

**NATIONAL MARINE FISHERIES SERVICE**  
**ENDANGERED SPECIES ACT SECTION 7**  
**LETTER OF CONCURRENCE**

**Title:** Letter of Concurrence on the Issuance of Permit No. 20527 to Ann Pabst for Vessel and Aerial Surveys of Blue, Fin, North Atlantic Right, Sei, and Sperm whales

**Consultation Conducted By:** Endangered Species Act Interagency Cooperation Division, Office of Protected Resources, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce

**Action Agency:** Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service

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UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

MAY 25 2017

Refer to NMFS No: FPR-2017-9199

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

RE: Endangered Species Act Section 7(a)(2) letter of concurrence on the issuance of Permit No. 20527 to Ann Pabst for vessel and aerial surveys of blue, fin, North Atlantic right, sei, and sperm whales.

Dear Ms. Harrison:

On April 4, 2017, the National Marine Fisheries Service (NMFS), Office of Protected Resources, Endangered Species Act Interagency Cooperation Division received your request for written concurrence that the issuance of a scientific research permit (No. 20527) to study several marine mammal species listed under the Endangered Species Act as amended (ESA; 16 U.S.C. 1531 et seq.) and non-listed marine mammals is not likely to adversely affect ESA-listed species. Permit No. 20527 would be issued to Ann Pabst, Ph.D., University of North Carolina Wilmington (the applicant), pursuant to section 104 of the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 et seq.) to authorize vessel and aerial surveys of blue (*Balaenoptera musculus*), fin (*Balaenoptera physalus*), North Atlantic right (*Eubalaena glacialis*), sei (*Balaenoptera borealis*), and sperm (*Physeter macrocephalus*) whales, as well as other non-ESA-listed cetaceans. This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at (50 CFR Part 402), and agency guidance for preparation of letters of concurrence.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with agency guidelines issued under section 515 of the Treasury and General Government Appropriations Act of 2001 (Data Quality Act; 44 U.S.C. 3504(d)(1) and 3516). This letter of concurrence will be made available through NMFS' public consultation tracking system, refer to consultation number FPR-2017-9199. A complete record of this consultation is on file at the NMFS Office of Protected Resources, ESA Interagency Cooperation Division.

Below we describe the timeline of our informal consultation with the Permits and Conservation Division (hereafter the Permits Division), the proposed action, the ESA-listed species that may be affected by the proposed action including the Permit Division's determinations, and the minimization measures included in the proposed action to avoid adverse effects to these species. We then consider whether the proposed action is likely to adversely affect ESA-listed species.





## Consultation History

On July 27, 2016, the Permits Division provided us a draft of Dr. Pabst's application and informed us that they may seek consultation on the proposed Permit No. 20527, likely as part of a batch consultation with another permit (Permit No. 20556). On September 13, 2016, the Permits Division provided us with their review of the initial application and requested our review so that combined comments could be sent to the applicant, which we provided on September 28, 2016. On November 29, 2016, the Permits Division informed us that they no longer wished to batch Permit No. 20527 with Permit No. 20556, given that the two permits differed in their timeline and several aspects of the proposed research activities. At this time, the Permits Division also provided the applicant's responses to our review of the initial application. On December 1, 2016, the Permits Division sent us a memorandum requesting formal consultation on the issuance of Permit No. 20527. On December 7, 2016, we provided the Permits Division with our review of the initiation package and requested additional information and clarification. On December 12, 2016, the Permits Division provided this additional information and clarification. At that time, we informed the Permits Division that the proposed research activities may constitute take under the MMPA, but not necessarily under the ESA, in which case formal consultation would not be required.

Under the ESA, "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct." "Harm" under the ESA is defined by regulation (50 CFR §222.102) as "an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including, breeding, spawning, rearing, migrating, feeding or sheltering." "Harass" under the ESA is defined by NMFS guidance as to "create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering" (NMFS 2016c).

Under the MMPA "take" is defined as "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal" (16 U.S.C. 1361 et seq.) and further defined by regulation (50 C.F.R. §216.3) as "to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal. This includes, without limitation, any of the following:

- the collection of dead animals, or parts thereof;
- the restraint or detention of a marine mammal, no matter how temporary;
- tagging a marine mammal;
- the negligent or intentional operation of an aircraft or vessel;
- the doing of any other negligent or intentional act which results in disturbing or molesting a marine mammal;
- feeding or attempting to feed a marine mammal in the wild".

