



# MARINE MAMMAL COMMISSION

7 October 2019

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 application submitted by Transcontinental Gas Pipe Line Company, LLC (Transco) under section 101(a)(5)(D) of the Marine Mammal Protection Act (the MMPA). Transco is seeking authorization to take small numbers of marine mammals by harassment incidental to the installation of the Raritan Bay Loop pipeline in the waters offshore of New York and New Jersey during a one-year period. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 3 September 2019 notice (84 Fed. Reg. 45955) requesting comments on its proposal to issue the authorization, subject to certain conditions.

Transco proposes to install and remove 163 piles, ranging in diameter from 10 to 60 in, using impact and/or vibratory hammers. The piles would be used to guide the installation of the pipeline and would be removed once the pipeline is constructed. Installation of piles would begin in the spring of 2020 and pile removal would be completed by the fall of 2020. Installation and removal of piles would occur for a total of 65.5 days (42.5 days for pile installation and 23 days for pile removal).

NMFS preliminarily has determined that, at most, the proposed activities could cause Level A and/or B harassment of small numbers of 10 marine mammal species. It also anticipates that any impact on the affected species and stocks would be negligible. NMFS does not anticipate any take of marine mammals by death or serious injury and believes that the potential for disturbance will be at the least practicable level because of the proposed mitigation measures. The proposed mitigation, monitoring, and reporting measures include—

- using protected species observers to monitor the Level A and B harassment zones for 30 minutes before, during, and for 30 minutes after all pile-driving and -removal activities;
- using standard pre-clearance, soft-start, delay, and shut-down procedures;
- delaying activities and shutting down immediately if a North Atlantic right whale is detected at any distance from pile-driving or -removal activities;
- using delay and shut-down procedures if a species for which taking has not been authorized, or for which authorized numbers of takes have been met, approaches or is observed within the Level A or B harassment zone;

- conducting pile driving and removal during daylight hours only;
- using standard vessel strike avoidance procedures during all pile-driving and -removal activities;
- ceasing operations and reducing vessel speed if a marine mammal comes within 10 m of heavy machinery during construction activities;
- reporting injured and dead marine mammals to the Office of Protected Resources and the New England/Mid-Atlantic Stranding Coordinator using NMFS's phased approach and suspending activities, when appropriate; and
- submitting a comprehensive draft and final monitoring report to NMFS.

### Take estimates

*Harbor and gray seals*—Transco originally estimated the numbers of Level A and B harassment takes for harbor and gray seals based on Navy Oparea Density Estimates (NODES) data (Department of Navy 2007, 2012; Halpin et al. 2009). Although NMFS previously used NODES data for estimating takes of harbor and gray seals incidental to other projects in the New York Bight region<sup>1</sup>, it informed Transco that the NODES densities<sup>2</sup> no longer represent the best available science (see section 6.4 of Transco's application). Transco re-evaluated the densities using the updated habitat-based density models for the mid-Atlantic (Roberts et al. 2018). Because the data used in the Roberts et al. (2018) density models were derived from offshore aerial and vessel surveys, Transco believed that the models did not accurately represent densities of pinnipeds in Raritan Bay. Specifically, Transco stated that the models resulted in take estimates<sup>3</sup> that were not consistent with opportunistic sightings reported in the project area. Transco indicated that the best available data closest to the project area originate from surveys conducted within Sandy Hook Bay by Save Coastal Wildlife (SCW 2019). Because SCW (2019) conducted only 24 surveys over a period of 10 years, Transco chose to calculate instead a 'daily density' based on systematic data collected by the Coastal Research and Education Society of Long Island, Inc. (CRESLI)<sup>4</sup> at Cupsogue Beach Park in Westhampton, New York. That method is flawed for multiple reasons.

First, Transco did not calculate a 'daily density'. Instead it divided the total number of *harbor seals* sighted from November 2018 to April 2019 (2,689 seals; CRESLI 2019) by the total number of survey months to yield a mean number of individual *harbor seals* 'per month'. The number of harbor seals per month was then multiplied by the four months that Transco's activities could occur, yielding 2,151 seals (see section 6.5.1 of Transco's application). It is inappropriate to estimate the number of seals that could be taken based on the total number observed intermittently over various months and the number of *months* of activities. That method would lead to a gross underestimation of seals that could be taken. Instead, NMFS routinely uses haul-out counts of pinnipeds to inform its *daily* take estimate<sup>5</sup> that it then multiplies by the number of days of activities<sup>6</sup> to obtain a total

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<sup>1</sup> See, for example, 83 Fed. Reg. 19541.

