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Supplemental Environmental Assessment for the Issuance of an Amendment to Scientific Research Permit for Aerial and Vessel Surveys of North Atlantic Right Whales off the Southeastern United States (File No. 13927)

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Document Being Supplemented:	Environmental Assessment For Issuance of a Scientific Research Permit for Aerial and Vessel Surveys of North Atlantic Right Whales off the Southeastern United States (File No. 13927)
Location:	Coastal waters of the southeastern United States, primarily focused on the area south of St. Augustine, Florida

Abstract: The National Marine Fisheries Service (NMFS) proposes to issue a major amendment to Scientific Research Permit No. 13927 for takes of marine mammals in the wild, pursuant to the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 et seq.) and the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq.*). Permit No. 13927 authorizes aerial and vessel surveys, focused on North Atlantic right whales (*Eubalaena glacialis*). Research may occur off the southeastern U.S. coast from December through April each year. Authorized activities are photo-identification, surveys, behavioral observations, and passive acoustics. Three other cetacean species may be incidentally harassed as a result of the research. The objectives would not change with the amendment and are to: 1) monitor the abundance, distribution, and habitat use of North Atlantic right whales in coastal waters of the southeastern United States, primarily focused on the area south of St. Augustine, Florida; and 2) study the acoustic behavior of right whales and investigate the feasibility of passive acoustic monitoring. The amendment would increase the number of right whales that may be harassed annually during aerial surveys from 50 to 100 and during vessel surveys from 10 to 60. The amended permit would expire on October 31, 2016.

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TABLE OF CONTENTS

CHAPTER 1 PURPOSE OF AND NEED FOR ACTION **3**

1.1 DESCRIPTION OF ACTION 3

1.1.1 Purpose and Need *3*

1.1.2 Research Objectives *3*

1.2 OTHER EA/EIS THAT INFLUENCE SCOPE OF THIS EA 4

1.3 SCOPING SUMMARY 4

1.3.1 Comments on application ..... ***Error! Bookmark not defined.***

CHAPTER 2 ALTERNATIVES INCLUDING THE PROPOSED ACTION **4**

2.1 ALTERNATIVE 1 – NO ACTION 4

2.2 ALTERNATIVE 2 – PROPOSED ACTION (ISSUANCE OF PERMIT WITH STANDARD CONDITIONS) 4

CHAPTER 3 AFFECTED ENVIRONMENT **6**

CHAPTER 4 ENVIRONMENTAL CONSEQUENCES **7**

4.1 EFFECTS OF ALTERNATIVE 1: NO ACTION 7

4.2 EFFECTS OF ALTERNATIVE 2: ISSUE PERMIT WITH STANDARD CONDITIONS 7

4.3 COMPARISON OF ALTERNATIVES 9

4.4 MITIGATION MEASURES 9

4.5 UNAVOIDABLE ADVERSE EFFECTS 10

4.6 CUMULATIVE EFFECTS 10

CHAPTER 5 LIST OF PREPARERS AND AGENCIES CONSULTED **11**

LITERATURE CITED **11**

CHAPTER 1 PURPOSE OF AND NEED FOR ACTION

1.1 DESCRIPTION OF ACTION

In response to an application from Dr. James H.W. Hain, Associated Scientists at Woods Hole, Woods Hole, MA, NMFS proposes to issue an amendment to Scientific Research Permit No. 13927 authorizing takes"[1] by Level B harassment[2] of marine mammals in the wild under the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 *et seq.*), and the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*).

1.1.1 Purpose and Need

The MMPA and ESA prohibit "takes" of marine mammals and of threatened and endangered species, respectively, with only a few specific exceptions. The applicable exceptions in this case are an exemption for *bona fide*[3] scientific research under Section 104 of the MMPA and for scientific purposes related to species recovery under Section 10(a)(1)(A) of the ESA.

The purpose of the permit amendment is to provide the applicant with an exemption from the take prohibitions under the MMPA and ESA for harassment of marine mammals associated with an increase in aerial and vessel surveys from that authorized under the existing Scientific Research Permit No. 13927, including those listed as endangered, during conduct of research that is consistent with the MMPA and ESA issuance criteria.

