

Discovery of Sound in the Sea (DOSITS) Webinar

Review of NMFS Regulatory Approach to Underwater Noise

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Webinar archive: <https://dosits.org/decision-makers/webinar-series/2020-webinar-series/nmfs/>

## *Question and Answer Summary*

*(questions asked/answered in real time during the webinar or in the Q&A box)*

### Questions asked/answered live by Jolie Harrison during the webinar

***I have been engaged in the dialog on BOEM's cumulative environmental Impact assessment for 20 wind farms between North Carolina and New England. How will these effect North Atlantic right whales and their conservation under the MMPA and ESA (where ocean noise is a key stressor)?***

There is a lot in this question. I don't know if the person is speaking to Vineyard Wind. There are plans, and people are probably aware of this, there are some serious plans to do some significant wind development off of the East Coast. And obviously we're concerned about the construction impacts of putting in those very large piles. And so, so we're analyzing those. But I think the agency is also concerned [about the fact that] we know a little bit less about any potential long-term effects once the wind farm is installed. We are looking at all of those things. We have only just begun working through the regulatory processes for those. I think there has been a couple of tests wing piles off the coast of Virginia, but that was one or two just to kind of get a sense...BOEM was interested in better understanding how sound propagates and that sort of thing. And then we've proposed an incidental harassment authorization for Vineyard Wind and are still in the process of seriously considering the really good comments we got on that. Clearly, we are interested in looking at a really robust mitigation and monitoring plan for those impacts, because, as you have pointed out, it is right along right whale migratory path, and want to be sure we are paying attention to that. This is still a work in progress and our greater Atlantic Regional Field Offices are heavily involved. There's a lot of interesting things to consider [as well], their [the wind turbines'] potential interactions with fisheries uses and all kinds of things. So, we are considering that currently under both the Endangered Species Act and the Marine Mammal Protection Act and also working with BOEM to make sure that we have a good environmental assessment or environmental impact statement to support our decisions under NEPA.

***Are there differences between NOAA and the US Fish and Wildlife Service and the implementation and oversight of the MMPA?***

Yes, there definitely are. And so again, under the MMPA there are a lot of sections in the act, and we share authority with the Fish and Wildlife Service under a lot of them. I'm going to speak to the incidental take provisions, because that's what I'm more familiar with. So one of the big differences is that the Fish and Wildlife Service hasn't actually developed implementing regulations for the

provisions and the actual statutes. So that is one difference. Because they have fewer species, and this is not meant to be critical, they have had less actions through which to develop more consistent processes. Although they have been sued multiple times, so they've definitely evolved the way that they deal with lawsuits and that sort of thing. My general comment is that their species are also affected by noise, but because they have fewer actions and fewer species, I think some of their processes are just a step or two behind us in their consistency. We have plenty of work to do, so that's not meant as a criticism...have a lot of terrestrial experience in some realm. So, I mean, I think that's one way that we're different.

Want to recognize that they do a LOT of research in noise. We have a lot of cooperative projects with them and the Park Service. They are right there with us and do a lot of research.

***Regarding the issuance criteria, during the Section 7 consult does NMFS take into account cumulative impacts of other projects in an area (past, present and future)?***

The National Marine Fishery Service, that definition that you just gave for cumulative impacts, is I think in the National Environmental Policy Act (NEPA). So, it's interesting. The Marine Mammal Protection Act (MMPA), our issuance of an authorization under that statute, is a Federal action that requires NEPA compliance. So, under the Marine Mammal Protection Act, we are required to do a NEPA analysis in which we consider cumulative effects explicitly. The Endangered Species Act (ESA), on the other hand, does not have an associated NEPA requirement, but they have a mechanism within the way they do their Section 7 consultations that inherently considers cumulative impacts. So that's probably the most basic answer to that.

***In relation to thresholds - how do you manage cumulative noise across industries - is it a first come first serves basis or is there a balance of what can go ahead – oil and gas seismic survey vs pin pilling for offshore wind?***

That's a great question. And I'm not sure my answer is going to satisfy anybody. First, I'll start with the Marine Mammal Protection Act, which unfortunately, well fortunately or unfortunately, most simply looks at the specified activity. And so, the MMPA lens is a bit narrower. So, while we consider those things in our NEPA analysis., and we also consider them in as much as they've influenced the state of play or the baseline at that moment, we don't add take, for example, from every activity going on, and analyze that. We look at what our activities are doing and we're considering it in the context of the general state of play. But that not specifically in like let's add all of these together and then look at exactly what happens from that. Now NEPA sort of does that, and I think from an agency standpoint, there are people, I mean, I think you guys know there was marine spatial planning a while back, and that's not really quite as much a thing anymore, but I think the agency's very much tried to think through how to best manage all of those effects. But there's not always a great mechanism to do it. Again, the Endangered Species Act considers cumulative effects specifically, but again, you're in, you're in the moment of through regulatory provisions like the ones I've discussed, you're in the moment looking at one particular thing. And it's hard to address that through the constructs that we have currently with these statutes. I realize it's this is probably a much longer conversation, and that's not a good answer, which is exactly what I expected, but it's a challenge that we all recognize I think we're constantly working to try and figure out how to manage it better. But it's really hard.

