through our bays may or may not be removed. Their plan does not consider the enormous amounts of shifting sands that take place along our coastline. Simple evidence is that the southern-most street in Longport, NJ is 11th Street. The Atlantic Ocean removed 1st through 10th Streets many years ago. Ask the U.S. Army Corps of Engineers how many

billions of tons of sand they have had to replace all along the coast of New Jersey because it washes away every year. What will that do the the scowls and cables that are left behind? How will that continue to negatively effect our marine environment? Both are questions unanswered and unaddressed. We would better protect our same sea life by never constructing these wind farms.

Your lack of protection for these marvelous Marine Mammals is in stark contrast to the environmental protection of the Piping Plover. The North end of Brigantine Island, NJ has been designated a sanctuary to protect the tiny Piping Plover. The area is closed to humans. In an interview with WHYY on Feb 22, 2019, John Heilferty, the acting chief of the New Jersey Endangered and Non-Game Species Program under the NJDEP's Division of Fish and Wildlife, said, *"The State of NJ doesn't have any choice. The state is obligated by law to protect endangered species. Whether people think it's fair or not is not mine to judge or to comment on. When species are listed as threatened or endangered at the state or federal level, certain things have to happen. It's really not a matter of fairness if they even wanted to characterize it that way. It's a matter of what's required by law. The migrating plover and other species do not belong to Brigantine or to New Jersey, but to the nation as a whole — and New Jersey has an obligation to protect them."* You, our Federal Government, should have the same standard of protection. These Marine Mammals do not belong to you and you have the same obligation to protect ALL of them.

Yet for the sake of creating a minimal amount of wind energy, you are industrializing our oceans with wind turbines. You are willing to allow the "incidental deaths" of over 1,400 mammals and untold numbers of other Marine life such as lobsters, crabs, shrimp, and clams. You are not protecting them. You are permanently sacrificing them for something that is temporary.

This is an abomination.

Do not authorize Atlantic Shores, LLC request.

Sincerely,
Arthur Gager
Absecon, NJ 08201



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

AtlanticShores Wind Incidental Take

1 message

Carl <lafongcarl@yahoo.com>
To: ITP.Potlock@noaa.gov

Mon, Apr 24, 2023 at 7:25 PM

If wind turbines don't harm wildlife then why would they need to take them? They would never admit they were the cause of harm anyway. Stop permitting this insanity.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Offshore Atlantic Windfarms

1 message

justin2523@aol.com <justin2523@aol.com>
 Reply-To: justin2523@aol.com
 To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Tue, Apr 25, 2023 at 12:40 PM

Hi Miss Harrison,

I never would have thought in my short 29+ year life would I be writing to NOAA to explain how harmful the impacts of offshore wind projects will be. My understanding is that NOAA has a fiduciary obligation as a STEWARD of the ocean to manage and protect marine mammal and endangered species in the United States.

Please refer to the following link ([NMFS and NOAA Harassment Authorization](#)) and take another look at what NOAA is supporting - Table 2 shows the Total Estimated Take during 'incidental' HRG (high resolution geophysical) marine site categorization surveys offshore of northeast and mid-atlantic states.

Can you honestly tell me what is currently going on aligns with NOAA and NMFS mission? What about the endangered species of whales that will be effected? The RIGHT WHALE population is in so much trouble that NOAA is proposing a 10kt speed restriction for boats 35ft and over, BUT the HRG surveys are allowed to kill 3 Right Whales? How do we know only 3 are killed when the primary wind direction blows offshore?

The following are a few key issues that need to be considered:

- Marine life & threats to endangered species
 - Negative impact on commercial and recreational fishing
 - Windmills kill Eagles: <https://www.usatoday.com/story/news/2022/04/06/150-eagles-killed-wind-turbines/9492311002/>
- C02 footprint in survey boats, freighters coming from overseas - the goal is to reduce C02 foot print, not "how to electrify" !!!
 - Will there be helicopters used to de-ice these turbines?
- Safety hazard for boaters
 - Fog
 - Radar interference
 - Additional USCG personnel and training needed to protect workers
 - What happens if a turbine blade breaks off? Do they float or sink? So now boaters are in harms way?
- Power grid questions - with the green initiatives, will our grid system be able to handle this undertaking?
- Relying on wind to create power
 - What happens when there is no wind? Burn more coal....
- Maintenance needed - Petroleum based products will be used to service and maintain these turbines. The amount of runoff will be sickening!
- Decrease shore town property values

Here are a couple links to support the above issues to consider:

https://wlds.com/porta-high-school-runaway-wind-turbine-collapses/?fbclid=IwAR1cgYWaxZI_W_6uP17BNUhLw7Ns4889DngjitA_OkRNXnGjuqR82u5h8GY

https://iowacclimate.org/2023/04/24/crashed-burned-soaring-construction-maintenance-costs-make-offshore-wind-power-projects-unbackable/?fbclid=IwAR0ag1BC6wwy8-xVhp1YJgAlA31y50tl5xgjiiisarnyEu7q_jPxne6jNFjQ

https://scontent-lga3-2.xx.fbcdn.net/v/t39.30808-6/279179889_5775019662527497_2976054598118066903_n.jpg?_nc_cat=104&ccb=1-7&_nc_sid=8bfeb9&_nc_ohc=ylqj6n9yBwlAX9RGzzH&_nc_ht=scontent-lga3-2.xx&oh=00_AfCQFrDQgWKAYrkP2tISG_7piZA64JFL1T729WvpF2bsSw&oe=644C2C40

I am asking you to simply HAULT ALL OFFSHORE WIND work until we have more scientific data in support of oceanic windmills. After all, NOAA is a science backed organization, right? Unless I see more science involved, NOAA will be to blame when these windfarms killed thousands of marine mammals and life for no reason when the turbines are not a direct, reliable substitute for nuclear power.

