



## The Offshore Wind Farm Round-Up

Issue #10

March 13, 2023

Publication of The OSWF Round-Up took a break in February

### IN THIS ISSUE:

Whales have been washing up on the shores of New York & New Jersey in higher numbers than usual over the past few months:

- An introduction to a recent news report about the whale strandings begins on this page.
- Experts weighing in on the causes begins on page 2.
- Details and a link to the notice from the National Marine Fisheries Service authorizing Atlantic Shores to conduct site surveys begin on page 4.

Note that this section includes information about “takes.”

- A link to the final report from the New Jersey Department Of Environmental Protection Science Advisory Board about the impacts of underwater seismic testing begins on page 5.
- Congressman Jeff Van Drew has announced that he plans to hold a hearing about the whale deaths on Thursday March 16 at 2 pm at the Wildwoods Convention Center. Information about how to register in advance begins on page 9.

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The Offshore Wind Farm Round-Ups periodically provide a review of recent research efforts in which the effects of offshore wind farms have been studied. In addition, in response to readers’ suggestions and questions, Round Ups occasionally include factual, clarifying information.

Research included in Round-Ups points you in the direction of the science and assumes no point of view one way or the other about the presence of offshore wind farms off our shore. Likewise, clarifications are provided without editorial comment; they are there for you to consider so you can draw your own conclusions.

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### **Why are so many dead whales washing up on shores of New Jersey & New York?**

Past occurrences of whales washing up dead on beaches are well documented and extend back as long as people have been keeping records. In particular, the National Oceanic and Atmospheric Administration (“NOAA”) has been closely monitoring humpback and North Atlantic right whales strandings along the entire Eastern coast since 2016 and 2017, respectively, as well as occurrences along the shores of the Gulf of Mexico and the Pacific coast.

What is sparking concern now, however, is that these occurrences seem to be happening more often in our region. Information from various news sources about dead whales washing up on the shores of New York and New Jersey have been published or aired frequently over the last three months.

■ An article in *The New York Times*, with the headline “Why 23 Whales Have Washed Up on the East Coast Since December,” was published February 28, 2023.

This article reported that since December 2022, 23 whales have washed ashore in multiple states, including 13 in New York and New Jersey, with the latest spotted by the Coast Guard at the end of February floating in a shipping channel between New York and New Jersey.

The article states, “Scientists believe the mortality rate may be tied to an unlikely confluence of factors” and then identifies those factors and includes links to relevant reports and sources.

*Access the full New York Times article by clicking on this link:*

<https://www.nytimes.com/2023/02/28/nyregion/east-coast-whale-deaths.html?smid=nytcore-ios-share&referringSource=articleShare>



### **CAUSES OF WHALE MORTALITY**

■ The National Oceanic and Atmospheric Administration (“NOAA”) has been monitoring the increased frequency of occurrences involving **humpback whales** since 2016.

■ Beginning in 2016, NOAA Fisheries declared a “marine mammal unusual mortality event” for humpback whale strandings along the Atlantic coast [Maine to Florida] and that event status continued through each subsequent year, making it a multi-year event.

*From NOAA’s report*<sup>1</sup>: “Partial or full necropsy examinations were conducted on approximately half of the whales. Of the whales examined, about 40 percent had evidence of human interaction, either ship strike or entanglement. A portion of the whales have shown evidence of pre-mortem vessel strike; however, this finding is not consistent across all whales examined. More research is needed.”

*Access the report by clicking on the link below:*

<https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2023-humpback-whale-unusual-mortality-event-along-atlantic-coast>

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<sup>1</sup> “2016–2023 Humpback Whale Unusual Mortality Event Along the Atlantic Coast” from NOAA Fisheries website and last updated March 3, 2023.

■ NOAA reports other causes of humpback whale mortality over the past three decades in descending order of frequency<sup>2</sup>:

49% undetermined	14% infectious disease
18% biotoxin	5% human interactions
14% ecological factors	

*Access that report by clicking on the link below:*

<https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-unusual-mortality-events>

Many stranded carcasses could not be retrieved and analyzed “because they were in states of advanced decomposition or were floating, but partial or full necropsy examinations on approximately half of the 42 cases that have occurred through April 2017 [have been conducted].”<sup>3</sup>

*Access the report which contains this quote by clicking on the link below:*

<https://www.fisheries.noaa.gov/national/marine-life-distress/frequent-questions-2016-2023-humpback-whale-atlantic-coast-unusual>

■ *From NOAA Fisheries:* “Since January 2016, elevated humpback whale mortalities have occurred along the Atlantic coast from Maine through Florida.” The report includes a table showing stranding numbers in 13 states along the Atlantic coast from 2016 - 2023.