For purposes of this action, harassment is defined under the MMPA as any act of pursuit, torment, or annoyance which:

- has the potential to injure a marine mammal or marine mammal stock in the wild (Level A Harassment); or

- has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B Harassment).

Given the different definitions of take under the MMPA and ESA, there are circumstances in which an act may constitute take under one statute but not the other. Based on our evaluation of the permit application (NMFS 2016b), our previous biological opinions (opinions) on permits for Dr. Pabst (Permit Nos. 948-1692 and 16473 (NMFS 2005; NMFS 2012a)), and discussions with the Permits Divisions during early consultation, we determined that the proposed action was such a case in which take was likely to occur under the MMPA, but not the ESA.

This determination differs from our, and the Permits Division's, previous determinations regarding Dr. Pabst's research activities. Previously, we formally consulted with the Permits Division on the issuance of several permits for Dr. Pabst (e.g., NMFS 2005; NMFS 2012a). At the time these previous permits were proposed, we and the Permits Division conservatively considered that the effects of the proposed actions were likely to result in take under both the ESA and MMPA. As a result, the proposed actions were likely to adversely affect ESA-listed species and we conducted formal consultation resulting in several biological opinions (e.g., NMFS 2005; NMFS 2012a). In our effects analyses in these opinions, we determined that blue, fin, North Atlantic right, sei, and sperm whales were likely to exhibit behavioral responses to the proposed vessel and aerial surveys, ranging from no response to sub-lethal, short-term behavioral responses (NMFS 2005; NMFS 2012a). After re-evaluating these effects, and discussing with the Permits Division in a meeting on January 5, 2017, we recommended the Permits Division consider the possibility that the proposed research may not result in take under the ESA and thus, may not be likely to adversely affect ESA-listed species.

On April 4, 2017, the Permits Division sent us a memorandum requesting concurrence on their determination that the issuance of Permit No. 20527 was not likely to adversely affect ESA-listed species. In this request, the Permits Division noted that the Permit would be issued as both an MMPA and ESA permit. However, in further discussion with the Permits Division we confirmed that no ESA take would be authorized, and the permit would be modified such that it would be issued only under the MMPA. As a result, we informed the Permits Division that initiation of formal consultation was not required, and we would work toward completing informal consultation.

### **Proposed Action and Action Area**

The proposed action for this consultation is the issuance of a scientific research permit (Permit No. 20527) to Dr. Ann Pabst to authorize take of ESA-listed blue, fin, North Atlantic right, sei, and sperm whales, in addition to several non-ESA-listed cetaceans, in the form of harassment under the MMPA. Under the MMPA, take of all age classes and both sexes would be authorized. No take of blue, fin, North Atlantic right, sei, and sperm whales under the ESA would be authorized since, as discussed above, the proposed research would not rise to the level of take under the ESA. The proposed research would involve both aerial and vessel surveys of cetaceans in the Atlantic Ocean from Delaware Bay to Cape Canaveral, Florida, over a five-year period (June 1, 2017 to May 31, 2022). Below we provide a brief description of aerial and vessel surveys as proposed by Dr. Pabst.

The Permits Division proposed to authorize Dr. Pabst to conduct aerial surveys of ESA-listed (and non-ESA-listed) cetaceans in order for researchers take photographs and collect observational data. During aerial surveys, a team of researchers and two pilots would fly over predetermined tracklines in over-wing, twin-engine aircraft, Cessna 337 airplanes, at altitudes at or above 305 meters and air speeds 185 kilometers per hour in search of cetaceans. When a cetacean is seen, researchers would break from the trackline in order to circle over the animal(s) to estimate group size, body size, take photographs, and document behavior. During this circling, the aircraft would likely temporarily decrease altitude below 305 meters, typically for no more than a minute and to altitudes still within 20 to 25 meters of the 305 meter target altitude. Researchers would attempt to remain with animals the minimum amount of time required to collected the desired data, which could last up to approximately 30 minutes and involved 10 to 20 circling events. Once data collection is complete, researchers would leave the animals and return to the trackline to continue searching for cetaceans. If at any point during circling researchers observe animals responding to the aircraft, they would minimize or curtail sighting efforts in order to avoid adverse affects.