6/2/23, 10:02 AM

National Oceanic and Atmospheric Administration Mail - Offshore Atlantic Windfarms

We need more time and studies for me to become a believer. I could be there one day, but not until I see more science.

Thank you for reading and considering my stance on offshore wind.

Sincerely,
Justin Healey



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

"TAKES"

1 message

tjskis01@earthlink.net <tjskis01@earthlink.net>
To: ITP.Potlock@noaa.gov

Tue, Apr 25, 2023 at 2:13 PM

DO NOT allow Atlantic Shores any more additional "INCIDENTAL TAKES". The present level of carnage is already UNACCEPTABLE. Do not use your self appointed authority to allow any more marine deaths. The ocean does NOT belong to you. It is not at your discretion to allow more killing! It belongs to THE PEOPLE! It is OUR OCEAN!!! STOP THESE INVASIVE WIND PROJECTS NOW!



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Agency/Docket Number: RTID 0648-XC667

1 message

JM Here <jmjnkhere@gmail.com>

Wed, Apr 26, 2023 at 9:10 AM

To: "itp.potlock@noaa.gov" <itp.potlock@noaa.gov>

Regarding <https://www.federalregister.gov/d/2023-06594>

On behalf of the over 500,000 signatures from those against the industrialization of the East coast:

<https://www.change.org/p/protect-our-coast-nj-save-the-whales-stop-offshore-wind>

Your continued destruction of our oceans by authorizing takes of our marine mammals to build overwhelmingly giant windmills is and will continue to be devastating to the entire earth.

It drives home that government isn't for it's people as it goes against what we want and positions NOAA and BOEM in a spot of promoting economic gain instead of protection.

This isn't a comment to prove climate change, this is a comment to prove the American people do not want this. This is about profits for companies. Not one study not produced by a wind farm companies can show any environmental benefit.

You live here, save the East coast!



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Wind Turbine - Mistake

1 message

Julie Johnson <johnsonjm10@gmail.com>
To: ITP.Potlock@noaa.gov

Wed, Apr 26, 2023 at 12:01 PM

I understand the we need to find alternative energy. however, killing our environment is not something that most citizens want.

It is so obvious that there are many many wealthy people who will stand to make more money off of this type of energy.

BUT, please consider the killing of our fish and wildlife and destroying our oceans.

I live in NJ and have written to my congressman with my absolute NO to this process.

The wind turbines will not even provide the electric energy needed for consumption

You must stop this in order to research just what this is doing at present and what it will do in the future.

I AM AGAINST BUILDING WIND TURBINES!!

Julie Johnson



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Stop ! Look ! !And Listen!!!

1 message

santaglenn1818 <santaglenn1818@gmail.com>
To: ITP.Potlock@noaa.gov

Thu, Apr 27, 2023 at 5:07 AM

The people are finally starting to wake up and become aware of what the effects and impacts of these massive wind farms will have on our marine life and coastal communities. This will have disastrous effects on the marine life, fishing industry and our coastal communities up and down the east coast . I implore you to not to allow this project to continue under these circumstances. The fact that most people are not even aware of the proposed allowable # of marine fatalities is outrageous in itself. These kill #'s should have been posted on every public media news outlet nation wide as well as mailers and notifications to every local coastal community resident and business owner as to the impact these turbine projects will have on the marine life and our coastal communities. There are currently more than 500,000 people and voters now demanding a immediate moratorium be placed on this and all wind farm projects until all questions and concerns are properly addressed by independent scientists, agencies and organizations.

These projects have all been fast tracked many through executive orders and without the vote approval of the people and there communities.

Frankly ... We have been blindsided....

One can not be saying they are trying to save the planet in the name of green energy. When they are knowingly destroying the marine life and ecosystems in our oceans .

It makes absolutely no sense and is wrong on every level ???

Please do the right thing !!!

Do not let this death and destruction to our oceans be allowed...

Thank you ...

Glenn Santaniello.

Just one voice , of many beach loving
concern citizens.

Sent from my Verizon, Samsung Galaxy smartphone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores off Atlantic City

1 message

Beth Kolmetsky <bethkolmetsky@yahoo.com>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Fri, Apr 28, 2023 at 11:54 AM

Chief Jolie Harrison

I am a resident of Brigantine New Jersey! I have lived in Atlantic county for 53 years. I am writing this email in hopes of you making the right decision to protect our marine life! Making the wrong decision will be catastrophic to all marine life as we know it. Please be the voice of the gentle giants!

ALL WHALES, DOLPHIN,PORPOISES, AND SEALS "MATTER"

You have the ability to block this inhumane slaughter of innocent marine life! Please be their voice of reason and do what is right. Money should not be more important than life! Please help save the



Sincerely,
Beth Daley
Brigantine NJ



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores for request for additional Takes: OPPOSED!

1 message

Kristina Tool <kntool@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 12:02 PM

I'm vehemently opposed to Atlantic Shores request for additional takes, as has been well publicized, the spate of this year's marine mammal deaths have been increasing weekly. From endangered species, to animals that were thriving in our ocean ecosystem, this request goes against any reasonable approach to sustainability. I strongly urge NOAA to deny the request for additional takes.

--
Kristina Tool



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Impact to Wildlife - Atlantic Shores

1 message

mfkeane131@gmail.com <mfkeane131@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 12:09 PM

Dear Jolie Harrison,

As a long time lover of the New Jersey shore, I am very concerned about the wildlife impact to the industrialization of our coast. I am strongly opposed to Atlantic Shores request for additional Takes in regards to their project off of LBI, Atlantic City and Brigantine. Our shores should be a sanctuary for dolphins, seals and whales not a location for profit and industrialization.

Warm Regards

Mike

Michael Keane | Principal

+1 484 885 4744

mfkeane131@gmail.com



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Wind lease area immediately off LBI

1 message

Stephen Raleigh <sraleigh90@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 1:02 PM

Good afternoon,

I am sending this email to you to voice my complete disagreement to the wind farm project and what it is doing to our ocean life. Moving forward will only cause more destruction to our marine life and the coast line. Wind is not the answer! There are better alternatives than destroying our oceans.