*Access the report and the table by clicking on the link below:*

<https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2023-humpback-whale-unusual-mortality-event-along-atlantic-coast>

■ NOAA Fisheries has been monitoring the increased frequency of occurrences involving **North Atlantic right whales** since 2017.

*From NOAA’s report<sup>4</sup>:*

■ “Beginning in 2017, elevated mortalities in North Atlantic right whales (*Eubalaena glacialis*) were documented in Canada and the United States and necessitated an Unusual Mortality Event (UME) be declared. The whales impacted by the UME include dead, injured, and sick individuals, who represent more than 20

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<sup>2</sup> “Marine Mammal Unusual Mortality Events” from NOAA Fisheries website and last updated January 5, 2023.

<sup>3</sup> “Frequent Questions: 2016–2023 Humpback Whale Atlantic Coast Unusual Mortality Event” from NOAA website and last updated January 17, 2023.

<sup>4</sup> “2017–2023 North Atlantic Right Whale Unusual Mortality Event,” from NOAA Fisheries website and last updated March 3, 2023.

percent of the population, which is a significant impact on an endangered species where deaths are outpacing births.

■ Additionally, research demonstrates that only about 1/3 of right whale deaths are documented. The preliminary cause of mortality, serious injury, and morbidity (sublethal injury and illness) in most of these whales is from rope entanglements or vessel strikes.”

*Access the full report by clicking on the link below:*

<https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2023-north-atlantic-right-whale-unusual-mortality-event-::~:~:text=Additionally, research demonstrates that only,rope entanglements or vessel strikes.>

■ NOAA Fisheries posted “Frequent Questions—Offshore Wind and Whales” on its website and answered those questions about interactions between offshore wind energy projects and whales on the East Coast. The FAQ was last updated February 27, 2023.

*Some highlights from the FAQ:*

■ “At this point, there is no evidence to support speculation that noise resulting from wind development-related site characterization surveys could potentially cause mortality of whales, and no specific links between recent large whale mortalities and currently ongoing surveys.”

■ “Vessel strikes and entanglement in fishing gear are the greatest human threats to large whales.”

■ “As the humpback whale population has grown, they are seen more often in the Mid-Atlantic. Along the New Jersey shore, these [humpback] whales may be following their prey (small fish) which are reportedly close to shore this winter. These prey also attract fish that are of interest to recreational and commercial fishermen. This increases the number of boats in these areas. More whales in the water in areas traveled by boats of all sizes increases the risk of vessel strikes.”

■ “We know that our climate is changing, and one of those key changes is the warming of our oceans. In response to this, we are seeing populations of many marine species adapting by moving into new areas where conditions are more favorable.”

*Access the FAQ by clicking on the link below:*

<https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-life-distress/frequent-questions-offshore-wind-and-whales?fbclid=IwAR2TXmI7xEfF89Cws7dmZJWYxkgnqTfl-nd6Fj3qI0D15bGharPIYOa Z5c>

## AUTHORIZATION TO CONDUCT SITE SURVEYS

The National Marine Fisheries Service authorized Atlantic Shores to conduct “marine site characterization survey activities off New Jersey and New York” for one year beginning August 2022.

*Access the full notice from the Federal Register by clicking on the link below:*  
<https://www.federalregister.gov/documents/2022/08/16/2022-17522/takes-of-marine-mammals-incident-to-specified-activities-taking-marine-mammals-incident-to-site>

The National Marine Fisheries Service allowed Atlantic Shores to conduct these activities by issuing an Incidental Harassment Authorization (“IHA”). This IHA permits “incidental takings” of marine mammals during site characterization surveys off New Jersey and New York in its designated lease areas, per regulations set in the Marine Mammal Protection Act.

This authorization from NOAA Fisheries issued to Atlantic Shores **DOES NOT** authorize, i.e., it does not permit, mortality or serious injury to marine mammals or endangered species.

■ The Marine Mammal Protection Act defines “take” broadly to mean “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.”<sup>5</sup>

■ This particular Incidental Harassment Authorization (IHA) issued to Atlantic Shores does **NOT** authorize whales or any other marine life to be killed. Atlantic Shores is specifically authorized to “incidentally harass marine mammals during site characterization surveys.”

■ **Incidental takings** are defined by the Marine Mammal Protection Act as “an unintentional, but not unexpected, taking.”, which, under this authorization, is limited to harassment.

*From the authorization notice published in the Federal Registry (link is above)<sup>6</sup>:*

■ “Authorization for incidental takings shall be granted if National Marine Fisheries Service 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).”