The Permits Division also proposed to authorize Dr. Pabst to conduct vessel surveys in order to collect photographs and observational data on ESA-listed and non-listed cetaceans. The exact vessel survey details (vessel size, number of researchers, etc.) would vary depending on the project and the research team conducting the vessels surveys. However, all would use the same general methods described here. Three to six researchers would search for cetaceans along predetermined tracklines (and on occasion opportunistically elsewhere) from research vessels (six to 25 meters in length), traveling 6 to 14 knots depending on vessel size. When a cetacean or group of cetaceans is spotted, the vessels would slow to between two and five knots in order to slowly approach the animal(s) on a converging, parallel course, ultimately matching the animal's travel speed. Vessels would remain as far from the animals as possible, but close enough to obtain high quality photographs (typically beyond 100 meters). A maximum of three approaches closer than 100 meters would be made on an individual or group of animals per day, and typical encounter times would be no more than 15 minutes in duration unless the animal appears to be injured or entangled, in which encounter times may be up to 25 minutes. If at anytime during vessel surveys animals appear to be effected by the vessels presence, researchers would cease efforts to avoid adverse impacts.

On an annual basis, the Permits Division proposes to authorize the follow number of annual MMPA takes (no take would be authorized under the ESA) as the result of harassment associated with aerial and or vessel surveys under Permit No. 20527: 40 blue whales, 100 fin whales, 200 North Atlantic right whales, 40 sei whales, and 150 sperm whales. These numbers do not necessarily represent the number of individual animals that would be exposed to aerial and vessel surveys, as some animals may be exposed more than once in any given year.

### **Minimization Measures**

In her permit application, Dr. Pabst specifies the following measures designed to avoid adversely affecting ESA-listed species.

“Each individual that we approach for photo-documentation may suffer a take by harassment, which could cause them disturbance and may result in disruption of his or her activities. We will stay with the cetaceans no longer than is absolutely necessary to collect high quality photographs for individual identification. We believe that these

effects will be short-term, as we limit our approaches to the minimal amount of time needed to obtain identifiable photos and scan the animals for signs of entanglement or injury. If any avoidance behavior is noted, we will minimize or curtail our sighting efforts. Research vessels proposed to be used herein will not intentionally approach cetaceans closer than 50 to 100 meters or at speeds that exceed two to five knots. Research vessels will only be operated by captains with extensive experience working around cetaceans, including large whales and observers will be in constant contact with captains to inform him/her of whale presence, distance and direction. Thus, we anticipate that the potential for boat strike by our research vessels to be very low.

As stated above, we share all our right whale photographs with colleagues at the New England Aquarium and the Florida Fish and Wildlife Conservation Commission, and all photographs of humpback whales, which include individual identification information, with colleagues at College of the Atlantic. In addition, when carrying out our surveys at the proposed Undersea Warfare Training Range site off of Jacksonville, we fly at a high altitude over the coastal "Early Warning System" survey areas when those surveys are active. This procedure is primarily designed for aviation safety, but it also ensures that we do not have any additional takes of right whales during these surveys. During the winter months just preceding the arrival of the Early Warning System survey teams, and spring months just after their departure, we do fly at or above 305 meters from the shore to the offshore survey site, to observe for right whales that may arrive early or leave after these survey periods.

In addition, the Permits Division proposes to include the following terms and conditions designed to avoid adverse effects to ESA-listed species (based draft permit as of May 15, 2017):