Please stop the madness! I want my future grandchildren to see whales and dolphins in the ocean swimming and not DEAD on the beach!!!

Please stand up against this!!! Once it's done, it is too late to go back.

--

Stephen L. Raleigh
Cell: (813) 310-3736



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Whales

1 message

Lou Ann Preston <louannfp@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 1:20 PM

Please stop this madness and stop hurting these mammals in the name of progress. We don't want these windmills in our shores. The water will be made warmer by these turbines which will affect everything. Be careful with our oceans and the environment.

Respectfully,
LouAnn Preston

--

Lou Ann Preston
c 201-280-3032



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

No More Takes

1 message

Mother Suburbia <mothersuburbia@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 1:22 PM

I am a resident of Barnegat Light on Long Beach Island in New Jersey. I am fervently opposed to the NOAA request for more "takes" of our marine mammals from the Atlantic ocean bordering New Jersey and Long Beach Island. Please do not authorize additional harm to these mammals. Enough harm has been done. We don't want to see anymore whales and dolphins and other ocean creatures wash up on our beaches. This is no way to claim to citizens that this project is "green" and environmentally beneficial. Quite the opposite.

Sincerely,

Jeannette V Sault



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Wind turbines

1 message

Caitlin Santora <santora.caitlin@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 1:28 PM

20 year resident in LBI here.. everyone I've spoken to is 100% opposed to this.
Why not put it to a vote?!

Caitlin Santora

Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Protect our coast

1 message

jane goddard <jgoddard416@live.com>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Fri, Apr 28, 2023 at 1:47 PM

Jolie Harrison

I have lived on the coast of NJ all my live and have never witnessed the deaths of so many sea mammals. It began when the testing began for the wind turbines. The plans to build these machines were never publicly brought to our attention. The destruction they will cause to the wildlife and fishing industry is tragic. The research I have read points to an industry that is unreliable and the plans are beyond the scope of information recently provided by our Government. I have respected noaa and your science up until now.

Jane S Goddard



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

offshore wind turbines

1 message

Diana Love <dilovebug@icloud.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 2:04 PM

Please stop this madness. It is destroying our sea life and putting unnatural materials (which will eventually erode) into our beautiful ocean. People move to the Jersey for clean air and peace. Seafood will not be considered safe, with these unnatural, ugly monstrosities being put into the ocean! Let the people decide what is right, because this is wrong on so many levels.

Thank you.
Diana Love

Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Takes of Marine Mammals Incidental to Specified Activities NY NJ1 message

ty1ash2@aol.com <ty1ash2@aol.com>

Fri, Apr 28, 2023 at 2:14 PM

Reply-To: ty1ash2@aol.com

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Jolie Harrison,

I am writing to oppose any takes of marine mammals due to activities of the offshore wind turbines. NOAA has already turned a blind eye to the potential impacts on marine wildlife. They admit noise affects marine life from pile driving, etc but will not admit that this is an effect of the whale strikes. Along the coast of New Jersey, the deaths of Humpback Whales have surpassed the yearly average in the first quarter of this year.

Scientists estimate there are approximately 350± Right Whales remaining, with only about 40 being capable of reproducing. Two have already died this year. These two reasons alone are enough to stop harassment/takes. In conclusion, it is your duty to protect these endangered mammals and not allow them to become extinct.

Thank you,
Regina Littwin



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Whale and marine life takes

1 message

Penny Campbell <55luckypennies@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 2:24 PM

Dear Jolie Harrison ,Chief ,Permits and Conservation Division,Office of Protected Resources, National Marine FisheriesService.

I am writing to you about the newest request for marine "Takes" . I am appalled with how our government is allowing the killing of endangered species. Right whales will be extinct in a short time if you continue to allow wind companies and our government to kill them. They are protected but you are killing them anyway .Where is your conscience ? What you are doing is hurting every American.We don't need wind turbines to survive , we need marine life to survive .We need our oceans to survive . Industrialization of our oceans will kill every living thing in ,it all the way down to plankton . Turbines are already polluting our air with the massive construction of them . The raw materials used to build them is destructive to our earth. We only have one ocean , one earth. I am begging you and our government to stop this insanity . Stop killing marine life . Stop killing our ocean and earth.

WIND TURBINES ARE NOT GREEN !

Penny Campbell
Stirling NJ 07980



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Save Marine Life

1 message

Noel Fiore <noel27fiore@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 2:32 PM

I can not believe that "Taking" so much marine life is acceptable. Even considering taking one right whale is a crime. For what? Wind energy is not the solution to our energy needs. All the hoopla and destruction of the environment just so some people can get rich and the rest of us will have an electric bill that is twice as much as we are now paying. Some places on earth have to be sacrosanct and the ocean is one of them.

Just think if someone was building a wind farm on the Serengeti and there was a "take list" of so many elephants, lions, rhinos and other endangered animals. I think the public would be enraged.

There are other energy alternatives that make more sense, such as, small nuclear facilities. Save the marine life!



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Big Wind is Killing Big Whales

1 message

Lou McElwain <loumcelwain@yahoo.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 2:43 PM

Jolie Harrison
Chief, Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service

Ms. Harrison,

Having read just now some of your publications, I am hopeful you and your team can review and analyze the events that have led to the killing of many whales and other mammals and fish along the Eastern coastline—specifically the state of NJ.

In the pursuit of 'Green Energy' those in charge of these projects have lost sight of the cost and impact of the Wind projects. You have shown in your writings the impact of marine noise upon our Ocean neighbors. Your work can assist here with illustrating/showing/uncovering the Truth of the work done to date by the Dutch construction crews and give some insight as to the longer term effects if this large scale project were to continue in its present form.

