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October 2nd, 2022

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

Re: Docket No. RTID 0648-XC259

Dear Chief Harrison,

Please accept our comment to approve an incidental take permit for the U.S. Navy for their expansion and modification of Dry Dock 1 (P-381) at Portsmouth Naval Shipyard in Kittery, Maine. After thorough research, we have decided that the planned construction will have a negligible impact (as defined in 50 CFR 216.103) on the marine mammals relevant to the application, including the harbor porpoise (*Phocoena phocoena*), the harbor seal (*Phoca vitulina vitulina*), the grey seal (*Halichoerus grypus*), the hooded seal (*Crystphora cristata*), and the harp seal (*Pagophilus groenlandicus*).

Of the marine mammals to be affected by the construction, the harbor porpoise is in the family Phocoenidae, and the relevant seals are in the family Phocidae or the “earless seals” family. The harbor porpoise mainly inhabits coast lines above the latitude of 30 degrees north except for a small range on the west coast of Africa (Fisheries, 2022). The seal species named also inhabit the same generalized range. The conservation status of all of the marine mammals mentioned is of least concern except that of the hooded seal which is considered vulnerable by the International Union for Conservation of Nature (ICUN) (Kovacs, 2015). None of the species are considered threatened or endangered by the Environmental Protection Act (EPA) but are protected under the Marine Mammal Protection Act (MMPA).

The Navy is projecting the use of impact and vibratory pile driving, hydraulic rock hammering, rotary drilling, and mono and cluster down the hole drilling (DTH). All of these activities cause large amounts of amplified underwater noise. This noise can cause damage to marine mammals' hearing and the process of drilling destroys some small-scale habitat (Cavanagh et al., 2000). This would classify as level A and level B harassment as stated in the permit request. The construction is stated to take place for the next five years, but it is noted it may be cut down to four years of construction time.

The marine mammals relevant to this project are all sensitive to anthropogenically caused underwater sound. Harbor porpoises, for example, have severe effects from pile driving out to a distance of 21 kilometers or 13 miles while harbor and grey seals have major adverse effects out to 215 meters or roughly 1/10th of a mile. The harbor porpoise has less severe effects out to 70 kilometers or 43 ½ miles while the seals have mild effects out to 14 kilometers or around 8 ½ miles (Bailey et al., 2010). Alongside this, auditory injury should only occur from around 100 meters or 109 yards from the pile driving (Bailey et al., 2010). The harbor porpoise has an

enlarged range of hearing because of the way it communicates with others in its species and the seal species have less hearing sensitivity in water and use above-water hearing more than the porpoise (Erbe et al., 2015). With all of this, the harbor porpoise would, at the extreme range, have major adverse effects in the entire harbor and down the coast to Hampton beach to the south and Cape Neddick to the north. The seals on the other hand would have no major adverse effects past the halfway point of the Piscataqua river and would be able to go in and out of the inlet with little affect to their health.

Although none of these species are on the ESA, putting the species into the context of the five ESA threat factors can help determine the extent to which the construction will harm these marine mammals. The first threat factor is the modification or destruction of these species' habitats. The construction will cause major disturbance to the harbor porpoise up to 21 kilometers away and major disturbance to the seals at 215 meters. Excluding the harbor porpoise, this is an extremely small area to the seals. The harbor porpoise on the other hand would be driven out of the area. The second threat factor is the overutilization of the species. None of the animals named are overutilized in the area. The third ESA threat is disease or predation, the fourth ESA threat is the inadequacy of existing regulations, and the fifth ESA threat is other natural or man-made factors. The relevant species have none of these as threats in the area.

In conclusion, the Navy should be allowed to go ahead with the construction and should be granted an incidental take permit. The construction at the shipyard in Kittery, Maine will not cause any threat to the greater population of harbor porpoises, harbor seals, grey seals, hooded seals, or harp seals. The construction is likely to have minimal and negligible effects on these species in the immediate vicinity. Although it could be argued that there is some modification to the harbor porpoise's habitat, the range of such modification would be limited to a small area comparative to its range. On top of this, there should be no threat to the lives of any of these marine mammals or their reproduction. Thank you for your time and the ability to comment on your decision.