The need for issuance of the amended permit is related to the purposes and policies of the MMPA and ESA. NMFS has a responsibility to implement both the MMPA and the ESA to protect, conserve, and recover marine mammals and threatened and endangered species under its jurisdiction. Facilitating research about species' basic biology and ecology or that identifies, evaluates, or resolves specific conservation problems informs NMFS management of protected species.

1.1.2 Research Objectives

The amendment request does not change the research objectives. They are to: 1) monitor the abundance, distribution, and habitat use of North Atlantic right whales (*Eubalaena glacialis*) in coastal waters of the southeastern United States, primarily focused on the area south of St. Augustine, Florida; and 2) study the acoustic behavior of right whales and investigate the feasibility of passive acoustic monitoring.

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1 Under the MMPA, "take" is defined as to "harass, hunt, capture, kill or collect, or attempt to harass, hunt, capture, kill or collect." The ESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

2 "Harass" is defined under the MMPA as "Any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing a disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering but does not have the potential to injure a marine mammal or marine mammal stock in the wild (Level B harassment)."

3 The MMPA defines bona fide research as "scientific research on marine mammals, the results of which – (A) likely would be accepted for publication in a refereed scientific journal; (B) are likely to contribute to the basic knowledge of marine mammal biology or ecology; or (C) are likely to identify, evaluate, or resolve conservation problems."

1.2 OTHER EA/EIS THAT INFLUENCE SCOPE OF THIS EA

An Environmental Assessment (EA) was completed in October 2011 for Permit No. 13927 (NMFS 2011), resulting in a Finding of No Significant Impact (FONSI). That EA demonstrated that impacts of the action are limited to minor, short-term adverse effects on individual whales and dolphins. No effects on other components of the environment were likely. Therefore, this Supplemental EA (SEA) focuses on evaluating whether increasing the number of North Atlantic right whales harassed will change the manner in which the permit affects the species.

1.3 SCOPING SUMMARY

The scope of this SEA is limited to those analyses that were not included in the 2011 EA: the effects of the increase of annual takes of North Atlantic right whales from 50 to 100 for aerial surveys and from 10 to 60 for vessel surveys. No increase in survey effort is associated with the proposed increase in takes. Instead, the proposed increase in takes is associated with the presence of whales during surveys authorized under SRP No. 13927.

The National Oceanic and Atmospheric Administration (NOAA) has, in NOAA Administrative Order 216-6 (NAO 216-6; 1999), listed issuance of permits for research on protected species as categories of actions that "do not individually or cumulatively have a significant effect on the human environment..." and which therefore do not require preparation of an EA or environmental impact statement (EIS). A possible exception to the use of these categorical exclusions is when the action may adversely affect species listed as threatened or endangered under the ESA (NAO 216-6 Section 5.05c). Therefore, NMFS has prepared this SEA, with a more detailed analysis of the potential for adverse impacts on endangered species resulting from takes of a specified number of the target whales, to assist in making the decision about permit issuance under the ESA.

CHAPTER 2 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This chapter describes the range of potential actions (alternatives) determined reasonable with respect to achieving the stated objective, as well as alternatives eliminated from detailed study. This chapter also summarizes the expected outputs and any related mitigation of each alternative.

2.1 ALTERNATIVE 1 – NO ACTION

Under the No Action alternative, no amendment would be issued and the applicant would not receive an exemption from the MMPA and ESA take prohibitions for additional takes of North Atlantic right whales. The existing permit would remain in effect until it expires on October 31, 2016, allowing research to continue as authorized in the original permit. No other permits or permit requests would be affected by this alternative.

2.2 ALTERNATIVE 2 – PROPOSED ACTION (ISSUANCE OF PERMIT WITH STANDARD CONDITIONS)

Under the Proposed Action alternative, a permit amendment would be issued to exempt the applicant from MMPA and ESA take prohibitions for an additional 100 North Atlantic right whales (50 for aerial surveys; 50 for vessel surveys), annually, during conduct of research that is

consistent with the purposes and policies of the MMPA, ESA and applicable permit issuance criteria.

The permit expiration date would remain October 31, 2016. The amended permit would contain the terms and conditions in Permit No. 13927, which are standard to such permits as issued by NMFS.

Action area

The action area would not change. Activities would continue to occur in coastal waters off the southeastern U.S. coast from December through April each year. Research would occur in Georgia and Florida, with a focus on the area south of St. Augustine, Florida.