I do not oppose win energy. It has its place. Europe has put their industrial turbine projects far from land so the ocean-going creatures can navigate around them. That is not the case with the current plans: 9-13 miles off the coast of NJ. Governor Murphy has called us many names and we have simply asked for the facts to be brought to light. He and his team have shunned the NJ organizations for years and is hopeful we will give up. We will not.

Please help us and the Whales, mammals and fish we share the planet with.

Thank you,

Lou McElwain
6500 Ocean Blvd
Long Beach Township NJ 08008

Lou McElwain
Sent from my iPad



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Deny additional authorization to Atlantic Shores

1 message

Sherri <broits@comcast.net>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 2:55 PM

I am a resident of Long Beach Township. I am against the authorization for additional takes, that Atlantic Shores is requesting!

Do not allow any additional senseless killing!

Please stop the project until we can determine how much damage we will do to our marine life!!

It is our responsibility not to ruin our ocean!

Sherri Broitman
[15 east Sigsbee ave](#)
[Long Beach township](#)

Sent from my iPhone



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Application by Atlantic Shores for Additional "TAKES" - opposed

1 message

sgogerty@optonline.net <sgogerty@optonline.net>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 3:09 PM

Dear Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources,
National Marine Fisheries Service.

We are opposed whole heartedly to the petition to allow additional "takes" by Atlantic Shore in
New Jersey.

This entire process has displayed a disregard for humans and sea life. The intended end game by
Atlantic Shores should not disrupt to such the degree the present sea life ...

Sandra Gogerty, Esq.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Stop the wind turbine project. It is killing animals and destroying our environment!

1 message

claire anechini <claireannechini@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 3:10 PM



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Deny additional authority to Atlantic shores

1 message

Yvonne Finkelthal <yvonrealty@gmail.com>

Fri, Apr 28, 2023 at 3:11 PM

To: ITP.Potlock@noaa.gov

- > resident of Long Beach Township. I am against the authorization for additional takes, that Atlantic Shores is requesting!
- >
- > Do not allow any additional senseless killing!
- >
- > Please stop the project until we can determine how much damage we will do to our marine life!!
- >

Yvon Finkelthal
Harvey cedars



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Regarding the Atlantic Shores Take

1 message

stacey kliesch <staceycliesch@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 3:44 PM

Dear Jolie Harrison,

I am opposed to the Atlantic Shores request for Additional "Take's" of marine mammals in the Outer Continental Shelf (OCS) Lease Area OCS-A 0499 and OCS-A 0549 and associated export cable route (ECR) area.

Please note that I am against the development of all Wind Turbine projects as the proper Environmental Impact Studies have not been completed. I am also concerned with National Security, the ability of the Commercial Fishing Industry to exist and the economic impact on Shore Communities who are dependent on Tourism.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores authorization request

1 message

Dorothy Reynolds <ddreynolds36@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 3:58 PM

Att: Jolie Harrison, Chief

Under no circumstances should the request for additional takes to survey the ocean bottom be granted by NMFS Office of Protected Resources. You will hypocrically be DESTROYING what you are supposed to be protecting! You will also be destroying the faith of the public in your agency and decisions.made by your agency.

Dorothy Reynolds

Councilwoman Borough of Barnegat Light, NJ 08006

ddreynolds36@gmail.com



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Jolie Harrison - Atlantic Shores Additional Takes request

1 message

Janet Miller <janetamiller@gmail.com>

Fri, Apr 28, 2023 at 5:18 PM

To: ITP.Potlock@noaa.gov

TO:

Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

I'm writing to oppose the request from Atlantic shores for the B Level takes off LBI, Atlantic City and Brigantine.

The request to take marine life of this magnitude is obscene. The number of whales that have died and washed ashore this year is historic and yet the company is asking the government to agree to let them kill more marine life, in addition to the already approved takes!

It's **unconscionable** that anyone would approve **Additional takes** for this company. I ask that you please reject this request!

--

Janet Miller
Brant Beach Resident



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Please deny Atlantic Shores Request

1 message

Christine M <themurraycrew@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 5:57 PM

Dear Jolie Harrison,

I am opposed to the Atlantic Shores request for Additional "Take's" of marine mammals in the Outer Continental Shelf (OCS) Lease Area OCS-A 0499 and OCS-A 0549 and associated export cable route (ECR) area.

Please note that I am against the development of all Wind Turbine projects as the proper Environmental Impact Studies have not been completed. I am also concerned with National Security, the ability of the Commercial Fishing Industry to exist and the economic impact on Shore Communities who are dependent on Tourism.

Sincerely,
Christine Murray
Brigantine, NJ



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores request for MORE take permits

1 message

Susan Kinsella <susankinsella92@gmail.com>
To: ITP.Potlock@noaa.gov

Fri, Apr 28, 2023 at 7:54 PM

Dear Ms. Harrison,

I am vehemently opposed to the issuance of any further "take" permits to Atlantic Shores or any of the wind companies. Please, do the right thing and say NO!!! We have already issued too many of these, including allowing takes of endangered species. All of this has clearly not been appropriately studied. I am so disappointed in our government, as it does not appear that they care about the opinions of us mere citizens. This is all moving along way too quickly, even the BOEM's own report finds that further studies are needed in many respects. Have some respect for our marine mammals, who are supposed to be protected by the marine mammal protection act and some by the endangered species act,

Just say NO!! PLEASE!!!

Sincerely,

Susan Kinsella
An independent voter and concerned NJ citizen



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

TAKES of Marine Mammals

1 message

Terri Klepczynski <terriklep@yahoo.com>
To: ITP.Potlock@noaa.gov

Sat, Apr 29, 2023 at 9:36 AM

Sent from my iPhone. I am opposed to ANY TAKES of these beautiful creatures for this purpose! Turbines are not the solution to the energy woes we are experiencing, will not generate enough electricity, may not withstand severe storms & hurricanes in this location, & will lead to devastating consequences to the fishing industry, tourism & quality of life! Please stop!