Thank you,

A handwritten signature in cursive script that reads "Samuel Phillips".A handwritten signature in cursive script that reads "Mac Garvin".

Sam Phillips and Mac Garvin

Literature Cited

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10-3-2022

Jolie Harrison
Chief Permits Division
National Marine Fisheries Service
1315 East-West HW
Silver Spring, MD 20910

Re: Docket No. RTID 0648-XC259

Dear Division Chief Harrison,

The United States navy has recently requested an incidental take permit for marine mammals in relation to noise associated with under water construction for the expansion of dry dock one at the Portsmouth shipyard in Kittery Maine. I believe that the proposed incidental take permit for small numbers of Marine mammals should be granted. I understand that the main concern is ocean noise affecting gray seals (*Halichoerus grypus*), harbor porpoises (*Phocoena phocoena*), harbor seals (*Phoca vitulina*), harp seals (*Pagophilus groenlandicus*), and hooded seals (*Cystophora cristata*) in the waters in and around the shipyard and do not think that the threat to these species will be significant for several reasons. The first of which is that the shipyard itself is not virgin habitat and is likely already causing ocean noise which would lead to discouragement of use by sensitive species beforehand. Secondly, the current information on the effects of ocean sound on marine life is inconclusive and the extent of the sound is largely unknown. Finally, I believe that the U.S Navy should be granted an incidental take permit because even though all species listed above are protected by the Marine Mammal Protection Act none of them further protected not currently listed as threatened or endangered under the Endangered Species Act and populations are considered stable.

The United States Navy Shipyard in Kittery Maine is the oldest shipyard still in use and has been established since 1800. This Shipyard's main purpose is to modernize, repair and maintain attack submarines for the U.S. Navy and in doing so requires dry docks to store submarines on while maintenance is done. The expansion of dry dock one is a necessity for the shipyard to function properly and serve its role as the submarine center for the Navy. In addition to the noise from the traffic and repairs of the submarines the navy has recently constructed a superflood basin around dry dock one in which they received an incidental take permit for the same ocean noise construction, therefore an additional 5-year permit will not be increasing the level noise currently present.

Ocean sound is the primary concern for incidental take in the Portsmouth shipyard. The main source of this sound will come from the pile driving that will take place during the construction on dry dock one. Pile driving has been found to be the noisiest of all man-made noise and can possibly impact behaviors of marine mammals for several miles (Madsen et al. 2006). Harbor seals and gray seals both show a minor behavioral disturbance at sounds at or above 160dB and show major behavioral disturbance at sounds above 200dB. The maximum distance they can detect sounds at these frequencies is 14 km for minor disturbance levels and 215 meters for major disturbances levels meaning that they are only significantly affected by sound within 215m of the

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Commented [A2]: You never, ever use Miss, Ms., or Mrs. to address a professional woman when she has a title. You must use her job title or Dr. if she has a Ph.D. She is the Division Chief, you must address her as Division Chief. This would be like you walking into my office and calling me Miss Lane. It ignores professional qualifications and is demeaning towards women, because these indicate marital status which is, frankly, none of your business. I realize you didn't mean it this way, but remember this moving forward in all professional correspondences with women.

Commented [A3]: You have odd capitalization of random words throughout the document, fix throughout. This is the only time I'm going to call attention to it.

Commented [A4]: I hope you discuss this later in the paper because this is a huge claim that requires multiple citations to back up.

Commented [A5]: Except all are protected under a separate federal law. Which law is it and why are they protected? What about their natural history makes them warrant an entire federal law dedicated to their protection?

