



MARINE MAMMAL COMMISSION

16 February 2021

Ms. Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the request submitted by Chesapeake Tunnel Joint Venture (CTJV) seeking renewal of an authorization issued under section 101(a)(5)(D) of the Marine Mammal Protection Act (the MMPA) to take small numbers of marine mammals by harassment. The taking would be incidental to conducting construction activities for the Parallel Thimble Shoal Tunnel Bridge Project in Virginia. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 8 February 2021 notice (86 Fed. Reg. 8594) on its proposal to issue an authorization renewal, subject to certain conditions. The Commission last commented on CTJV's proposed activities in its [26 December 2019 letter](#). The Commission has additional comments on the appropriateness of the Level B harassment zones for down-the-hole (DTH) pile installation, as well as whether NMFS's criteria for issuing a renewal can be and have been met.

DTH pile installation and renewal criteria

When NMFS issued CTJV's incidental harassment authorization in spring 2020, it did not consider DTH pile installation to be an impulsive, *continuous* source. NMFS considered DTH pile installation to be an impulsive, *intermittent* source to which the 160-dB re 1 μ Pa threshold applied for Level B harassment (85 Fed. Reg. 16072). Thus, NMFS vastly underestimated the Level B harassment zone to be only 215 m (see Table 11; 85 Fed. Reg. 16072).

DTH hammers involve both percussive hammering and drilling actions. As such, NMFS has considered DTH pile installation to be an impulsive, continuous source since the summer of 2020 (e.g., 85 Fed. Reg. 48159), including for other projects that occur in the Chesapeake Bay (85 Fed. Reg. 48159, 86 Fed. Reg. 1610). If NMFS had used the 120-dB re 1 μ Pa threshold for continuous sources for CTJV's activities¹, the Level B harassment zone would be estimated to be approximately 11.7 km for activities involving a single DTH hammer (see Table 19, 86 Fed. Reg. 1618) and 18.5 km for two DTH hammers used simultaneously² (86 Fed. Reg. 1611–1612) rather than 215 m. If

¹ And the 166-dB re 1 μ Pa at 10 m source level from Denes et al. (2016) consistent with other incidental harassment authorizations (e.g., 86 Fed. Reg. 1610).

² Based on a combined source level of 169 dB re 1 μ Pa at 10 m.

CTJV used or plans to use two vibratory hammers simultaneously to install the 36- or 42-in piles³ or a vibratory hammer and DTH hammer simultaneously to install the piles⁴, the Level B harassment zones would be even larger.

It is unclear why NMFS is proposing to continue to mischaracterize DTH pile installation for CTJV's authorization renewal given that it began characterizing the source appropriately last summer, including for two incidental take authorizations issued or proposed to be issued to Hampton Roads Connector Partners (HRCP) in the same area as CTJV's activities within Chesapeake Bay (HRCP; 86 Fed. Reg. 1610 and 85 Fed. Reg. 48159). Inconsistencies aside, mischaracterization of DTH pile installation also has practical implications regarding the accuracy of the monitoring measures and any draft or final marine mammal monitoring report. For example, CTJV's preliminary monitoring report for 2020 activities indicated that six bottlenose dolphins were observed during DTH pile installation on 8 August at a distance of 800 m from the DTH hammer (CTJV 2020). Since the Level B harassment zone was estimated to be a mere 215 m for DTH pile installation, the dolphins were not reported as Level B harassment takes. Implementing a Level B harassment zone that is underestimated by more than 50-fold fails to ensure that the monitoring measures will result in the authorized level of taking or impacts on populations of marine mammals as required under NMFS's implementing regulations associated with section 101(a)(5)(D) of the MMPA (50 C.F.R. §216.104 (a)(13); 85 Fed. Reg. 16073).

In addition, it is unclear how many of the 100 bottlenose dolphins that CTJV observed were in fact taken by Level B harassment, as CTJV reported that none of the dolphins were taken during any of the activities conducted. The inaccurate Level B harassment zones for DTH pile installation are one issue. Some of information NMFS required CTJV to provide in its monitoring report (item 6(a) in CTJV's 2020 final authorization⁵) also does not appear to be included in CTJV's preliminary monitoring report or in the protected species sighting log forms. The information provided in those forms is scant and haphazard, making it unclear whether bottlenose dolphins should have been reported as being taken in the preliminary monitoring report.