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<sup>5</sup> “What does take mean under the Marine Mammal Protection Act and what is incidental take?” from the NOAA Fisheries website <https://www.fisheries.noaa.gov/node/8111> on [February 1](#), 2023

<sup>6</sup> *Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Site Characterization Surveys Off New Jersey and New York in the Area of the Atlantic Shores Lease Area (OCS-A 0541)* published in the Federal Registry, August 16, 2022

■ “Neither Atlantic Shores Bight nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.”



### **IMPACT OF SEISMIC TESTING**

The New Jersey Department Of Environmental Protection Science Advisory Board issued its final report on this subject in March 2020: “Evaluation Of The Observed Or Potential Impacts To Ocean Resources From Underwater Seismic Testing.”

*Access the full report by clicking on the link below:*

<https://dep.nj.gov/wp-content/uploads/sab/sab-seismic-impacts.pdf>

The 69-page report includes an introduction, regulatory criteria for sound during seismic surveys, mention of 6 classes of marine species<sup>7</sup>, direct and indirect impacts of seismic activity, mitigation measures, 7 pages of references and 9 pages with links to 27 different studies about the impact on whales and other marine life of seismic activity.

*From page 1:* The Science Advisory Board’s Ecological Processes Standing Committee (“EPSC”) was given the responsibility of 1) investigating and responding to specific questions; and, as a result, 2) providing the NJ Department of Environmental Protection (“NJDEP”) with technical information that can be used to inform future regulatory decisions and identify research options regarding the use of sound generation devices.

The specific questions raised by the NJ Department of Environmental Protection were

- What are the actual or potential impacts of seismic testing on ocean resources?
- What types and scales of seismic testing could have impacts on New Jersey’s ocean and marine resources?
- What documentation (and potentially additional research) is needed to determine whether seismic testing off NJ shores has impacts on our marine species?

*From the Executive Summary:*

■ “Responses to anthropogenic<sup>8</sup> sound may be strongly related to circumstances specific to an individual animal (e.g., mother with calf) or an animal group (e.g., migrating pod).

Nothing is yet known about long-term effects of seismic exposure or about effects related to cumulative exposures. Because auditory structures and auditory processes differ between various species and across taxonomic phyla, and sound propagation is not consistent under different environmental conditions, research findings cannot be

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<sup>7</sup> Marine mammals (whales, dolphins & seals); marine reptiles (sea turtles), fish, macroinvertebrates (shellfish), zooplankton (including larval stages of fish and macroinvertebrates), and phytoplankton

<sup>8</sup> Defined as “originating in human activity”

reliably extrapolated from one species to another or from one set of environmental conditions to another.”

■ [In addition to peer-reviewed and non-peer reviewed [research] papers, presentations published in conference proceedings and reports commissioned by various governments, agencies, and industry groups], “there are also published anecdotal reports that attempt to connect seismic survey activity with negative environmental results, although demonstrating cause/effect has not been possible.

Significant issues exist with obtaining reliable data in the wild: the difficulty/cost of establishing *in situ* controls; the challenges associated with eliminating effects attributable to the presence of a vessel; the challenges with obtaining significant sample sizes; and the limitations of visual observations at a distance.”

■ “The Ecological Process Standing Committee has reviewed an extensive body of research that has been published regarding the impacts of sound generated by air guns used as a component of seismic surveys.

In general, the identified impacts are negative, with direct impacts being both physical (in terms of physical damage to auditory structures) and behavioral (changes in life activities). While not all of the impacts are believed to be permanent, the research has not demonstrated any underwater noise generation activity from air guns that is considered to have no effect or a positive influence.”

*From the Direct Impacts section:*

■ “With respect to marine noise, marine mammals, and particularly whales, are studied most frequently. . . . Studying captive species and observing individuals during field research is the primary source of experimental data.

While the professional community infers that whales are impacted by the noise of seismic testing because of the sensitivity of their auditory structures, Gordon *et al.* report that there is no direct evidence of damage to the ears of marine mammals resulting from seismic sound sources because there have been no direct investigations of hearing threshold shifts in marine mammals. Auditory parameters are inferred from the frequency range of vocalizations, field observations, and physical characteristics of the inner ear.”

■ “Scientists usually make observations from shore (resulting in a reduced visibility distance) or from ships (making it difficult to separate the seismic effects from a response to the vessel’s presence). [Researchers] Castellote and Llorens reviewed reports of whale displacement and ten suspected whale mass strandings that could be linked to offshore seismic activity.

