

Protect Our Coast New Jersey

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PRESS RELEASE

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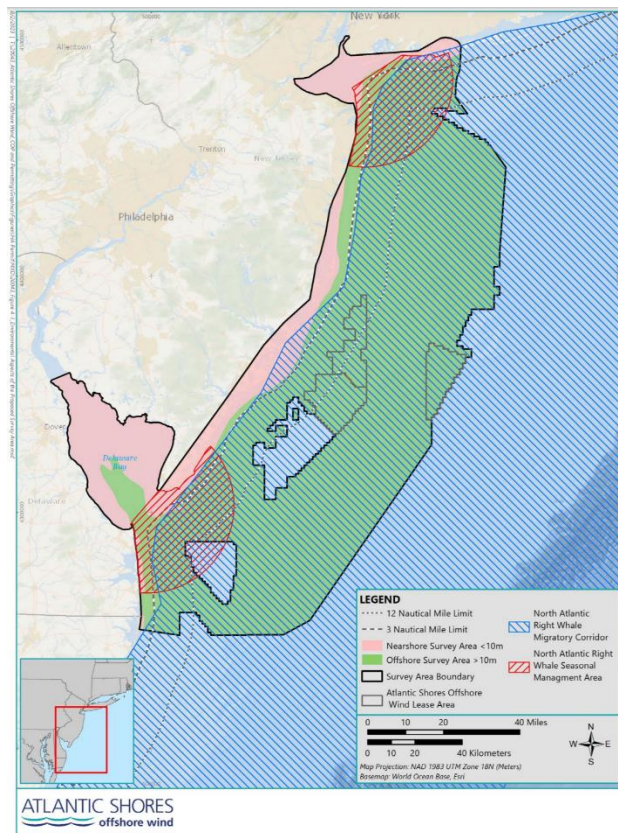
January 12, 2024

DEVASTATING DIN: ENERGY COMPANIES PROPOSE EVEN MORE HARASSMENT OF MARINE LIFE

OCEAN CITY, New Jersey—Just when many along the Jersey Shore thought the coast was clear and huge oil and gas companies were packing up and leaving, comes word of two massive proposals that will endanger the coastal and nearshore marine ecosystem. Nearly a half a million cetaceans, higher order marine mammals uniquely adapted to deep sea navigation based on sound, will be threatened if Atlantic Shores LLC is granted pending Incidental Harassment Authorization (IHA) and Letter of Authorization (LOA) from the National Oceanographic and Atmospheric Administration (NOAA). Atlantic Shores is an offshore wind company that is a wholly owned subsidiary of EDF, a French renewable energy company, and Shell New Energy.



Protect Our Coast New Jersey (POCNJ) spokesman Robin Shaffer said, “there are myriad problems with the applications presently before NOAA Fisheries, not the least of which is that Atlantic Shores is just a shell company for French and Dutch energy companies including EDF and Shell Oil.”



Offshore wind developers have planned for the inevitable outcome of casualties to marine life—including critically endangered Northern Right Whales—by applying for and being granted LOAs and IHAs by NOAA. These LOAs and IHAs allow the offshore wind industry to harass, and even kill marine mammals that fall under the protection of the Marine Mammal Protection Act of 1972. Atlantic Shores has applied for a LOA that will allow for five years of disruption during the construction phase of 357 massive thousand foot tall industrial wind turbines off the coast of New Jersey from Atlantic City to the New York border. The IHA would allow for harassment of cetaceans and other marine life from 2024-25 in huge swath of the ocean from the coast out to 40-50 miles into the ocean, from the Delaware Memorial Bridge all the way to the Delaware and New York borders. (see graphic from IHA application). A total of 447,373 whales and dolphins will be compromised if the latest round of applications is approved; however, POCNJ projects that this number is likely much higher since the proposed IHA ignores entire species such as the endangered Sperm Whale (see table, *excluded from IHA). In Atlantic Shores’ previous IHA issued in 2022 for the same activities, the Sperm Whale was included as an affected species, even though the proposed survey area was far smaller. With an extraordinary hearing range at both