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

(no subject)

1 message

Bud Sault <bsault@hotmail.com>

Sat, Apr 29, 2023 at 9:30 AM

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Stop killing the sea life!

Sent from my iPad



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York

1 message

Carl <lafongcarl@yahoo.com>
To: ITP.Potlock@noaa.gov

Sun, Apr 30, 2023 at 11:55 AM

There should no reason to permit or way to mitigate an industry to take wildlife.

Carl van Warmerdam



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York

1 message

Carl <lafongcarl@yahoo.com>
To: ITP.Potlock@noaa.gov

Sun, Apr 30, 2023 at 12:02 PM

20% of Bottlenose Dolphins is criminal.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

akes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York

1 message

George Humphris <geohump@yahoo.com>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Sun, Apr 30, 2023 at 4:53 PM

Comments attention Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

NOAA is permitting a "small" taking and harassment of mammals in our oceans with no number listed. What does "small" mean especially when there are some whales on the endangered list off our coast?
There are fewer than 70 females North Atlantic right whales left that could reproduce today and NOAA acknowledged their unusual mortality since 2017.

So for NOAA to seemingly declare "Full Speed Ahead" on offshore wind now when some are saying climate change may be driving the whale's food source closer to shore seems very short sighted.

Whales need their hearing especially when they are near the shore. It's a sad fact falling on deaf ears with NOAA.

NOAA published Ocean Wind I take request of mammals over a five year period in October 2022. The take and harassment of these mammals would be "small".

31 dead whales and 26 dead dolphins since December 2022 does not seem small to me but then who actually knows what the "small" number is.

I am concerned for the ocean creatures & wonder if NOAA will do in the ocean what the government has done with on land wind turbines e.g. authorizing the taking of endangered eagles for 30 years.

It's time to put a stop to this needless killing.

George Humphris
2 Parkway Dr
Toms River NJ 08753



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment For Jolie Harrison regarding OC MD Wind Farm Project

1 message

mrmsay21104@verizon.net <mrmsay21104@verizon.net>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Mon, May 1, 2023 at 8:02 AM

Dear Ms. Harrison,

I'm Mark Ramsay, I have a Princeton Engineering Science degree, a Johns Hopkins Master of Science degree, and am a retired professional engineer. I've installed energy saving projects curtailing thousands of tons of CO₂ in Maryland. I have no financial interest in any energy industry group.

I will explain how I find this wind farm's contribution to the global warming problem insignificant, not worth the high cost and risks to wildlife.

Using data from EPA's, NASA's, and NOAA's sites, and doing some calculations that a high school chemistry student could do, I find that the US has dropped power plant CO₂ emissions by 21% over the last several decades. This hasn't done much to curtail global CO₂ as CO₂ concentration has increased 12% over the same time and is accelerating.

Government data shows that CO₂ growth in the atmosphere calculates to 20 billion tons/yr. This 2 gw wind farm would curtail 6 million tons/year. I assumed the farms would output an average of 50% of the 2gw capacity. I use 50% because wind farm power output is proportional to the cube of wind speed. Drop the wind speed by 30% from design conditions and power will curtail by 66%, for example. So how many of these wind farms would you need to curtail global atmospheric CO₂ growth? I calculate the number to be 2800, yes 2800 of them. Consider the cost and environmental impact of building that many offshore wind farms.

And you still need fossil fuel power which can provide highly dispatchable power when the wind dies down. Wind farms are not dispatchable, and you need dispatchability for a stable electrical grid. PJM issued a paper recently stating that coal plant retirement will reduce dispatchability and hence grid uptime.

Maryland legislators think the percentage of renewable energy in power generation is important. It would be if Maryland had its own atmosphere. But it doesn't. %-renewable power is a misleading metric. The worthwhile goal is to keep atmospheric CO₂ concentration below some upper limit.

Two years after this wind farm is to startup, a commercially sized hydrogen fusion reactor will be starting up in Massachusetts. I know a physicist from the company doing this. More such reactors will start up by 2035. Fusion power is a lot less environmentally invasive than offshore wind.

You may ask, do we have the time to wait for alternative energy production? Eminent physicists have found the answer is YES. And they verified their work with satellite records. Further atmospheric CO₂ increases will have far less effect upon the atmosphere than it has. A chart from a 2013 Harvard publication shows doubling current CO₂ concentration will only increase its heating of the earth by 3 watts per square meter. Recent studies corroborate this. Three watts is miniscule compared to the 380 or so watts/sq meter that the sun radiates to earth. And it will take over a hundred years for the CO₂ concentration to double. The reason CO₂ growth won't warm much is that it has a property called short optical depth, short relative to the height of the

troposphere. The more CO₂, the more it blocks itself from radiating heat outside of its mixture. Optical depth is a term well known by atmospheric physicists. I have had correspondence with one of them. You can find a group of them, their papers, and videos, on CO₂Coalition.org. This could be new information to NOAA. (Update: I am now a member of CO₂ Coalition).

You can also read about Germany's similar debate between their Green energy groups and the Green biologic environmentalists. That country dove into renewables big time in 2010, and it has been so successful, they had to start up coal power plants again, even before Russia threatened energy supply. Governor Newsom has cancelled the shutdown of its Diablo Canyon nuclear reactors because of reduced reliability of CA's green energy sources.

Maryland's offshore wind website does not quantify how much the proposed farm will curtail CO₂ growth. Without the farm making a serious contribution to stemming CO₂ growth, it has no reason for assuming environmental risk, considering lack of experience with offshore wind.