***For the quantitative measures of take that are currently being developed in the scientific/academic community, are there set mechanisms to incorporate new scientific knowledge into the regulatory strategy?***

We have a lot of quantitative methods that we use. I mean, the most obvious one is the noise criteria, that Amy Scholik-Schlomer was the primary author for that, came out in 2018 and so I mean that is one of the most formalized quantitative metrics that we have and that one very specifically says you know what, we're going to look at this regularly, and definitely make an effort as new science comes out to make sure that we're making sure that we're keeping up with that. That doesn't mean that you change it every time there's a new article. You're obviously evaluating the thresholds that we have with new information, but as information comes out, there's an absolutely deliberate intent to update those and consider it as necessary. And I think many of the quantitative...the acoustic thresholds are probably the ones that stay the most stable and with behavioral thresholds, we've had an intent for a while to as needed update those, they've remained stable for a long time. But with the metrics that we use for take estimates, we don't mandate those. We encourage people to develop models, to come up with a better way of calculating something, a better way to consider more refined environmental information, and I feel like we are pretty darn flexible with how we encourage the growth of those sorts of metrics. And we you know we change things. I mean, sometimes people you know, I mentioned a tool for evaluating HRG sources. Well, it might change in a month, if we figure out something important. So there are mechanisms to do that. When I am answering these questions, these are pretty specific to the MMPA work that I'm involved in, and so, you know, other people might have different experiences. But I think we do have a way and we do in try to update things as information is gathered.

***How does NMFS track the population-level impacts of multiple incidental take authorizations in a given time period and/or location?***

So that's interesting. I think, saying that we track them would probably be too strong of a statement. We obviously know where they're happening, and we're considering them in the baseline as we look to evaluate new and upcoming authorizations or permits or consultations, or those sorts of things. But in terms of tracking them, I mean, we certainly know where they all are, and I mentioned that that website a moment ago that has all of our MMPA authorizations on it. And as we're evaluating new ones, we're obviously looking at that and making sure we understand what's going on. With tracking, I think the main place where actually use the word "tracking" is when it comes to mortality. So we definitely track mortalities from commercial fishing and from a incidental take authorizations and other mortalities that occur from regulated activities. Those are tracked and actually reported for marine mammals and reported through our stock assessment reports. So, where mortality is concerned, we're tracking it. Where sub mortal impacts are concerned, I think tracking is probably a strong word. But we do have, you know, a geospatial database that shows where they all are. And we consider them as we move along with other consultations and authorizations.

***If you have a multi-year phased project with discrete plans for construction activity each year, could you apply for an IHA for each year's work (so 2 IHAs rather than 1 LOA with ITR)?***

Definitely yes, and many people do. An IHA is notably simpler to process than a rule. My back of the envelope suggestion to people is typical for 2 years, two IHAs is probably easier. But when you get up to 3 years or more, I think the payoff becomes stronger for doing regulations to cover it. Also you

know, the longer an activity goes, I think, in my experience, the greater the likelihood that something will slip. And so you have a little bit more of a buffer, if you have five-year regulations for a little bit of slippage there. So you certainly can. It has a picture of fragmentation...you know your ESA consultation that goes along with that MMPA those IHAs probably is going to have to look at all of that together, it's connected but yes you could do, do 2 IHAs.

***For underwater noise while, the IHA application process is transparent and public publicly available, the results of compliance monitoring apparently less so. Are you aware of any means to obtain or share information from the compliance monitoring?***

We require monitoring reports and we do post them on our website after they are submitted to us. So, you should be able to get them on our website, and if for some reason you look and you don't see them, and it is past the date that they were due, you can ask us, and sometimes we just haven't posted them yet or something. They are available.

Also, please check out the following web site: <https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>

***Is there a "fast track" research permitting avenue for a single, very short duration research activity? For example, operating a sound source (within hearing range of marine mammals and has a source level high enough to possibly affect behavior but not injure) at a single, low animal density, static location from 10 am to 2 pm for three days.***

This is a question about research permit, which is not actually what we were talking about, but I do manage that program and I will mention that we do have some programmatic biological opinions in place right now that have really helped speed up some of our processes. But I this is this is a very specific question, I might just that person shoot me or Amy Sloan an email.