1. Researchers must immediately stop permitted activities and the Permit Holder must contact the Chief, NMFS Permits and Conservation Division (hereinafter "Permits Division") for written permission to resume:
  - a. If serious injury or mortality of protected species occurs.
  - b. If authorized take is exceeded in any of the following ways:
    - i. More animals are taken than allowed in this permit.
    - ii. Animals are taken in a manner not authorized by this permit.
    - iii. Protected species other than those authorized by this permit are taken.
  - c. Following incident reporting requirements
2. Researchers must approach animals cautiously and retreat if behaviors indicate the approach may be interfering with reproduction, feeding, or other vital functions.
3. Researchers must immediately terminate efforts if animals exhibit avoidance and/or evasive behaviors.
4. If animals are encountered during permitted research that are entangled or have evidence of human interaction that require closer observation, additional follow up, or tracking to monitor location, you must report these encounters and takes under the Marine Mammal Health Stranding Response Program.
5. Where females with calves are authorized to be taken, Researchers:
  - a. Must immediately terminate efforts if there is any evidence that the activity may be interfering with pair-bonding or other vital functions;
  - b. Must not position the research vessel between the mother and calf;

- c. Must approach mothers and calves gradually to minimize or avoid any startle response;
- d. Must discontinue an approach if a calf is actively nursing; and
- e. Researchers must not approach a right whale calf that appears unusually thin or emaciated.
6. Manned aerial surveys must be flown at an altitude of 305 meters (1,000 feet).
7. To minimize disturbance: If an animal shows a response to the presence of the aircraft, the aircraft must leave the vicinity and either resume searching or continue on the line-transect survey.
8. This permit does not authorize takes of any protected species not identified in this permit, including those species under the jurisdiction of the United States Fish and Wildlife Service (e.g., manatees). Should other protected species be encountered during the research activities authorized under this permit, researchers must exercise caution and remain a safe distance from the animal(s) to avoid take, including harassment.
9. Individuals conducting permitted activities must possess qualifications commensurate with their roles and responsibilities.

### Affected ESA-listed Species

The species that may be affected by the proposed action are listed below in Table 2, along with links to the Federal Register notices for their ESA-listings and recovery plans, and the Permits Division determination regarding the effects of the proposed action to each species. Blue, fin, North Atlantic right, sei, and sperm whales are the target ESA-listed species for this research (in addition to other non-ESA-listed cetaceans). The ESA-listed turtle species may be present within the action area but no interaction with these species would be authorized.

**Table 1:** Endangered Species Act listed species that may be affected by the proposed action. E – Endangered, T – Threatened, NLAA – Not likely to adversely affect.

Species	ESA Status	Critical Habitat	Recovery Plan	Permits Division Determination
Blue Whale ( <i>Balaenoptera musculus</i> )	<a href="#">E – 35 FR 18319</a>	-- --	<a href="#">07/1998</a>	NLAA
Fin Whale ( <i>Balaenoptera physalus</i> )	<a href="#">E – 35 FR 18319</a>	-- --	<a href="#">75 FR 47538</a>	NLAA
North Atlantic Right Whale ( <i>Eubalaena glacialis</i> )	<a href="#">E – 73 FR 12024</a>	<a href="#">59 FR 28805</a> <a href="#">and 81 FR 4837</a>	<a href="#">70 FR 32293</a>	NLAA
Sei Whale ( <i>Balaenoptera borealis</i> )	<a href="#">E – 35 FR 18319</a>	-- --	<a href="#">76 FR 43985</a>	NLAA
Sperm Whale ( <i>Physeter macrocephalus</i> )	<a href="#">E – 35 FR 18319</a>	-- --	<a href="#">75 FR 81584</a>	NLAA
Green Turtle, ( <i>Chelonia mydas</i> ) – North Atlantic DPS	<a href="#">T – 81 FR 20057</a>	<a href="#">63 FR 46693</a>	<a href="#">63 FR 28359</a>	NLAA
Hawksbill Turtle ( <i>Eretmochelys imbricata</i> )	<a href="#">E – 35 FR 8491</a>	<a href="#">63 FR 46693</a>	<a href="#">57 FR 38818</a>	NLAA
Kemp's Ridley Turtle ( <i>Lepidochelys kempii</i> )	<a href="#">E – 35 FR 18319</a>	-- --	<a href="#">75 FR 12496</a>	NLAA
Leatherback Turtle ( <i>Dermochelys coriacea</i> )	<a href="#">E – 35 FR 8491</a>	<a href="#">44 FR 17710</a> <a href="#">and 77 FR 4170</a>	<a href="#">63 FR 28359</a>	NLAA
Loggerhead Turtle, ( <i>Caretta caretta</i> ) – Northwest Atlantic Ocean DPS	<a href="#">T – 76 FR 58868</a>	<a href="#">79 FR 39856</a>	<a href="#">63 FR 28359</a> <a href="#">74 FR 2995</a>	NLAA

### Effects of the Action

Under the ESA, “effects of the action” means the direct and indirect effects of an action on the ESA-listed species or designated critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR §402.02). The applicable standard to find that a proposed action is not likely to adversely affect ESA-listed species or designated

critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take (as defined by the ESA) occurs. Discountable effects are those extremely unlikely to occur.