The world has already spent \$2 trillion on abatement projects. We should save our powder for environmentally friendlier curtailment projects. But while this strategy warrants consideration, what appears important to the Doctrinal Managers in the Executive Branch is protecting the power structure pushing green energy projects, whether or not the projects will meet their objectives, harm life, or have any support in objective (not settled) science. NOAA does not have to share in the Administration's insidious objective. NOAA should be skeptical like a good scientist.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

100-wind turbine farm proposed off Ocean City, MD

1 message

Eosonde Research Services <wx@raob.com>

Mon, May 1, 2023 at 10:27 AM

Reply-To: Eosonde Research Services <wx@raob.com>

To: ITP.Potlock@noaa.gov

The Ocean City wind farm is anti-ecology – disruption of ocean ecology both below and above sea level.

Birds, whales, and other sea-life will suffer. Where's the climate justice for them?

Plus, wind energy is NOT reliable and is MORE costly, especially since you need 24/7 "fossil-fuel" or "nuclear" as backup.

More importantly, there is no climate change crisis – just a climate education crisis.

John Shewchuk
Certified Consulting Meteorologist
Lt Col, USAF, Retired



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

BAN ALL OFFSHORE WIND TURBINES

1 message

klarson767@aol.com <klarson767@aol.com>

Mon, May 1, 2023 at 10:32 AM

Reply-To: klarson767@aol.com

To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

We beg you to have mercy on the whales and sea life off the US coast.

How can you possibly see any environmental benefit to these turbine projects?

Coming from a long time mariner family, this is a disaster to our coastline, tourism, seafood industry, and especially the whales and our environment.

Not to mention, one good hurricane or similar Sandy storm will wipe them out. Check out the **1961 Texas Tower** event off our coast of New Jersey.

STOP ALL OFFSHORE WIND PROJECTS NOW.

tku

Karen Larson

609-709-3725 cell



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Comment on proposed Atlantic Shores IHA

1 message

James Viola <jviola151@gmail.com>
To: ITP.Potlock@noaa.gov

Mon, May 1, 2023 at 11:57 AM

Dear Jolie Harrison,

Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

I have to admit I am confused as why we are considering moving Marine animals for survey or actually doing the survey. The evidence is clear it is detrimental to sea life. In fact NOAA's assessment:

- "It is possible that pile driving could displace animals into areas with lower habitat quality or higher risk of vessel collision or fisheries interaction. Multiple construction activities within the same calendar year could potentially affect migration, foraging, calving, and individual fitness. The magnitude of impacts would depend upon the locations, duration, and timing of concurrent construction. Such impacts could be long term, of high intensity, and of high exposure level. Generally, the more frequently an individual's normal behaviors are disrupted or the longer the duration of the disruption, the greater the potential for biologically significant consequences to individual fitness. The potential for biologically significant effects is expected to increase with the number of pile-driving events to which an individual is exposed."

Also, not only the survey, **but building the windmills and apparently the operation interferes with their communication.** So we are ok potentially destroying an ecosystem for what? More windmills in landfills?

We also know that not just the noise from survey's and construction disturb/kill these animals but the operation as witnessed in places that have windmills: (which makes sense as we know their communication is sensitive to noise.) <https://wattsupwiththat.com/2016/03/03/are-vibrations-from-offshore-wind-turbine-farms-killing-whales/>

Between January 9 and February 4 this year, 29 sperm whales got stranded and died on English, German and Dutch beaches. Environmentalists and the news media offered multiple explanations – except the most obvious and likely one: offshore wind farms.

- Indeed, “researchers at the University of St. Andrews have found that the noise made by offshore wind farms can interfere with a whale’s sonar, and can in tragic cases see them driven onto beaches where they often die,” a UK *Daily Mail* article observed.
- It is certainly possible that permanent damage to the cetaceans’ middle and inner ears, and thus to their built-in sonar, can result from *large air guns* used during seismic surveys and from violent bursts of noise associated with pilings being rammed into the rock bed. Wind promoters themselves admit that their pile-driving can be heard up to 50 miles (80 kilometers) underwater, and can be harmful to whales that happen to be nearby. But unless these injuries cause external bleeding, they are very difficult to detect.

Other scientists.

- As scientists have *pointed out*, “It is likely that acoustic masking by anthropogenic sounds is having an increasingly prevalent impact on animals’ access to acoustic information that is essential for communication and other important activities, such as navigation and prey/predator detection.”
- “Blinded” by this masking, whales and dolphins could seek refuge in shallow waters, away from big ships and killer whales. There, low tides could surprise them, as large pelagic species have limited experience with tidal flows.
- In September 2012, 19 pilot whales, a minke whale and a large sei whale beached on the coast of Scotland opposite an area where air guns were being used by ships surveying the ocean floor, as a prelude to installing offshore wind farms. “A second pod of 24 pilot whales was spotted in shallow water by Cellardyke around the same time, but [it] returned to sea without beaching,” *the article noted*.
- **Offshore turbines were also *associated with* “many” stillborn baby seals washing up onshore near the UK’s Scroby Sands wind farm in June 2005. “It’s hard not to conclude the wind farm is responsible,” the author concluded.**
- **Many more similar deaths may well have been caused by wind farms at sea. The scientific and environmental literature abounds in warnings about risks to marine mammals from man-made noise.**
- **Modern 8-megawatt offshore turbines are 656 feet (200 meters) above the waves; their rotating blades sweep across a 538-foot (164-meter) diameter. Those enormous blades create powerful pulsating infrasound and *exact a toll* on many species of marine birds, and even on *bats that are attracted* to the turbines as far as 9 miles (14 km) offshore.**
- **In a February 2005 letter, the Massachusetts Audubon Society estimated that the proposed Cape Cod wind project alone would kill up to 6,600 marine birds each year, including the roseate tern, which is on the endangered list.**

This is not new knowledge. So why so reckless?

- *Do we really want to add marine mammals to the slaughter of birds and bats, by expanding this intermittent, harmful, enormously expensive and heavily subsidized energy source in marine habitats?*

So why are we ignoring the science for a dubious benefit.