Cetacean Species	Remaining Population
Northern Right Whale	338
Fin Whale	6,802
Minke Whale	21,968
Sei Whale	6,292
Long Finned Pilot Whale	39,215
Humpback Whale	1,396
Sperm Whale*	4,349
Bottlenose Dolphin	69,940
Other Dolphins	301,422
Less Common Cetaceans (not included in IHA)	131,602
TOTAL	583,324

Source: Atlantic Shores IHA, NOAA, 2023

high and low frequencies, the Sperm Whale would likely be impacted by survey work, even hundreds of miles from the survey vessels. And this is just one of several species left off the proposed IHA currently under review by NOAA. Given the greater range of vocalization and hearing of many of the

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species left off the draft IHA, there is concern that the proposed activity will have more profound effects than observed in previous survey work off the Atlantic seaboard.

The reasons the IHA and LOA currently under consideration by NOAA are so concerning is the mounting evidence that previous survey work done on behalf of the offshore wind industry—including Shell’s Atlantic Shores and Orsted’s Ocean Wind projects—caused injury and death to hundreds of whales and dolphins over a seven year period from 2016-2023. The activities of survey vessels have been closely correlated with the deaths of these cetaceans which has been characterized by NOAA as an ‘unusual mortality event.’

“For nearly two years, politicians and some environmental activists have put a narrative spin on the dozens of whales and dolphins that have washed ashore dead along the beaches of New Jersey and New York,” POCNJ spokesman Robin Shaffer said. “They say, without scientific support, that there is ‘no credible evidence’ that offshore wind survey and construction work is contributing to the boat strikes and entanglements that are ultimately cited as the cause of death. Without evidence, these groups unfairly allude to the commercial fishing industry as being responsible.

“However, what we know now is that the unusual mortality event that has resulted in 212 humpback whale deaths in east coast waters since 2016 is closely correlated with the work of offshore wind companies in east coast lease areas. Scientific acoustic research and data points us to one obvious conclusion—that the construction and operation of offshore wind facilities will disrupt the communication patterns of marine mammals and will destroy habitat for marine life more generally. Against the unrelenting man-made din, whales and dolphins are left blind and vulnerable to ship strikes and entanglements. For the affected mammals, it is just as reckless as forcing people to drive the Garden State Parkway from Cape May to New York blindfolded.”

Shaffer continued, “the public comment period for Atlantic Shores’ LOA has already passed. However, public comment on the IHA is open until February 5. We encourage anyone who has an interest in protecting marine wildlife from harm, and in preserving our Jersey Shore for generations to come to submit a comment. Further details for sending comment are included below:”

Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service and should be submitted via email to ITP.clevestine@noaa.gov. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable>. In case of problems accessing these documents, please call the contact listed below.

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. All comments received are a part of the public record and will generally be posted online at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable> 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.

Shaffer continued, “what follows is analysis and background information regarding impact to marine life from the offshore wind industry’s survey and construction activities and operations.”

Water is a much more efficient conductor of sound than air, and sound in the water travels 4.3 times as fast as through air—moving at about 4,500 meters per second. Just as human ears have adapted to sound in the air, marine mammals’ ears have also adapted to hearing in water. Marine mammals and humans determine the direction a sound is coming from by subconsciously estimating the time difference between when a sound is received in each ear. For humans, because sound travels so much faster underwater, it is difficult to determine the source of the noise. However, marine mammals, are equipped to detect sound underwater, much as we use GPS. This enables them to locate fellow marine mammals, fellow pod members, food sources, and avoid danger from predators and human activities.

Sound in the water is affected by the ocean properties with sound increasing proportionally with increasing temperature, salinity, and pressure. Generally, temperature drops, and pressure increases with increasing ocean depth, causing sound waves to accelerate. In addition, because of a phenomenon called Rayleigh scattering, sound waves tend to bend in the direction of lower velocity. At considerable depths, deep sea or SOFAR