***Can you explain how the newly published Biological Opinion for Gulf of Mexico region plays into MMPA/ESA/NEPA reviews/consultation. What difference does it bring to consultations?***

What I'm going to say about this is going to be relatively limited because the biological opinion has been issued, but the associated regulations have not been issued yet. This is somewhat still an active...we're in the pre-decisional space there where the MMPA is concerned. But specifically, that biological opinion is intended to serve as ESA coverage for both the MMPA regulations, which are not final yet, as well as BOEM's program for issuing those permits. So, that ESA biological opinion is the ESA compliance for the rule that is currently in process in the Gulf of Mexico and for BOEM's geophysical and geological permits. I think the person might be asking about differences between the ESA and the MMPA, and because that has been issued, and we're still working on the MMPA part, I probably can't really speak to that.

## **Questions asked/answered in the Q&A box during the webinar**

(answers mainly provided by Amy Scholik-Schlomer, also with NOAA Fisheries)

### ***What does flushing refer to?***

Flushing refers to an animal (pinniped) being disturbed and moving off the beach.

### ***How have the frequency thresholds been determined?***

Frequency thresholds (weighting functions for TTS and PTS) for marine mammals have been determined by marine mammal hearing and TTS susceptibility data.

### ***Is there a publicly available document on NOAA's behavioral thresholds?***

Yes. NOAA's behavioral thresholds can be found in recent Federal Register Notices:

<https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>

### ***Does your zone algorithm take into account the body of water (salinity, depth, etc.) where in your sound is generated (in order to understand how far the sound will travel)?***

It depends on how the modeling is done. Some models are more sophisticated than others.

### ***Any idea when those tools might be available? These sound very helpful!***

They [the tools] are in various levels of development. Contact Jolie to get more information, and she will direct you to the appropriate person.

### ***Are the spreadsheets and manuals specific to areas in the US only?***

They are specific to the activities NMFS regulates. Certain aspects may be applicable to activities beyond which NMFS regulates.

### ***How are you determining pre-industrialization communication space?***

We don't determine it directly. Currently, NMFS doesn't have quantitative thresholds to assess communication space and masking. Our assessment for these impacts is mostly qualitative.

### ***I work for a company that measures underwater sound from pile driving and have collected lots of data over the years. Is there a way to we can provide this data for the pile driving source level tool?***

Yes, please contact Jolie. These data would be welcome. Thank you!

### ***Do you have some mandatory mitigation measures for activities such: pile driving, blasting of drilling, in order to avoid physical or acute damages? Where can I find it?***

Please look at recent Federal Register Notices to get a better understanding of mitigation measures:

<https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>

### ***What are the known long-term impacts of offshore wind turbines on marine mammals?***

We are still learning and most of what we know is from wind farm development in Europe.

***Will NMFS eventually implement functional hearing group behavioral thresholds, rather than the generic thresholds?***

We are still in the process of updating our behavioral thresholds, so it is TBD. Functional hearing groups were specifically derived for TTS and PTS (not behavior). Thus, there may be other ways to consider marine mammal groups for behavior (e.g., sensitive species, like harbor porpoise or beaked whales).

***I'm interested in the ramp up using air gun. Is there evidence of how efficient this is as mitigation, to show which species respond, how far they move etc?***

Check out the Australian BRAHSS study: <https://www.brahss.org.au/>, which as looked at the behavioral impact of seismic on humpbacks, including ramp-up.

***Can you share the link for the map of the issued authorizations? She zipped through that really quickly.***

<https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>

***How often are tools (shown at the end) updated on your website?***

It depends on the specific tool. Please contact Jolie, if you have a question about a specific tool.

***Hi! Where could I find the behavioral thresholds for marine mammals including the justifications they are based upon?***

You can look our recent authorizations for more information:

<https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act>

***Can you explain the relationship of PTS/TTS relative to Level A/B take? Is PTS Level A, TTS Level B?***

PTS is Level A, while TTS is Level B.

***I am also interested in how impulsive noise propagates and how it changes over distance - the potential to effectively become non-impulsive. How is this taken into account when applying PTS and TTS thresholds?***

This is an area where we would like to know more (how impulsive sound transitions to non-impulsive), but there isn't a lot of information on this. Thus, we don't quantitatively account for this yet (more dealt with qualitatively).

***Can take estimates account for acoustic aversion? i.e. animals can move away from a source to potentially reduce their exposure/take?***

Our current thresholds don't account for aversion directly, but this can be considered qualitatively.