Regards,

James Viola

Jviola151@gmail.com

201-452-8924

Jim Viola

201-452-8924

JViola151@gmail.com



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

New Atlantic Shores Take Request

1 message

Debbie Widmeier <debbiewid@gmail.com>
To: ITP.Potlock@noaa.gov

Mon, May 1, 2023 at 2:18 PM

TO: Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

Hello Jolie,

As today is the deadline to receive comments about the additional TAKE Request by Atlantic Shores, I write in strong opposition to this application. It is unimaginable to me that there are so many unanswered questions surrounding the surge of dead whales and dolphins for the past year on our NJ shores and yet the group denies all responsibility. They demand their group is not currently harming the our ocean's wildlife, but they want to get a pass on harming an even larger amount of marine life than they originally planned. This clearly is a group that knows the construction, sound waves, operations and miles of cables will cause unknown damages. The Atlantic Shores Take Request is all about money. It wants to protect itself from future law breaking and not protect the marine life that enjoys life in this area.

DO NOT allow more marine life to be affected by an already bad situation.

Debbie Widmeier



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

New Atlantic Shores Request

1 message

Tom Widmeier <tomwid33@gmail.com>

Mon, May 1, 2023 at 3:14 PM

To: ITP.Potlock@noaa.gov

TO: Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

Hello Jolie,

As today is the deadline to receive comments about the additional TAKE Request by Atlantic Shores, I write in strong opposition to this application. It is unimaginable to me that there are so many unanswered questions surrounding the surge of dead whales and dolphins for the past year on our NJ shores and yet the group denies all responsibility. They demand their group is not currently harming the our ocean's wildlife, but they want to get a pass on harming an even larger amount of marine life then they originally planned. This clearly is a group that knows the construction, sound waves, operations and miles of cables will cause unknown damages. The Atlantic Shores Take Request is all about money. It wants to protect itself from future law breaking and not protect the marine life that enjoys life in this area.

DO NOT allow more marine life to be affected by an already bad situation.

Tom Widmeier

TOM WIDMEIER

C: 215-766-9925 | vCard

E: tomwid33@gmail.com



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys Offshore of New Jersey and New York

1 message

OC Flooding <ocflooding@gmail.com>

Mon, May 1, 2023 at 9:46 PM

To: ITP.Potlock@noaa.gov

Please do NOT authorize ANY takes! Are you aware that our government has authorized nearly 1000 takes of North Atlantic Right whales yet there are only about 343 left! We can't afford to lose any more of our endangered species yet our government seems to want to ignore the endangered species act. This entire process of industrializing our coast is the most insane thing I have ever experienced in my life. We know that this is going to increase our use of fossil fuels, as well as increase our carbon emissions. Meanwhile, in the COOs, it says clearly that these will do nothing to address climate change. So why would we do it? There are plenty of other strategies for energy that actually is clean, this is not, including solar and onshore, wind, and especially nuclear energy, the ocean, and our whale population account for about 60% of our carbon absorption. What do you think polluting the ocean and killing? The whales is actually going to do for us? It's going to bring about the destruction of our coastal communities. What I'd like to know is why is this being fast tracked, why are our rights being taken away in our voices being silenced? Why is NOAA lying to the American people? I repeat, do not authorize any more takes ever!

Suzanne Hornick
Protect Our Coast NJ

--

Suzanne Hornick,
Ocean City Flooding Committee and
Protect Our Coast NJ



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Public Comment - Action #4 Atlantic Shores Offshore Wind1 message

Jeff Platenyk <jplatenyk@gmail.com>
To: ITP.Potlock@noaa.gov

Mon, May 1, 2023 at 10:13 PM

On/Offshore Wind Turbines are an aged/antiquated technology (e.g. windmills - Holland, Netherlands) and are the most expensive, least effective and most costly electric generation energy source. Millions of dollars of seed money came from Joe Biden's Inflation Reduction Act. Post construction costs (maintenance, repair and decommissioning) will be passed on to the rate payer. Fossil fuel electric generation will be phased out causing rates to skyrocket. Additionally, the summer doldrums will not spin turbines causing brownouts and blackouts during peak demand periods.

Offshore Wind Turbines are not green energy. Expect oil and toxic chemical spills during maintenance, repair and decommissioning cycles. The industrialization of the ocean will decimate endangered species, sea mammals, sealife and ecosystem due to sonic sonar mapping of the seafloor, 6' - 8' dredging for laying copper cables and pile driving construction vibration and noise.

Coastal communities will have impacted property values as expected tax revenues from tourism, vacation rentals, restaurants will decline as beaches will have a horizon of wind turbines and a night array of red blinking lights. Expect health concerns to rise as infrasound (low frequency sound) to impact sleep, brain function (i.e. anxiety and mental health). Electromagnetic Fields (radiation) will emanate from sea to land substations and distribution introducing health concerns. Also, expect turbine blade erosion to introducing fiberglass and resin particles to degrade ocean water and air quality.

The fishing Industry, recreational boating, search and rescue missions by the USCG will be in jeopardy due to OWT navigational hazards, radar interference and the permanent disruption of migratory, feeding and breeding grounds of sea mammals, sealife and ecosystem. Seasonal bird migration will also be adversely impacted, including innumerable bird strikes.

Sincerely,

J. Platenyk
Point Pleasant, NJ. 08742



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

A big no to the wind turbines near Ocean City ! First put them at Martha's Vinyard!

1 message

gregory garsteck <g_garsteck@hotmail.com>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Mon, May 1, 2023 at 11:41 PM

Sent from my Galaxy



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

Atlantic Shores - Wind Turbines off coast of Long Beach Island, NJ

1 message

Thomas Santora <tsantora@fortress.com>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Fri, Apr 28, 2023 at 12:35 PM

Dear Jolie Harrison,

Please reconsider allowing the installation of wind turbines off the coast of Long Beach Island, NJ.

The potential impacts on marine life are significant and the construction and operation have negative effects on marine ecosystems and are harmful to marine life.