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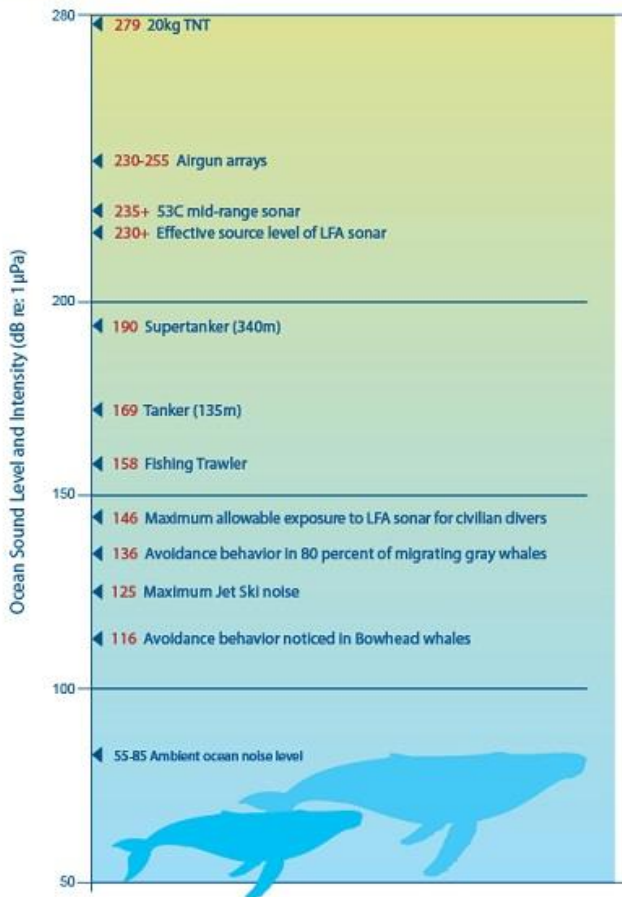


channels can occur in which sound is reflected up and down in a channel for hundreds of miles. Downed airmen in WWII used SOFAR channels to communicate their locations to US Navy ships and from hydrophone arrays off the East Coast, the Navy could hear submarines 1,900 miles away, transiting the Mediterranean Sea into the North Atlantic.

Cetacians such as whales, dolphins and porpoises are uniquely adapted to deep sea navigation based on sound and auditory processing. One such example, the fin whale, is second only to the blue whale as the largest animal on earth. Fin whales were detected off the Jersey Shore during offshore wind (OSW) baseline study work in 2008-2009. The call of the male fin whale at 180 dB in water, corrected to 118 dB in air, is as loud as a jet plane taking off or a live rock concert. Fin whale calls have been detected more than 500 miles away from their sources. This would be like someone in OCNJ being able to have a conversation with someone in Cleveland, Ohio (496 miles away) without a telephone!

Unfortunately, underwater man-made sounds from air gun arrays (230-250 dB), sonar (235-250 dB), supertankers (190 dB), fishing trawlers (158 dB), and OSW surveys and construction (to be discussed below) drive the overall ocean noise to dangerous levels. The loud explosive sounds from air gun arrays and sonar have been known to cause fatalities in marine mammals and invertebrates. In studies from 2008, using hydrophone arrays in the mid-Atlantic Mountain range, it was found that the 20-hz call of the fin whale was being masked (silenced) by air gun blasts used in seismic mapping for oil and gas exploration *being conducted 2,400 miles away*. There are many documented cases of military sonar injuring and killing marine mammals by damaging their ears. Other fatalities have occurred, such as in the case of beaked whales who were found beached after naval exercises with signs of air embolism. Their injuries were apparently caused by rapidly swimming up and down the water column after being exposed to naval sonar. The high level of man-made sounds, along with the fact that sound can propagate much farther in water, means that man-made noise sources can have a much greater impact on the ocean environment and the animals that make it their home.

Comparative Scale of Known Ocean Noises and their Noise Levels



It is estimated that the level of noise in the ocean has been doubling every 10 years and that the increasing ocean noise could be stressing marine mammals and fish. Before the terrorist attacks of September 11, 2001, a group of scientists from the New England Aquarium had been collecting and examining feces of North Atlantic right whales for the presence of stress hormones known as glucocorticoids. After the attacks, the scientists noticed a significant drop in the whales' stress hormone levels. (*Fathoms*, R. Giggs, 2020) The drop in stress levels coincided closely with the sudden pause in all shipping, fishing, and soundings. In the absence of man-made sources of ocean noise, the ocean had become much quieter, and right whales seemingly liked it. Unfortunately, the enjoyment was short lived, as the same scientists tracked the return of stress hormones as shipping resumed operations a short time later. It is hard to causally link right whales' health to noisy oceans, however, scientists have noticed that North Atlantic right whales are becoming shorter than ever before, suggesting they may not be thriving. (See Animal Welfare Institute *Ocean Noise* chart).