For an authorization renewal to be issued, NMFS requires that—

- A request for renewal is received no later than 60 days prior to expiration of the current authorization.
- The request for renewal include the following:
 - An explanation that the activities to be conducted under the proposed authorization renewal are identical to the activities analyzed under the initial authorization, 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 taking).
 - 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.

³ More than 34 km based on a combined source level of 173 dB re 1 µPa at 10 m.

⁴ More than 25 km based on a combined source level of 171 dB re 1 µPa at 10 m.

⁵ https://media.fisheries.noaa.gov/dam-migration/ctjvthimbleshoals_2020iha_issued_opr1.pdf.

Upon review of the renewal request, the status of the affected species or stocks, *and* any other pertinent information, if 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 authorization remain valid, it can issue an authorization renewal. NMFS's renewal criteria and overarching process place the burden on the agency, not the action proponent, for determining whether a renewal is appropriate. In this case, it is clear that the monitoring measures are not appropriate or consistent with other recently proposed and issued incidental take authorizations involving DTH pile installation. As such, it is unclear why NMFS proposed to issue an authorization renewal for CTJV's activities. The Commission recommends that NMFS deny CTJV's request to renew its incidental harassment authorization based on the inappropriate and vastly underestimated Level B harassment zones for multiple DTH pile installation scenarios and possibly the vibratory pile driving scenarios as well. The Commission recommends that NMFS ensure that CTJV is aware of the reporting requirements set forth in section 6(a) of CTJV's 2020 incidental harassment authorization for the draft and final monitoring reports.

Authorization renewals in general

The aforementioned issues regarding how NMFS has implemented its renewal process for CTJV's authorization adds to the Commission's ongoing concerns regarding the renewal process in general. As such, the Commission again recommends that NMFS refrain from issuing a renewal for any authorization unless it is consistent with the procedural requirements specified in section 101(a)(5)(D)(iii) of the MMPA.

Moreover, NMFS should not be promulgating incorrect Level B harassment zones into another incidental harassment authorization in an effort to increase efficiencies. CTJV and HRCP should be held to the same standards with regard to DTH pile installation—that includes ensuring that the Level B harassment zones are consistent and based on best available science for two action proponents conducting the same activities in the same area and during the same timeframe. NMFS's previous efforts to maximize efficiencies must be supplanted by efforts to ensure that its statutorily-required determinations are based on best available science and all processes, including NMFS's renewal process, abide by the requirements set forth under the MMPA, including those specified in section 101(a)(5)(D)(iii).

Please contact me if you have questions regarding the Commission's recommendations.

Sincerely,



Peter O. Thomas, Ph.D.,
Executive Director

References

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Submitted via email

February 23, 2021

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**Re: Application by Chesapeake Tunnel Joint Venture to Take Marine Mammals
Incidental to the Parallel Thimble Shoal Tunnel Project in Virginia Beach, Virginia,
86 Fed. Reg. 8594 (Feb. 8, 2021)**

Dear Ms. Harrison,

We submit these comments on behalf of the Center for Biological Diversity (“Center”) with respect to Chesapeake Tunnel Joint Venture’s request to harass marine mammals incidental to construction of the Parallel Thimble Shoal Tunnel Project (“Project”). The Fisheries Service should not approve the incidental harassment of marine mammals until it ensures the Project and similar projects in the area, such as the Hampton Roads Bridge Tunnel Project (“HRBT Project”),¹ in aggregate have a negligible impact on marine mammal populations.

Our primary concern is that NMFS should consider the Project’s impacts on marine mammals together with the HRBT Project and ongoing activities in the area. These two projects occur at the mouth of the Chesapeake Bay, which is a winter hotspot for humpback whale feeding² and heavily trafficked by commercial vessels, military ships, and recreational boat traffic. Because a substantial number of humpback whales feed in high-traffic areas near the mouth of the Chesapeake Bay,³ authorization for two separate construction projects, with associated barges and tugs, increases the likelihood of injurious vessel interactions that can result in mortalities.