One of the most significant impacts of offshore wind turbines on marine life is noise pollution. During the construction and operation of offshore wind farms, there is constant noise from drilling, pile driving, and turbine operation. This noise can disorient and harm marine mammals, such as whales and dolphins, which rely on sound for communication, navigation, and feeding. According to a report by the International Council on Clean Transportation, the noise generated by offshore wind turbines can travel up to 80 kilometers (50 miles) underwater, potentially causing significant harm to marine life in the vicinity.

Another impact of offshore wind turbines is habitat destruction. Wind farms require large areas of the seafloor to be cleared, disrupting and destroying the natural habitat of many marine species. The turbines themselves also act as artificial reefs, attracting marine life, but they can also cause physical damage to marine organisms, such as fish, which can be injured or killed by the spinning blades.

Furthermore, the construction and operation of offshore wind turbines can also cause disturbance to important feeding, breeding, and migration areas for many marine species. These disturbances can have long-term effects on marine ecosystems, disrupting the balance of populations and potentially leading to declines in some species.

According to a study published in the journal *Frontiers in Marine Science*, offshore wind farms can also have indirect effects on marine life, such as altering ocean currents and causing changes in water temperature, salinity, and nutrient levels. These changes can have impacts on the entire food chain, affecting everything from plankton to top predators.

In conclusion the construction and operation of offshore wind turbines have significant negative impacts on marine life. Noise pollution, habitat destruction, disturbance of important areas, and indirect effects on the entire marine ecosystem are all issues that have not been considered and should be seriously examined before moving forward with this project and the negative impacts on our marine life.

Sincerely,

Tom Santora

The Fortress Compliance Department prohibits all Fortress personnel from communicating about Fortress related business over text message. Fortress employees are only permitted to communicate about Fortress business on Fortress email, Microsoft Teams, Bloomberg and, if pre-approved by the Fortress Compliance Department, WhatsApp.



itp Potlock - NOAA Service Account <itp.potlock@noaa.gov>

RE: Atlantic Shores - Wind Turbines off coast of Long Beach Island, NJ1 message

Thomas Santora <tsantora@fortress.com>
To: "ITP.Potlock@noaa.gov" <ITP.Potlock@noaa.gov>

Fri, Apr 28, 2023 at 12:45 PM

Hi Jolie,

To follow up on my previous email, offshore wind developers are typically required to conduct a range of environmental studies to assess the potential impact of their projects on the marine environment.

Can you please share with me the following studies that the developers conducted:

1. Baseline Studies: These studies involve collecting data on the current physical, biological, and socioeconomic conditions of the project area. This helps developers to establish a baseline against which to compare any changes that may occur as a result of the wind farm.
2. Marine Mammal and Bird Surveys: These surveys are conducted to determine the presence and abundance of marine mammals and birds in the project area. This information is used to assess the potential impact of the wind farm on these species and to develop mitigation measures to minimize any negative impacts.
3. Fish and Invertebrate Surveys: These surveys are conducted to assess the potential impact of the wind farm on fish and invertebrate populations in the project area. This information is used to develop measures to protect these species and their habitats.
4. Seabed Surveys: These surveys involve mapping the seabed in the project area to identify any potential obstacles or hazards that may impact the construction or operation of the wind farm.
5. Noise and Vibration Studies: These studies are conducted to assess the potential impact of the wind farm on marine life, particularly marine mammals, which can be sensitive to underwater noise.
6. Socioeconomic Studies: These studies assess the potential impact of the wind farm on local communities, including the potential economic benefits and any potential impacts on tourism, fisheries, and other industries.

These environmental studies are critical to ensuring that offshore wind projects are developed in a responsible and sustainable manner, and to minimizing any negative impacts on the marine environment and local communities. So I am anxious to read the results of the studies above.

Thank you,

Tom Santora

From: Thomas Santora
Sent: Friday, April 28, 2023 12:36 PM
To: ITP.Potlock@noaa.gov
Subject: Atlantic Shores - Wind Turbines off coast of Long Beach Island, NJ

Dear Jolie Harrison,

Please reconsider allowing the installation of wind turbines off the coast of Long Beach Island, NJ.

The potential impacts on marine life are significant and the construction and operation have negative effects on marine ecosystems and are harmful to marine life.

One of the most significant impacts of offshore wind turbines on marine life is noise pollution. During the construction and operation of offshore wind farms, there is constant noise from drilling, pile driving, and turbine operation. This noise can disorient and harm marine mammals, such as whales and dolphins, which rely on sound for communication, navigation, and feeding. According to a report by the International Council on Clean Transportation, the noise generated by offshore wind turbines can travel up to 80 kilometers (50 miles) underwater, potentially causing significant harm to marine life in the vicinity.

Another impact of offshore wind turbines is habitat destruction. Wind farms require large areas of the seafloor to be cleared, disrupting and destroying the natural habitat of many marine species. The turbines themselves also act as artificial reefs, attracting marine life, but they can also cause physical damage to marine organisms, such as fish, which can be injured or killed by the spinning blades.

Furthermore, the construction and operation of offshore wind turbines can also cause disturbance to important feeding, breeding, and migration areas for many marine species. These disturbances can have long-term effects on marine ecosystems, disrupting the balance of populations and potentially leading to declines in some species.

According to a study published in the journal *Frontiers in Marine Science*, offshore wind farms can also have indirect effects on marine life, such as altering ocean currents and causing changes in water temperature, salinity, and nutrient levels. These changes can have impacts on the entire food chain, affecting everything from plankton to top predators.

In conclusion the construction and operation of offshore wind turbines have significant negative impacts on marine life. Noise pollution, habitat destruction, disturbance of important areas, and indirect effects on the entire marine ecosystem are all issues that have not been considered and should be seriously examined before moving forward with this project and the negative impacts on our marine life.

Sincerely,

Tom Santora

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