<sup>2</sup> The NODES densities yielded a greater number of Level A and B harassment takes than were ultimately proposed to be authorized by NMFS (see Table 12 in Transco's application).

<sup>3</sup> It is unclear what those estimates were, as they were not provided in Transco's application or in the *Federal Register* notice.

<sup>4</sup> From November 2018 to April 2019.

<sup>5</sup> Either the maximum number observed hauled out on a given day or the average number observed hauled out over multiple days.

<sup>6</sup> 65.5 days in this instance.

estimated take.

Second, the CRESLI data were collected at a haul-out site more than 90 km east of the project site. Harbor seals typically range no farther than about 50 km from their haul-out sites, as referenced by NMFS on its website<sup>7</sup>. Thus, individuals that haul out at Cupsogue Beach Park are not expected to be within the project's Level B harassment zone<sup>8</sup>. It is not clear why the seal sightings from Sandy Hook Bay, adjacent to Raritan Bay and within the Level B harassment zones (see Figures 11 and 13 in Transco's application) were not used to inform the take estimates, particularly since Transco indicated that those data represented best available science<sup>9</sup>. During winter 2018 and 2019<sup>10</sup>, the number of seals observed within Sandy Hook Bay<sup>11</sup> ranged from 26<sup>12</sup> to 162 harbor seals and 1 gray seal on a given day. During winter 2018 and 2019<sup>13</sup>, the number of harbor seals at Cupsogue Beach Park<sup>14</sup> ranged from 14 to 157 on a given day and no gray seals were documented. The sightings at Sandy Hook Bay were obtained during roughly the same time of year<sup>15</sup> as those at Cupsogue Beach Park and the frequency of surveys was comparable to that used for other authorizations<sup>16</sup>. Therefore, the average number of harbor seals observed on a given day in Sandy Hook Bay (118 seals) should have been used to inform the take estimates.

Third, Transco and NMFS estimated a total take of 2,151 harbor seals but then reduced that take estimate based on the ratio of harbor to gray seals from the NODES data<sup>17</sup> to derive the estimated takes of 1,377 harbor seals and 774 gray seals (84 Fed. Reg. 45976). The total estimated take of harbor seals should have been used *to inform* the number of gray seals rather than *being reduced* by the number of gray seal takes. Fourth, Transco and NMFS estimated the numbers of Level A harassment takes of harbor and gray seals by multiplying the Level B harassment takes by the proportion of Level A to Level B harassment takes from the take estimates that were calculated based on the NODES data. Not only is that method circuitous, but the resulting Level A harassment take estimates of 12 harbor seals and 6 gray seals are gross underestimates. The Level A harassment zones at the three impact pile driving sites range from 1.56 to 2.60 km, the largest of

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<sup>7</sup> <https://www.fisheries.noaa.gov/species/harbor-seal>

<sup>8</sup> Out to 21.5 km.

<sup>9</sup> There also are regular sightings of seals east of Staten Island on Swinburne Island and Hoffman Islands (SCW 2019) and off the south shore of Staten Island from Eltingville to Tottenville—all of which are in the project's various Level B harassment zones. <https://www.silive.com/news/g66l-2019/03/79653e59641998/harbor-seals-staten-islands-winter-visitors.html> and <https://www.ny1.com/nyc/all-boroughs/news/2018/03/05/hundreds-of-seals-are-now-calling-the-waters-around-nyc-home>

<sup>10</sup> During the months of February and March in both 2018 and 2019.

<sup>11</sup> Including the haul-out sites on various sandbars, north spit, and south spit.

<sup>12</sup> Which is an underestimate of those animals hauled out on one of the days, because a kayaker disturbed the animals before an official count could be made. The unofficial count was approximately 60 animals.

<sup>13</sup> Based on seal walks conducted from November 2018 to April 2019.

<sup>14</sup> Including those in the water and hauled out, similar to Sandy Hook Bay.

<sup>15</sup> Although the sightings data were obtained in winter when pinnipeds appear to be more likely to be present, the authorization would be valid from May 2020 until April 2021 with no restriction on when the activities could occur within the year.

<sup>16</sup> Haul-out counts are obtained in some instances during a single aerial survey of the area. Further, NMFS has used non-systematic anecdotal data to inform its take estimates in other instances. Thus, four ground/vessel surveys of the project area should be sufficient for informing take estimates.