Proposed Activities

The methods would not change from what was analyzed in the 2011 EA. The proposed amendment would increase the annual authorized number of North Atlantic right whales from 50 to 100 for aerial surveys and from 10 to 60 for vessel surveys. The 100 additional right whales would be approached for counting, photo-identification, behavioral observations, and passive acoustics (Table 1) as described in Chapter 2 of the EA prepared for Permit No. 13927, incorporated here by reference.

The increase in take numbers is requested so that the Dr. Hain can carry out his research as originally planned. When designing his project and requesting take numbers in his application, the researcher thought that his numbers could be extremely low because he did not expect whales to react to the research. However, NMFS requires that all whales approached within 1000 ft by aerial platform or within 100 yards by boat, must be counted as takes regardless of whether or not a behavioral reaction is observed. This is consistent with the MMPA definition of level B harassment which includes actions with the potential to disturb a marine mammal. With this guidance, Dr. Hain is unable to complete his annual field work because his currently authorized takes (50 aerial; 10 vessel) could be exhausted with just a few groups of whales. The revised take numbers of 100 aerial and 50 vessel approaches are based on Dr. Hain's experience in previous field seasons.

No other changes would be made to the permit. No increase in research effort is associated with the proposed increase in take.

Table 1. Proposed annual takes of North Atlantic right whales in the coastal waters of the southeastern U.S. from December through April.

Species	Life Stage	Sex	Expected Take*	Takes per animal	Observe Method	Procedures
North Atlantic right whale	All	Male and female	100	3	Aerial surveys	Count/ survey; Photo-id
North Atlantic right whale	All	Male and female	60	3	Motorized vessel surveys	Acoustics, passive recording; Count/ survey; Observations, behavioral; Photo-id

* Takes = the **maximum** number of animals, not necessarily individuals, that may be taken annually in each row of the table. If any animal is harassed more than once during research, each additional attempt (i.e., take) reduces the number of total takes remaining.

CHAPTER 3 AFFECTED ENVIRONMENT

The affected environment would not change from what was described in Chapter 3 of the EA prepared for Permit No. 13927, incorporated here by reference and summarized as:

- Social or economic environment: There are no significant impacts of the research interrelated with significant natural or physical environmental effects.
- Physical environment:
  - Research would occur off the Florida and Georgia coasts from December through April. The majority of the effort would take place south of St. Augustine, Florida.
  - The study area includes a portion of right whale critical habitat, called the South Atlantic Bight (also referred to as the SEUS). The SEUS area extends roughly from Cape Hatteras, North Carolina, to West Palm Beach, Florida.
  - Although Essential Fish Habitat (EFH) is found within the action area, none of the activities in the Proposed Action are directed at or likely to have any impact on any designated EFH.

A newer stock assessment report for North Atlantic right whales has been published since the October 2011 EA was prepared. Thus, updated information on the status of the species follows.

North Atlantic Right Whale

The western North Atlantic right whale population was estimated to include a minimum of 361 individuals based on 2005 data (Waring et al. 2011). Although the 2008 SAR indicates the population declined in the 1990s, more recent data indicate the population may be increasing at a slow rate. Data on the reproductive success of this population suggest that the number of calves born annually is declining and the mean calving interval is increasing (Knowlton et al. 1994). However, recent sightings by the NMFS Southeast Fisheries Science Center on the southeast U.S. calving grounds identified 39 mother–calf pairs in the 2008–2009 season. This is the highest number of mother–calf pairs recorded for the population since the 1980s. Approximately

one-third of all Northern right whale mortalities have been attributed to human activities, including entanglement in fishing gear and collision with vessels (Kraus 1990). Given the small population size and low reproductive rate, human-related mortalities may be the principal factors inhibiting growth and recovery of the population.

The stock is considered to be critically endangered and is designated as strategic under the MMPA.

CHAPTER 4 ENVIRONMENTAL CONSEQUENCES

This chapter represents the scientific and analytic basis for comparison of the direct, indirect, and cumulative effects of the alternatives. Regulations for implementing the provisions of NEPA require consideration of both the context and intensity of a proposed action (40 CFR Parts 1500-1508).

4.1 EFFECTS OF ALTERNATIVE 1: No Action

The effects of the No Action alternative, in which NMFS does not issue the permit amendment, are the same as the effects of issuing the original permit, No. 13927. Those effects were described and evaluated in the EA for 13927, resulting in a FONSI, are hereby incorporated by reference and are summarized here.

