



PSA-054-Hazards of marine exploration- World's Oceans

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The Bipartisan Fight for Quieter Oceans

The Trump administration wants to prospect the Atlantic for oil and gas using loud explosive blasts that will seriously harm whales, fish, and other marine life.

A breaching humpback whale
Mike Hutchings

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Last night, to celebrate the Fourth of July, the air over the U.S. filled with fireworks. The noise they created was extremely loud and, mercifully, brief. But imagine having to listen to even louder explosions once every ten

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seconds, for days or weeks on end. Starting this fall that may be the new reality for whales, fish, and other marine life off the eastern seaboard, if the Trump administration's plans go ahead.

Following the president's executive order to open the Atlantic to offshore drilling, the National Marine Fisheries Service (NMFS) is set to permit five companies to begin seismic airgun blasting—an old but controversial technique for detecting reserves of oil and gas. Ships will tow an array of 24 to 36 cannons behind them along with streamers of underwater microphones. The cannons create explosions by releasing pressurized gas, while the microphones detect the echoes of these detonations to pinpoint petroleum deposits beneath the ocean floor.

Each airgun produces up to 180 decibels of noise, making them around 1,000 times louder than [nearby fireworks](#). And each will go off five or six times a minute, for months at a time, from the back of slow-moving ships that crisscross 90,000 kilometres of Atlantic waters from New Jersey to Florida. There is clear evidence that noise of this magnitude kills or perturbs marine life at every scale—from titanic whales to tiny plankton. It “poses an unacceptable risk of serious harm to marine life... the full extent of which will not be understood until long after the harm occurs,” said [a group of 75 marine scientists in 2015](#).

In 2015, Barack Obama had considered allowing the use of seismic airguns, but was met with staunch opposition from both [scientists](#) and local communities. In response, during the waning days of his presidency, he announced a [ban on drilling in the Atlantic](#) and denied six applications for seismic exploration. “Guided by an abundance of caution, we believe that the value of obtaining the geophysical and geological information from new air-gun seismic surveys in the Atlantic does not outweigh the potential risks of those surveys’ acoustic pulse impacts on marine life,” said Abigail Ross Hopper, director of the Bureau of Ocean Energy Management [in a statement](#).

On April 28, Donald Trump took the first steps to undo those decisions. As part of [an executive order](#) that put forward an “America First Offshore Energy Strategy,” he specifically charged Secretary of the Interior Ryan Zinke to expeditiously consider any applications for seismic exploration. Zinke quickly [took up this mandate](#) on May 1, and moved to [re-evaluate the denied permits](#). “You should be excited,” [he said to the attendees](#) at an offshore drilling conference, as reported in *The Hill*.

On June 5, the NMFS drafted [Incidental Harassment Authorizations](#) for five companies—rulings that would allow them to use airguns on the grounds that they would only have a “negligible impact” on marine mammals. Those authorizations have been subject to a 30-day period of public comment that was due to end tomorrow, but has since been extended by 15 days. If they are approved, permits could be issued immediately. “They could be blasting the Atlantic ocean by this fall,” says [Frank Knapp Jr.](#), one of the directors of the Business Alliance for Protecting the Atlantic Coast.

“The ocean is an acoustic world—a world of hearing not vision.”

It is easy to paint environmental issues as fights between moralizing tree-huggers and hard-working business-owners. But the opposition to airgun testing transcends such caricatures. “There is no separation between the interests of environmentalists and the business community,” says Knapp, whose bipartisan organization represents 41,000 businesses and 500,000 commercial fishing families who oppose seismic testing. They do so because the blasts can harm and displace fish, greatly reducing the populations that both commercial and recreational fishers

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depend upon. In other parts of the world, catch rates for species like [cod](#) and [rockfish](#) have fallen by 50 to 70 percent in the days after seismic tests. The tourism industry can also be affected, since airgun noise can potentially [force whales to beach themselves](#). “Tourists don’t like to see dying marine mammals on the beach,” Knapp says.

“We are absolutely bipartisan in support,” he adds. “There might be some pockets of resistance from businesses who are willing to put partisan politics above even their local economies. But you can go up and down the coast, and the vast majority of businesses will say this is crazy. Why would we want to blast away at our marine life?”