<sup>17</sup> 64 percent of the seals were considered to be harbor seals and 36 percent were considered to be gray seals (Department of the Navy 2007, 2012; Halpin et al. 2009).

which occurs adjacent to Sandy Hook Bay and Sandy Hook National Recreation Area<sup>18</sup> and two of which far surpass the extents of the Level B harassment zones<sup>19</sup>. In addition, impact pile driving would occur on 13.5 days (Table 1, 84 Fed. Reg. 45958). Thus, the estimated number of Level A harassment takes would not allow for even a single individual of either species to be taken on each of the days that impact pile driving would occur. For all of these reasons, the Commission recommends that NMFS authorize at least 1,593 Level A harassment takes and 6,136 Level B harassment takes of harbor seals based on the average daily sightings of 118 harbor seals in Sandy Hook Bay and 13.5 days of impact driving and 52 days of vibratory driving and removal, respectively.

As noted herein, NMFS assumed a ratio of 64 percent harbor seals to 36 percent gray seals<sup>20</sup> based on NODES density data to estimate gray seal takes. Applying NMFS's same approach to the average daily sightings of 118 harbor seals in Sandy Hook Bay would result in an estimated take of 66 gray seals per day. The Commission is not convinced that 66 gray seals would be taken on a given day by Transco, given the low number of gray seals observed within Sandy Hook Bay, at Cupsogue Beach Park, and at the various sites off Staten Island. Instead, the estimate of 833 Level B harassment takes of gray seals originally calculated by Transco, which was based on the NODES data, appears to be more appropriate (see Table 12 in Transco's application). Although Transco's application stated that during initial consultation with NMFS a determination had been made that the NODES data do not represent best available science<sup>21</sup>, NMFS used those same data to inform Level B harassment takes of gray seals and Level A harassment takes of both species. Therefore, it appears that NMFS agrees that local sightings data should be considered best available data for harbor seals and, in the absence of such data for gray seals, NODES data should be considered best available for that species. Regarding Level A harassment takes, NMFS's estimate of six Level A harassment takes of gray seals is an underestimate for the reasons stated herein. The Commission recommends that NMFS authorize 833 Level B harassment takes and at least 14 Level A harassment takes of gray seals based on the 13.5 days that impact pile driving could occur.

*Humpback whales*—Similar to pinnipeds, Transco used a 'monthly sightings rate' to estimate Level B harassment takes of humpback whales, based on opportunistic sightings data from 2011 to 2017. Transco divided the total number of sightings by the number of years and then divided the average annual sightings by 12 to obtain the total number of whales observed per month. Transco multiplied the monthly sightings by four, which represents the number of months the project would be conducted. As with pinnipeds, that method is flawed for several reasons.

As calculated, the monthly sightings rate assumes that the likelihood of occurrence of humpback whales in the New York Bight is the same each month, which Brown et al. (2018a,b)<sup>22</sup> contradicts. As referenced in Transco's application, humpback whales are observed in the New York Bight during only a portion of the year. Thus, using a monthly average that assumes equal likelihood

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<sup>18</sup> Where the seals haul out.

<sup>19</sup> Which range from 1.58 to 2.15 km. The Level A harassment zone for the third site comprises 99 percent of the Level B harassment zone. Thus, it would be prudent to allocate all of the takes for that site to Level A harassment.

<sup>20</sup> The Commission, however, notes that the take estimates derived from the NODES data produce a ratio of 68 percent harbor seals to 32 percent gray seals (see Table 12 of Transco's application).

<sup>21</sup> See section 6.4 of Transco's application.

<sup>22</sup> Brown et al. (2018a) reported 46 sightings of humpback whales in the New York-New Jersey harbor estuary from 2011 to 2016. Brown et al. (2018b) reported 617 sightings of humpback whales in the same area from 2011 to 2017.

of encountering a whale during each month of the year could underestimate the number of takes. The proposed method also does not reflect the apparent dramatic increase in sightings of humpback whales in recent years, particularly 2018 and 2019<sup>23</sup>. Similar to averaging the sightings across all months, Transco underestimated the numbers of takes by averaging humpback whale sightings across all years, from 2011, when five humpback whales were observed, through 2017, when hundreds of whales were observed<sup>23</sup>. NMFS should have estimated a daily sightings rate, based on the sightings data referenced<sup>24</sup>, that accounts for seasonal variability and the increased numbers of whales sighted in the project area in recent years. The Commission also is concerned that NMFS omitted Level A harassment takes of humpback whales. Given the very large size of the Level A harassment zones for low-frequency cetaceans (2.92 to 4.86 km) and the fact that the Level A harassment zones are larger than the Level B harassment zones for each of the 13.5 days of impact pile driving, NMFS should have authorized Level A harassment takes of humpback whales on each of those days. The Commission recommends that NMFS (1) obtain the most recent 2018 and 2019 sightings data from Gotham Whale to recalculate Level A and B harassment takes of humpback whales using a daily sightings rate that reflects seasonal occurrence of whales in the New York Bight and (2) include a sufficient number of Level A harassment takes of humpback whales based on 14 days of impact pile driving in the final authorization.