In the 2011 EA, NMFS determined that, for North Atlantic right whales:

- The proposed research activities are non-intrusive and categorized as Level B harassment because there is the potential to disturb the whales, but not the potential to result in injury. Mortalities are not expected.
- Disturbance from research activities would be temporary and animals would be expected to recover from any harassment fairly quickly (within a day).
- Any harassment is not likely to have a measurable long-term effect on North Atlantic right whale individuals or population.

4.2 EFFECTS OF ALTERNATIVE 2: Issue permit with standard conditions

Effects to the Physical Environment

The Proposed Action is directed at specific marine mammals and would not have a significant cumulative effect on the physical environment. Although research may occur within critical habitat, Essential Fish Habitat, national seashores, and state parks, it is not likely that the taking of marine mammals by harassment would affect such areas. The proposed research would not occur within a National Marine Sanctuary, thus no sanctuaries would be affected.

Effects to Target Species

Impacts of the Proposed Action would be limited to 100 additional North Atlantic right whales. The Proposed Action would not affect any other portion of the environment; therefore, only the increased take number is addressed here.

The effects of the proposed increase in takes of additional 100 North Atlantic right whales (50 aerial surveys, 50 vessel surveys) annually would only translate into an adverse effect on the population or species if it results in reduced reproduction or survival of the individual(s) that causes an appreciable reduction in the likelihood of survival or recovery for the species. In order for the proposed action to have an adverse effect on the species, the exposure of individual animals to the research activities would first have to result in:

- direct mortality,
- serious injury that would lead to mortality, or
- disruption of essential behaviors such as feeding, mating, or nesting, to a degree that the individual's likelihood of successful reproduction or survival was substantially reduced.

Subsequently, mortality or reduction in the individual's likelihood of successful reproduction or survival would then have to result in a net reduction in the number of individuals of the species. In other words, the loss of the individual or its future offspring would not be offset by the addition, through birth or emigration, of other individuals into the population. That net loss to the species would have to be reasonably expected, directly or indirectly, to appreciably reduce the likelihood of both the survival and recovery of the listed species in the wild.

The effects of the Proposed Action would not be expected to differ from those analyzed in the 2011 EA. All of the research activities are non-intrusive, and categorized as Level B harassment because there is the potential to disturb the whales, but not the potential to result in injury. NMFS expects aerial surveys and vessel approaches for photo-identification, behavioral observations, and passive acoustic recordings to result in no more than temporary, minimal harassment to the target individuals. Animals would be expected to recover from such harassment within minutes. Close approaches would be made in a controlled manner at safe speeds so as not to alarm the whale and no vessel strikes would be expected. Research efforts would be abandoned if an animal exhibits a response that indicates the approach may be interfering with reproduction, feeding, or other vital functions. Conditions in the proposed permit would be the same as those in Permit No. 13927, and are designed to minimize effects to individual North Atlantic right whales and non-target species.

Given the minimal effects of the research that would occur and the ability of the animals to recover from effects between surveys, NMFS expects that even those animals that may be affected more than once a field season would not suffer any significant consequences. No serious injury or mortality would result from these activities. The research activities considered individually and as a group are not likely to disrupt the migration, breathing, nursing, feeding, breeding, or sheltering behavior of North Atlantic right whales.

A Biological Opinion prepared under Section 7 of the ESA determined that issuance of the permit amendment is not likely to jeopardize the continued existence of North Atlantic right or

humpback whales and is not likely to destroy or adversely modify critical habitat for right whales.

Based on the above analysis, takes of 100 additional North Atlantic right whales (50 during aerial surveys, 50 by vessel) would not be expected to result in serious injury or mortality or disrupt essential behaviors to the extent that reproduction or survival would be reduced. Therefore no population or species level effects are expected.

4.3 COMPARISON OF ALTERNATIVES

The No Action alternative would result in the environmental effects evaluated for issuing the original permit, No. 13927. Under the No Action alternative, Dr. Hain may not be able to conduct his research as originally planned because a few groups of whales would exhaust his take numbers and force him to end his fieldwork prematurely. Dr. Hain would not be able to collect additional information that could contribute to a better understanding of North Atlantic right whales and that could provide information needed to implement NMFS' management activities, as directed by the MMPA, ESA and implementing regulations.