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pile driving (Harris et al. 2006). While most pinnipeds are thought to be similarly affected by sounds in general it is thought that no significant injury or hearing loss will occur at distances greater than 100m from the point of pile driving (Harris et al. 2006). The harbor porpoise on the other hand is known to be sensitive to sounds and was found to be minorly affected by sounds of 90dB or higher at up to 70Km from the point of pile driving and had major behavior disturbances from sounds of 155 dB at up to 40 Km from the point of pile driving (Southall et al. 2007). However, another study found that harbor porpoises only show a strong avoidance of areas within 20Km of pile driving (Bailey et al. 2006). [Direct population level effects are hard to link to underwater noise due to lack of monitoring of noise levels and uncertainty of the extent that noise indirectly effects the complex communications between cetaceans \(Weilgart 2007\).](#) ~~in the number of seindirect mortal how conclusively There is likely a~~ While there is some data on the effect of Ocean noise on Marine mammals there are large gaps in data for many species such as the Hooded and Harp seal. In addition, only a few studies [were found to](#) have attempted to quantify the range of impact to an affected area with several outside factors such as seabed topography and background noise effecting the results (Bailey et al. 2006.). ~~and This data is especially variable in shallow waters such as in and around the port (Urick 1983). (harbordata varies is especially lacking in shallow water environments 6). Furthermore~~

While some behavioral disturbance is caused by pile driving, none of the five species located within the area around the Portsmouth shipyard are currently listed as endangered or threatened under the Endangered Species Act. All five species are protected by the Marine Mammal Protection Act which includes all marine mammals. While each species is protected by the Marine Mammal ~~P~~rotection Act, the populations of all pinniped species ~~liste~~ are trending upward or remaining stable. Harp seal populations in the Western North Atlantic stock are estimated to be 7 million individuals according to NOAA which is trending upwards from 4.7 million individuals estimated from 1994 (Shelton et al. 1997). Hooded seals are estimated to have 600,000 individuals in the Western North Atlantic Stock according to the latest NOAA surveys, which is similar to the 626,7000 individuals estimated in 1996 by Hamill and Stenson showing a stable population (Hamill and Stenson 2000). Gray seals are currently estimated to have a population of 450,000 in the western North Atlantic stock according to the most recent NOAA estimates. ~~P~~opulation trends from 2005-2015 also showed a growth of 5-2% per year [for gray seals](#) (Pace et al. 2019). Harbor seals are lacking information on recent population estimates however they are considered stable in the New England area according to NOAA. One additional study of harbor seals found that there could be a potential decrease in populations from 99,340 in 2001 to 75,834 in 2012 but does acknowledge that the difference could simply be from using different survey methods (Waring et al. 2015). While Pinniped species listed within the incidental take permit are considered stable populations, Harbor porpoise population trends within the Gulf of Maine stock are unknown due to lack of information. The population of the Gulf of Maine stock is estimated to be around 95,543 individuals according to the US Atlantic and Gulf of Mexico Assessment for Marine Mammals [\(](#). Annual population estimates are required to complete population trends for Harbor porpoises in the future in addition to further studies.

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Given the overall status of the pinniped species listed above, their stable populations and their lack of real threat from underwater noise, I find no reason to deny the U.S Navy an incidental take permit for these species (hooded seal, harp seal, gray seal and harbor seal). While there is concern for the potential take of harbor porpoises due to their sensitivity to sound the current sound present from both previous construction over the last year and ship noise likely has already discouraged use of the area within 20 km of construction. While more research is needed on both population trends for harbor porpoises and effects of ocean noise on their communication and habitat use, given the necessity of the construction of dry dock 1 for the shipyard to fulfill its main purpose for the US submarine fleet I find it appropriate to issue an incidental take permit.

Sincerely,
Nic Bray

Commented [A11]: I agree with your comment regarding the incidental take permit. I think your comment is informational and gives good feedback regarding the background of the species involved. Other than some punctuation and grammar issues, I think this is a great comment.

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