¹ Taking Marine Mammals Incidental to the Hampton Roads Bridge Tunnel Expansion Project in Norfolk, Virginia, 86 Fed. Reg. 1588 (Jan. 8, 2021).

² Aschettino, J.M., Engelhaupt, D.T., Engelhaupt, A.G., DiMatteo, A., Pusser, T., Richlen, M.F. and Bell, J.T., 2020. Satellite telemetry reveals spatial overlap between vessel high-traffic areas and humpback whales (*Megaptera novaeangliae*) near the mouth of the Chesapeake Bay. *Frontiers in Marine Science*, 7, p.121.

³ *Id.*

I. The Marine Mammal Protection Act allows the Service to authorize marine mammal take only if certain conditions are met.

Congress enacted the Marine Mammal Protection Act (“MMPA”) in 1972 in response to widespread concern that “certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man’s activities.”⁴ The legislative history states that the purpose of the MMPA is to manage marine mammals “for their benefit and not for the benefit of commercial exploitation.”⁵ The primary mechanism by which the MMPA protects marine mammals is through a moratorium on takings.⁶ Under the MMPA, the term “take” is broadly defined to mean “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.”⁷ “Harassment” is further defined to include acts of “torment” or “annoyance” that have the “potential” to injure a marine mammal or marine mammal stock in the wild or have the potential to “disturb” them “by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.”⁸

The MMPA provides several narrow exceptions to the moratorium on take. Relevant here, the Fisheries Service may, upon request, promulgate regulations or, if the taking is limited to harassment, provide notice of a proposed incidental take authorization allowing take of small numbers of marine mammals, provided certain conditions are met. An activity: (i) must be “specified” and limited to a “specific geographical region,” (ii) must result in the incidental take of only “small numbers of marine mammals of a species or population stock,” (iii) can have no more than a “negligible impact” on species and stocks, and (iv) cannot have “an unmitigatable adverse impact on the availability of such species or stock for taking for subsistence uses” by Alaska Natives.⁹ The MMPA requires the Fisheries Service to separately find both that only small numbers of marine mammals will be harmed and that the impacts to the species or stock will be negligible.¹⁰ In issuing an authorization, the Service must provide for the monitoring and reporting of such takings and must prescribe methods and means of affecting the “least practicable impact” on the species or stock and its habitat.¹¹

II. Anthropogenic Impacts to Humpback Whales

The Fisheries Service has declared an ongoing Unusual Mortality Event (“UME”) for humpback whales along the Atlantic Coast that began in 2016. Out of the 13 states that are part of the UME, Virginia has the third highest number of strandings (24 over five years).¹² To authorize incidental take of humpback whales by Level B harassment from an in-water

⁴ 16 U.S.C. § 1361(1).

⁵ H. Rep. No. 92-707, at 11 (1971), reprinted in 1972 U.S.C.C.A.N., pp. 4144, 4154.

⁶ 16 U.S.C. § 1371(a).

⁷ *Id.* §1362(13).

⁸ *Id.* § 1362(18); *see also* 50 C.F.R. § 216.3 (defining “Level A” and “Level B” harassment).

⁹ *See* 16 U.S.C. § 1371(a)(5)(D)(i).

¹⁰ *Center for Biological Diversity v. Salazar*, 695 F.3d 893 (9th Cir. 2012).

¹¹ 16 U.S.C. § 1371(a)(5)(D)(ii)(I).

¹² NMFS, 2021. Marine Life in Distress: 2016–2021 Humpback Whale Unusual Mortality Event Along the Atlantic Coast. <https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2021-humpback-whale-unusual-mortality-event-along-atlantic-coast> (last accessed Feb. 23, 2021).

construction activity without assessing the increased risk of a ship strike turns a blind eye to the sorrowful stranding events occurring in Virginia Beach (fig. 1).



Figure 1. Dead stranded humpback whale showing evidence of pre-mortem propeller injuries. Photo: Virginia Aquarium. (Source: NMFS Website, *2016–2021 Humpback Whale Unusual Mortality Event Along the Atlantic Coast*)

This population of humpback whales was removed from the Endangered Species Act in 2016,¹³ the same year that the UME began. When the population was delisted, NMFS anticipated conducting a 5-year review,¹⁴ which means that review should be completed soon. Since 2016, new science has shown that entanglements are more frequent than believed; Ramp et al. (2021) observed scars from previous entanglements on 85 percent of the humpback whales photographed by drone in the study in the Gulf of St. Lawrence.¹⁵ This shows a high risk of anthropogenic impact to the humpback whales at issue.