*North Atlantic right whales*—NMFS has proposed to authorize two Level B harassment takes of North Atlantic right whales, based on the presumption that only one group of whales would enter the Level A or B harassment zones before shutdown procedures could be implemented. However, right whales are regularly found in groups that exceed two whales (Clapham and Pace 2001, Merrick et al. 2001). Further, NMFS has routinely authorized at least three and up to five takes of North Atlantic right whales based on average group size (80 Fed. Reg. 27656, 79 Fed. Reg. 57538 and 52159). As such, the Commission recommends that NMFS increase the number of Level B harassment takes of North Atlantic right whales from two to at least three based on average group size.

*Take estimates in general*—The Commission has indicated numerous times in previous letters that NMFS has not been using best available science to inform its take estimates, has been using pinniped haul-out counts or sightings incorrectly, has been using inappropriate group size estimates, and has been underestimating Level A and B harassment takes repeatedly. The Commission again voices its concern that the quality of the authorizations is diminishing and again recommends that NMFS conduct a more thorough review of the applications and notices to ensure accuracy, completeness, and consistency and to ensure they are based on best available science, prior to submitting them to the *Federal Register* for public comment.

### **Appropriateness of the Level A harassment zones**

As the Commission has indicated in previous letters, there are some shortcomings that need to be addressed regarding the method for determining the extent of the Level A harassment zones based on the associated permanent threshold shift (PTS) cumulative SEL (SEL<sub>cum</sub>) thresholds for the various types of sound sources, including stationary sound sources<sup>25</sup>. For determining the range to the SEL<sub>cum</sub> thresholds, NMFS uses a baseline accumulation period of 24 hours unless an activity

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<sup>23</sup> <https://www.nationalgeographic.com/animals/2019/09/whale-populations-new-york-city-booming/>

<sup>24</sup> Gotham Whale, <https://gothamwhale.org/>

<sup>25</sup> However, this also could be an issue for moving sound sources that have short distances between transect lines.

would occur for less time (e.g., 8 hours). The Commission supports that approach if an action proponent is able to conduct more sophisticated sound propagation and animat modeling. However, that approach is not ideal for action proponents that either are unable, or choose not, to conduct more sophisticated modeling. In those instances, it is assumed that the receiver is stationary and all of the energy emitted during a 24-hour period is accumulated for the SELcum thresholds.

As an example, the Level A harassment zones for low- and high-frequency cetaceans were estimated to be greater than the Level B harassment zones during impact pile driving for all scenarios and for two of the three scenarios<sup>26</sup> for phocids (see Table 9 of the *Federal Register* notice). Based on the extent of those zones, it is assumed that an animal would experience PTS before responding behaviorally and leaving or avoiding the area. That notion runs counter to the logic that permanent and temporary physiological effects are expected to occur closest to the sound source, with behavioral responses triggered at lower received levels, and thus at farther distances.

The Commission understands that NMFS has formed an internal committee to address this issue and is consulting with external acousticians and modelers as well. The Commission continues to believe that animat modeling, that considers various operational and animal scenarios, is the best way to determine the appropriate accumulation time. More importantly, animat modeling could directly inform or be incorporated into NMFS's user spreadsheet that currently estimates the Level A harassment zones. The Commission recommends that NMFS continue to make this issue a *priority* to resolve in the near future and consider incorporating animat modeling into its user spreadsheet.

### **Monitoring and reporting requirements**

Sections 4(b) and 5(a) of the draft incidental harassment authorization stated that Transco is required to employ protected species observers according to the measures in the application dated July 2019<sup>27</sup>. The application stated that one observer would be stationed on the barge and another on the escort boat. To minimize ambiguity and for consistency with other authorizations, the Commission recommends that NMFS include the number and location of the protected species observers in sections 4(b) and 5(a) of the final authorization rather than referencing the application.

In recent authorizations<sup>28</sup>, NMFS has required that action proponents estimate the total take of each species based on the proportion of the Level B harassment zones that is able to be observed relative to the extent of the Level B harassment zones. That requirement was not included in the draft authorization. In addition, not all marine mammals that approach or occur within the Level A harassment zones during impact pile driving would be observed, due to the large size of those zones (up to 5.78 km for high-frequency cetaceans). Therefore, it is imperative that total takes by both Level A and B harassment be extrapolated<sup>29</sup> and that a running tally of the takes be maintained to ensure that the total takes do not exceed the authorized limits. The Commission recommends that

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<sup>26</sup> The Level A harassment zone is only 22 m less than the Level B harassment zone for the third scenario.