When examining the impact of offshore wind projects, it is helpful to look at the pre-construction, construction, and operational phases. In the pre-construction phase, surveys for offshore wind use sound transmitters to send out sound pulses that penetrate the sea bottom and are reflected back in order to determine the make-up of the bottom. While the sound from the vessel surveys using "sparkers" (140 dB at 13-34 miles and 160 dB at ½ to 16

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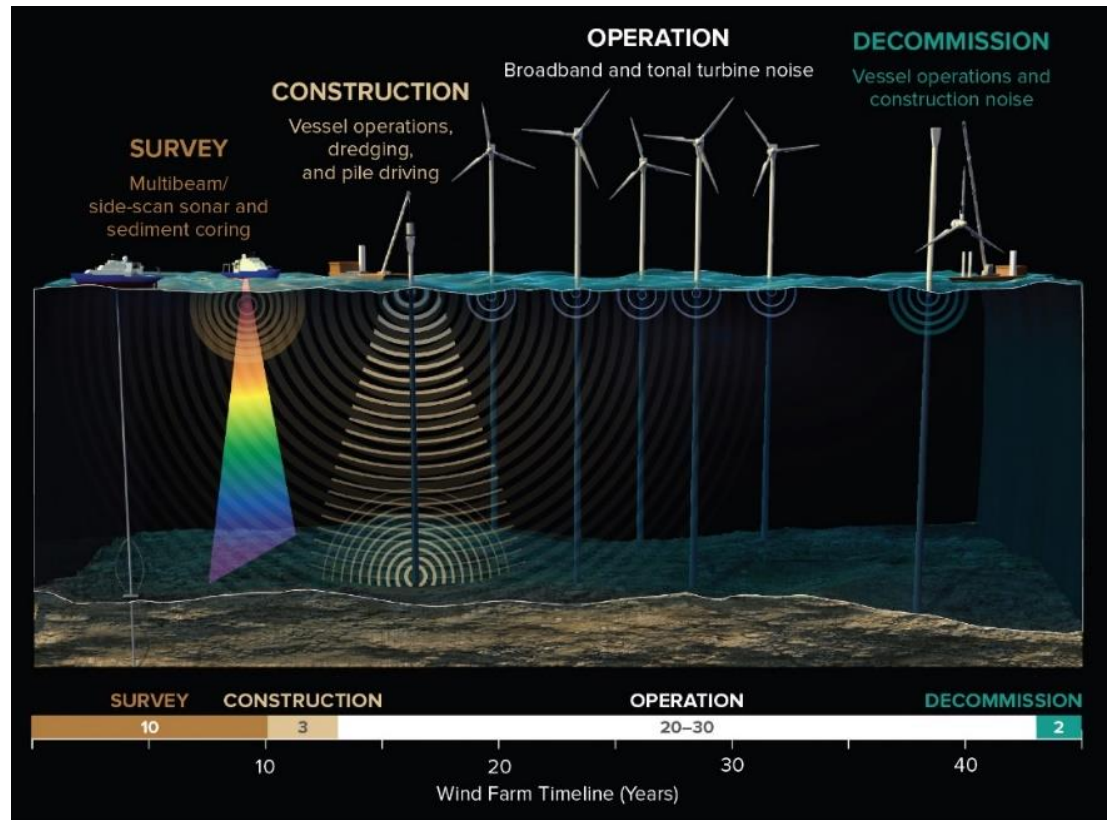


miles) is not enough to cause permanent hearing damage to whales and dolphins, it could cause the animals to seek to avoid the sound. Whales could be diverted from their life activities- feeding, breeding, and caring for their young. In the worst case, while avoiding the sound from ocean bottom surveys, they could be (and have been) struck and killed by the survey vessels and other shipping. There is strong evidence that suggests the increased offshore wind survey work caused over 25 humpback whale deaths in 2022-23 according to a press release put out by Save Long Beach Island (*Study Linking Marine Mammal Deaths to Offshore Surveying*, Stern, December 13, 2023). In addition, because many whales die and sink to the bottom of the ocean without ever washing up on the shore, the actual number of whales killed during the offshore wind surveying is likely much higher than 25 officially documented by the National Oceanographic and Atmospheric Administration (NOAA). (NOAA Fisheries estimates that only 1/3 of Right Whale mortalities are actually detected.)