III. Conclusion

Considering the evidence presented, we urge the Fisheries Service to reconsider its proposed authorization for the Project. More specifically, the perfect storm of authorizing this Project in the same area as the HRBT Project, on top of a high likelihood of ship strike in the area, plus the ever-present risk of entanglement for humpbacks requires more analysis to show the take will have negligible impact. Given the extraordinary circumstances of a recently delisted large whale at risk of further harm, we oppose NMFS's use of a categorical exclusion to

¹³ Endangered and Threatened Species; Identification of 14 Distinct Population Segments of the Humpback Whale (*Megaptera novaeangliae*) and Revision of Species-Wide Listing, 81 Fed. Reg. 62,260 (Sept. 8, 2016).

¹⁴ *Id.* at 62,295.

¹⁵ Ramp C, Gaspard D, Gavrilchuk K, Unger M and others (2021) Up in the air: drone images reveal underestimation of entanglement rates in large rorqual whales. *Endang Species Res* 44:33-44. <https://doi.org/10.3354/esr01084>

circumvent analysis under the National Environmental Policy Act.¹⁶ We ask that NMFS issue an environmental assessment to study the Project's impacts before issuing the authorization.

We echo the Marine Mammal Commission's comments submitted on Feb. 16, 2021, which recommended that NMFS deny the request to renew the Project's incidental harassment authorization. We incorporate the Commission's comments by reference.

Please contact me with any questions. Thank you for your consideration.

Sincerely,



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¹⁶ See also Letter from C. Kilduff, Center for Biological Diversity, to K. Renshaw, NOAA NEPA Coordinator, dated Dec. 19, 2016, regarding Impacts to Marine Mammals from NOAA-HQ-2016-0145; Revised National Environmental Policy Act (NEPA) Implementing Procedures, 81 Fed. Reg. 81066 (Nov. 17, 2016).

Comment on proposed Renewal incidental harassment authorization

The actions being taken to protect the marine mammals during the pile driving is similar to the action being taken to protect whales from Navy sonar training. To monitor the large region used in sonar testing two spotters, use a helicopter, and will alert when a whale is seen in the perimeter to shut down testing. (Vries 2010) During the construction it is important for the spotter to know if a marine mammal has passed the bubble curtain to halt the construction and prevent damage to the mammal. Since pile driving involves a high impact hammer the process can produce a damaging level of vibrations and noise for marine mammals and fish proximate to construction. By extending the construction of the Thimble Shoal Tunnel the environmental impact of building is increased. *Taking Marine Mammals Incidental to the Parallel Thimble Shoal Tunnel Project in Virginia Beach, Virginia* focuses on the protection of marine mammals and potential effects to prey species. Avoidance by prey fish due to foraging habitat loss from pile driving activities is possible and that the duration of the avoidance is unknown (Wieting 2019). The Renewal incidental harassment authorization would allow continued exposure to pile driving activities and potential habitat loss. Fish avoidance duration could increase in response to longer foraging habitat disturbance. Longer fish avoidance could have negative effects on the local ecosystem and economy. Increased monitoring of current methods using a bubble curtain to protect wildlife from damaging sound waves in a construction zone has been shown effective for fish in the Mississippi river. (Keevin et al. 1997) The bubble curtains offer the only form of protection to the prey fish if they are unable to avoid. Monitoring species and foraging habitat would allow greater understanding into avoidance behavior. It has been reported that the fish mortalities, during pile driving, resulted from internal bleeding and damage to the swim bladder. (Caltrans 2001) Increased use of bubble curtains would offer greater chances of avoidance and protection. Monitoring and protecting prey fish habitat can help the main food source for marine mammals. Building the Thimble Shoal Tunnel has the potential to impact the ecosystem and all those connected to it.

Caltrans (2001). "Pile Installation Demonstration Project, Fisheries Impact Assessment." PIDP EA 012081, Caltrans Contract 04A0148. San Francisco - Oakland Bay Bridge East Span Seismic Safety Project.

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