<sup>27</sup> Although the date of the application on NMFS's website is May 2019, NMFS indicated that it is in fact the July 2019 application.

<sup>28</sup> See, for example, Section 6(a)(xii) of the [draft authorization for the U.S. Army Corps of Engineers Sand Island Pile Dike System Test Piles Project near the mouth of the Columbia River](#).

<sup>29</sup> The distance at which seals can be seen is likely no more than 1 km. That sighting distance should be accounted for appropriately when extrapolating takes obtained from a moving observation platform. It is not appropriate to assume that the entire vessel track can be observed at a given time.

NMFS include a requirement to estimate the total takes by extrapolating Level A and B harassment takes to the proportion of the zones that are not visible in section 6(a) of the final incidental harassment authorization and ensure that Transco keeps a running tally of the total takes for each species to comply with section 4(i) of the authorization.

Further, the draft incidental harassment authorization does not include a requirement that Transco include the marine mammal observational datasheets or raw sightings data in the draft or final report submitted to NMFS. Those data are important for providing the details regarding each sighting and take for the current activity and for informing future activities. The Commission recommends that NMFS include in section 6(a) of the final incidental harassment authorization a requirement for Transco to provide the marine mammal observational datasheets or raw sightings data in its draft and final monitoring report.

### **Proposed one-year authorization renewals**

NMFS has indicated that it may issue a second one-year<sup>30</sup> incidental harassment authorization renewal for this and other future authorizations if various criteria are met and after an expedited public comment period of 15 days (see 84 Fed. Reg. 45983 and the proposed authorization for details). The Commission agrees that NMFS should take appropriate steps to streamline the authorization process under section 101(a)(5)(D) of the MMPA to the extent possible. However, the Commission is concerned that the renewal process proposed in the *Federal Register* notice is inconsistent with the statutory requirements—section 101(a)(5)(D)(iii) clearly states that proposed authorizations are subject to a 30-day comment period—and Congressional expectations regarding the length of the comment period when it passed that provision<sup>31</sup>.

Another significant issue with the proposed 15-day comment period is the burden that it places on reviewers, who will need to review the original authorization and supporting documentation<sup>32</sup>, the draft monitoring report(s), the renewal application or request<sup>33</sup>, and the proposed authorization and then formulate comments very quickly. Depending on how frequently NMFS invokes the renewal option, how much the proposed renewal or the information on which it is based deviates from the original authorization, and how complicated the activities are and the taking authorization is, those who try to comment on all proposed authorizations and renewals, such as the Commission, would be hard pressed to do so within the proposed 15-day comment period. Therefore, the Commission recommends that NMFS refrain from using the proposed renewal process for Transco's authorization. The renewal process should be used sparingly and selectively, by limiting its use only to those proposed incidental harassment authorizations that are expected to have the lowest levels of impacts to marine mammals and that require the least complex analyses.

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<sup>30</sup> NMFS informed the Commission that the renewal would be issued as a one-time opportunity, after which time a new authorization application would be required. NMFS has yet to specify this in any *Federal Register* notice detailing the new proposed renewal process but should do so.

<sup>31</sup> See, for example, the legislative history of section 101(a)(5)(D), which states "...in some instances, a request will be made for an authorization identical to one issued the previous year. In such circumstances, the Committee expects the Secretary to act expeditiously in complying with the notice and comment requirements." (H.R. Rep. No. 439, 103d Cong., 2d Sess. 29 (1994)). The referenced "notice and comment requirements" specify a 30-day comment period.

<sup>32</sup> Including the original application, hydroacoustic and marine mammal monitoring plans, take estimation spreadsheets, etc.

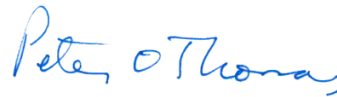
<sup>33</sup> Including any proposed changes or any new information.



Notices for other types of activities should not even include the possibility that a renewal might be issued using the proposed foreshortened 15-day comment period. If NMFS intends to use the renewal process frequently *or* for authorizations that require a more complex review or for which much new information has been generated (e.g., multiple or extensive monitoring reports), the Commission recommends that NMFS provide the Commission and other reviewers the full 30-day comment opportunity set forth in section 101(a)(5)(D)(iii) of the MMPA.

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

Sincerely,



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

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