During the construction phase of offshore wind facilities, the increased ship activity and the extremely loud sound of pile driving impulses fill the ocean and seriously endanger marine mammals and fish close to the turbine sites. In an example used by Save LBI, for a pile foundation with a diameter of 15 meters, to embed the pile 200 feet in the seabed would require 15,387 blows at a rate of approximately 30 per minute. (*Marine Mammal Noise Impact-Offshore Wind Energy*, Stern) For each blow, the force of impact causes a wave to be driven down the piling at 5,900 m/s, greater than the sound speed of 1,500 m/s. This Mach wave propagates down the piling and reflects off the ocean bottom.

For the Block Island windfarm, SPL peak near the seafloor at 500 meters was 188 dB. Assuming spherical spreading, peak source level was 242 dB at 1m. (*Block Island Wind Farm*, Miller, 2020)

The obvious question is how will these sound levels affect marine mammals in close proximity to the pile-driving? Unfortunately, there is sparse data on what sound levels and durations can create permanent or temporary hearing loss (temporary threshold shift or TTS) in whales. However, one study exposed bottlenose dolphins and beluga whales to various signals at frequencies that lasted for one second. The received levels required to cause TTS were generally between 192 and 201 dB. The data from this study are plotted in the following figure. The highest received level that was tested at the 400 Hz frequency (193 dB re 1 μ Pa) did not produce threshold shifts in any of the animals, as indicated by the dashed line. (See graphic from *Acoustic Impacts of Offshore Wind Energy on Fishery Resources: An Evolving Source and Varied Effects Across a Wind Farm's Lifetime*, TA Mooney, 2020)



During the operational phase, noise levels transmitted into the ocean from blade and gear box vibrations are expected to be lower than the level of shipping sounds. However, with the hundreds of wind turbines operating simultaneously, the overall effect will be of a single, huge sound-producing organism with a lifetime of 25-30 years. Birds, more than fish, will be impacted during the operational phase by blade collisions and avoidance

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maneuvers. A study is currently underway on the impact of Block Island Wind on migratory birds, specifically the endangered piping plover. The irony of an impact study on birds being conducted *after* commissioning of the Block Island Wind facility must be highlighted.

While this paper has focused on the impact of OSW sound on marine mammals, there are many other harms from OSW that need to be explored, including the significant impact of OSW construction sound on fish and invertebrates. There will be harm from the hardening of the ocean bottom from pile driving vibration and from sedimentation increase. Wind vortices from the turbines will affect ocean surface temperature and oxygenation. Trenching for cable laying will increase ocean turbidity and could possibly release toxins from the bottom. And electromagnetic fields (EMF) from the cables themselves during the operational phase will affect fish such as flounder and sharks that have EMF sensitivity.

The ocean is at a tipping point and endangered species like the North Atlantic Right Whale are already suffering. Industrialization of the ocean off the US east coast and the out-of-control underwater noise it will create will threaten this population with extinction.

Shaffer said, "in the face of threatened industrialization of the ocean, POCNJ supports the United Nations' 'Precautionary Principle,' part of the 1992 Rio Declaration which states 'where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.' The principle includes four central components: taking preventive action in the face of uncertainty, shifting the burden of proof to the proponents of an activity, exploring a wide range of alternatives to possibly harmful actions and increasing public participation in decision making." (*Environmental Health Perspectives*, D. Kriebel et al, 2001)

"If we cannot save the largest animals in the world, we have little chance of saving the biosphere itself, and, therefore of saving our own species."
-Sir Peter Scott, former President of Whale and Dolphin Conservation

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