The pushback from Congress has been similarly un-polarized. Don Beyer, a Democratic representative from Virginia, and Republican Frank LoBiondo from New Jersey [recently introduced a bill](#) to the House that would ban seismic testing. (A [similar Democrat-led bill](#) has been introduced in the Senate.) And last week, Beyer, together with Republican John Rutherford from Florida, sent a letter to Zinke [“urging an immediate halt to the permitting process.”](#) It was signed by a bipartisan group of 103 representatives. “The Republicans on the letter aren’t a bunch of backbenchers no one’s ever heard of,” Beyer says. “It’s been really encouraging that a lot of them have lined up with us. The science keeps helping us.”

“The ocean is an acoustic world—a world of hearing not vision,” says Michael Jasny, an expert in the law and policy of ocean noise pollution at the Natural Resources Defense Council. But between propellers, sonar, and industrial plants, “the acoustic environment of the ocean has changed very significantly, even within the lifetime of an individual whale,” he says. And even amid this human-made cacophony, the noise of airgun blasts is especially damaging.

“I don’t think you’ll see the public opposition wane at all. And you’ll see the Trump administration taken to court.” It can substantially injure the internal organs of fish, as well as the hair cells that allow them to hear. It can damage the organs that allow invertebrates, from rock lobsters to giant squid, to maintain their balance. It slows development, induces damaging levels of long-term stress, forces animals to seek shelter instead of feeding, prevents them from spotting predators, drowns out the sounds that they use to attract mates, and stops larvae from finding their way to the right habitats. It disrupts the lives of blue and other giant whales, forcing them to abandon their habitats and increasing the risk of calves being separated from their mothers.

Perhaps most alarmingly, last month, a new study showed that airgun blasts [can kill zooplankton](#)—the microscopic animals that form the basis of the ocean’s food webs. After a day of blasts, the numbers of dead plankton rose by two to three times, and the larvae of krill—the little crustaceans that large whales depend upon—were completely annihilated. And that experiment involved a single airgun, rather than the large arrays that will be towed by actual ships.

Proponents of the airgun tests have occasionally claimed that it’s impossible to prove that a given animal was specifically killed by seismic blasts, according to Beyer who has witnessed several congressional hearings where the evidence was debated.

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More recently, in discussing the five permits under consideration, the NMFS has argued that their effects on marine mammals would be negligible. But Jasny argues that this claim is based on “creative accounting.” It considers each permit separately and never tallies their effects. “It’s like separately considering the emissions of five factories in the same air corridor as though they wouldn’t combine to affect air quality. It doesn’t make any sense.”

Zinke’s office did not return a request for comment, but has previously stated that BOEM “employs mitigation measures and safeguards to reduce or eliminate impacts to marine life.” Those measures, according to Knapp, involve putting a guy on deck with binoculars to watch for nearby whales and dolphins. “When you say it, people laugh, it’s so insufficient,” he says. It also doesn’t consider the impact on smaller organisms like fish and plankton. There are ways of reducing the noise from the airguns, including using quieter models that produce 10-fold less noise. That’s better than nothing, but the blasts are still exceptionally loud, and particularly within low frequencies that large whales and many fish depend upon. And some argue whether such tests are necessary at all. “There’s the larger environmental issue,” Beyer says. “In a world where we need to be moving away from fossil fuels as quickly as possible, and where our energy independence is high because of fracking, do we really need to be out there drilling offshore, especially in the wake of Deepwater Horizon?”

Despite the outcry, Beyer fully expects that BOEM will grant the first set of blasting permits. “It would be wonderful if the administration backed off but there’s no history of that happening so far,” he says. Many more applications are likely to follow. And on Monday, the Department of the Interior is set to announce a five-year plan for offshore drilling, triggering another 30-day period of public comment.

“I don’t think you’ll see the public opposition wane at all,” says Jasny. “And you’ll see the Trump administration taken to court.”

The president claims regulations are hurting economic growth. The data shows otherwise.



ABOUT THE AUTHOR

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