They note that this work is “very controversial”, some findings are contradictory, and a causal link was not established in any of their reported displacement events that occurred between 2004 and 2013. However, Castellote and Llorens specified that, “This

lack of evidence should not be considered conclusive but rather as reflecting the absence of a comprehensive analysis of the circumstances.”

■ “In a study of whale and dolphin responses to seismic exploration off the coast of Angola, [Researcher] Weir found that humpback and sperm whale sightings from a vessel did not differ significantly based on the volume of the air gun arrays.<sup>9</sup>

The mean distance to whale sightings was greater during seismic operations than when air guns were not in use, showing that the whales actively avoided the area regardless of the volume of the air gun array.

Dolphins exhibited the most overt response to air guns in terms of sighting rates and distances from the boat; positive dolphin approach behavior was only observed when the air guns were not in use, though [dolphins] will also approach a vessel using airguns and ride the bow wave or play near streamers.”

■ “The whales and dolphins all appeared to stay far enough from the in-use air gun arrays to avoid potential injury. [Researcher] Weir did look at the potential for prolonged displacement as a result of air gun activity and noted that humpback whale sightings exhibited a significant decrease that the authors suggest was potentially related to seasonal migration patterns. However, during the ten-month period of seismic activity, no evidence of a prolonged or large-scale displacement of the cetaceans was found.”

■ “Many anthropogenic<sup>10</sup> maritime activities may temporally and spatially coincide, including seismic testing, oil and gas extraction, wind energy development, shipping, navigational dredging, and commercial fishing. Effects such as habitat changes, pollution, sedimentation, direct mortality, or noise and vibration created by each of these activities may compound or otherwise interact and potentially result in cumulative impacts.”

*In the Mitigation Measures section:*

■ “Mitigation for biological impacts associated with seismic testing are required, or under consideration, in several geographic area, including the U.S., Russia, and Latin America. The mitigation approach required for a typical project reflects the size, scope, geographic location, and timing of the proposed seismic survey project.

There is a standard set of mitigation procedures for seismic surveys, as initially implemented by the regulator for Gulf of Mexico surveys by industry (“permitted” by

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<sup>9</sup> Air gun arrays are the sources of the acoustic energy pulses used in seismic surveying. The pulse is emitted and reflected or refracted back from the seafloor. These reflected/refracted acoustic signals create pressure fluctuations, which are detected and recorded by the towed cables with hydrophones encased in plastic tubing called streamers (*page vii*).

<sup>10</sup> Defined as “originating in human activity”

BOEM). All IHA holders now follow those standard mitigation procedures for seismic surveys.”<sup>11</sup>

*From the Conclusions section*

■ “The Ecological Process Standing Committee has reviewed an extensive body of research that has been published regarding the impacts of sound generated by air guns used as a component of seismic surveys.

In general, the identified impacts are negative, with direct impacts being both physical (in terms of physical damage to auditory structures) and behavioral (changes in life activities).

■ While not all of the impacts are believed to be permanent, the research has not demonstrated any underwater noise generation activity from air guns that is considered to have no effect or a positive influence.”



### **HEARING ANNOUNCED**

Congressman Jeff Van Drew has announced that he plans to hold a hearing about the whale deaths on March 16 at 2 pm at the Wildwoods Convention Center. Pre-registration is requested through his website. The link is below.

[https://vandrewforms.house.gov/forms/form/?ID=28&fbclid=IwAR1UE4e3ok5HyFB3QjVLnsxp5jOnWO4wpI\\_WXpLxrg4e9JpTLbjChCv4hk](https://vandrewforms.house.gov/forms/form/?ID=28&fbclid=IwAR1UE4e3ok5HyFB3QjVLnsxp5jOnWO4wpI_WXpLxrg4e9JpTLbjChCv4hk)



*This Round-Up was prepared by a group of writers and researchers from Long Beach Island, New Jersey. Questions about the content of Round-Ups and suggestions for topics to be covered in future issues can be directed to [RoundUpLBI@gmail.com](mailto:RoundUpLBI@gmail.com). In particular, the team encourages you to email links to relevant research and articles that you think the team has missed.*

*The Round Up research and writing team welcomes questions and comments.*

*Round-Ups are distributed to the voting representatives of the eleven member organizations of the Joint Council of Taxpayers Associations of LBI (JCTA). Each taxpayer and property owners association then distributes this information to its members and the community via its regular communication methods, e.g., through newsletters; posted on websites; social media.*

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<sup>11</sup> Atlantic Shores is an IHA holder (see previous section “Authorization to Conduct Site Surveys” in this Round Up)