A variety of ESA-listed sea turtles may be found within the action area. In fact, in her application Dr. Pabst notes that her research team has previously documented Kemp's ridley, loggerhead, leatherback turtles, and other unidentified turtles during aerial surveys. Thus, there is a potential that during aerial or vessel surveys, researchers may encounter ESA-listed turtles and disturb them. As noted in the request for concurrence and previous opinions on permits for Dr. Pabst (NMFS 2005; NMFS 2012a; NMFS 2017b), responses to such disturbance likely range from no response, to low-level behavioral responses including startle responses, diving, and other changes in behavior. Data from Dr. Pabst annual reports from past research efforts are consistent with this; to date, she has observed no response by sea turtles to her research activities (NMFS 2012b; NMFS 2016d). With or without a behavioral response, turtles may also experience a physiological stress response. However, given that researchers would not break tracklines to observe turtles, and turtles would not be intentionally approached, encounters with turtles are likely to be extremely brief, if they occur at all. Given the short-term nature of these encounters, and the possible behavioral and stress responses that may occur, we find that the effects of vessel disturbance to ESA-listed turtles are insignificant. In addition to disturbance, vessel transits associated with vessel surveys carry a risk of vessel strike for sea turtles. However, as we in our previous opinion on Dr. Pabst most recent permit, we find this possibility extremely unlikely since researchers would constantly be on the lookout for marine animals and vessels would typically be transiting at slow speeds (NMFS 2012a). In addition, we are aware of no instances of a research vessel striking a sea turtle in thousands of hours of at sea research permitted by the Permits Division. Thus, we find effects of vessel strike to sea turtles to be discountable.

ESA-listed blue, fin, North Atlantic right, sei, and sperm whales would all be exposed to aerial and vessel surveys. Based on previous consultations on permits issued to Dr. Pabst and other similar research activities, and the Permits Divisions' request for concurrence, these species are likely to exhibit a variety of behavioral responses to aerial and vessel surveys, ranging from no response to short-term avoidance (e.g. diving, change in swimming speed/direction, etc.) and active lobtailing and/or breaching (NMFS 2005; NMFS 2012a; NMFS 2016a; NMFS 2017a; NMFS 2017b). In Dr. Pabst annual reports from previous research permits, she notes that whales typical exhibit no response to her research activities, with avoidance behavior being observed during only a few encounters, and usually those associated with emergency response efforts aimed at disentangling whales (NMFS 2012b; NMFS 2016d). Regardless of the response, with the short-term nature of the encounters, whales are expected to resume species typical behavior within a matter of minutes of researchers leaving the area. Given the mild, short-term expected behavioral responses, we do not anticipate any meaningful effects to the fitness of individual whales from aerial and vessel surveys as proposed under Permit No. 20527. As such, we find the effects of aerial and vessel surveys on blue, fin, North Atlantic right, sei, and sperm whales to be insignificant.



## Conclusion

Based on this analysis, the NMFS ESA Interagency Cooperation Division concurs with the Permits Division that the proposed action may affect, but is not likely to adversely affect, ESA-listed species.

## Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by the Federal agency, or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect an ESA-listed species or designated critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the ESA-listed species or designated critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed under the ESA or critical habitat designated that may be affected by the identified action (50 CFR §402.16).

Please direct questions regarding this letter to Eric Patterson, NMFS Office of Protected Resources, ESA Interagency Cooperation Division, 301-427-8415, [eric.patterson@noaa.gov](mailto:eric.patterson@noaa.gov).

Sincerely,



Donna S. Wieting  
Director, Office of Protected Resources

## Literature Cited

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