The Proposed Action would affect additional North Atlantic right whales (50 during aerial surveys, 50 during vessel surveys). The effects would be limited to the short-term stresses of taking those additional whales and would not result in any serious injury or mortality, just like the No Action alternative. The authorization to take the additional right whales would:

- Reduce the probability of disruption to field efforts and allow Dr. Hain to complete his field seasons as originally planned.
- Provide data on endangered North Atlantic right whale abundance, distribution, and behavior off Georgia and Florida, including in the area south of St. Augustine, where few researchers work.

Neither the No Action nor the Proposed Action alternatives are anticipated to have adverse population or stock-level effects on marine mammals.

While the no action alternative would result in fewer whales being approached, the opportunity would be lost to collect additional information that may contribute to a better understanding of right whales and that could provide information that is needed to implement NMFS management activities. This could help conserve and manage right whales as required by the MMPA, ESA and NMFS's implementing regulations. The Proposed Action alternative would allow Dr. Hain to complete each field season and collect the additional information that could help NMFS' efforts to recover right whales.

4.4 MITIGATION MEASURES

There are no additional mitigation measures beyond those described in Chapter 4.5 of the EA for Permit No. 13927, incorporated here by reference.

4.5 UNAVOIDABLE ADVERSE EFFECTS

The mitigation measures imposed by permit conditions are intended to reduce, to the maximum extent practical, the potential for adverse effects of the research on the targeted species as well as any other species that may be incidentally harassed. The taking is not expected to have more than a short-term, minimal effect on individual right whales. No effect to the population is expected.

4.6 CUMULATIVE EFFECTS

Cumulative effects are defined as those that result from incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (federal or nonfederal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions that take place over a period of time. There may already be substantial adverse impacts on marine mammals from the existing levels of human activities. However, the relative incremental effect of the proposed action would not be significant.

The 2011 EA included a summary of identified natural and anthropogenic activities that may impact right whales. Those factors are still relevant, but have not changed since the 2011 EA, so they will not be re-evaluated here.

NMFS expects that the proposed action as discussed above, and as analyzed in the 2011 EA which is hereby incorporated by reference, would not have a significant cumulative effect on either the human or marine environment. Specifically the 2011 EA determined that:

- The most common threats to North Atlantic right whales remain entanglement in fishing gear and vessel collisions which have the potential to seriously injure or kill whales.
- Other impacts, such as habitat degradation, energy development, and noise, may temporarily harass individual right whales but are not likely to be life threatening.
- Right whales are not exposed to all human activities at all times, particularly given this species' migratory nature. The short-term stresses (separately and cumulatively when added to other stresses right whales face in the environment) resulting from the proposed research activities would be expected to be minimal to targeted right whales. Behavioral reactions suggest that harassment is brief, lasting minutes, before animals resume normal behaviors. NMFS expects any effects of harassment to dissipate before animals could be harassed by other human activities.
- Significant cumulative impacts are not expected because no serious injury or mortality is expected (resulting in no direct loss of animals from the population) nor an appreciable reduction in the fecundity of target individuals. Therefore, the proposed research would contribute a negligible increment of harassment over and above the effects of the baseline activities currently occurring in the marine environment of the action area over the life of the permit.

The proposed action would be directed at North Atlantic right whales and would similarly not be likely to have a significant cumulative effect on target and non-target species.

Taking of marine mammals under the Proposed Action alternative is not expected to result in more than minimal, temporary harassment of animals in the action area. It is likely the effects of the disturbance would be short-term and that the affected areas would recover between disturbances and following conclusion of the permitted research. NMFS does not expect the issuance of the proposed permit amendment to appreciably reduce the species' likelihood of survival and recovery in the wild because it would not likely adversely affect their birth rates, death rates, or recruitment rates. In particular, NMFS does not expect the taking of the additional 100 right whales to appreciably reduce the reproductive success of adults, the survival of young, or the number of young that annually recruit into the breeding population.

Considering the nature of the proposed research activities, the mitigation measures that would be employed, and that these types of research activities are not novel in the marine environment, the proposed increase in take numbers would contribute a negligible increment over and above the effects of the baseline activities currently occurring in the marine environment where the research would occur.

CHAPTER 5 List of Preparers and Agencies Consulted

This document was prepared by the Permits and Conservation Division of NMFS' Office of Protected Resources in Silver Spring, Maryland.

No other agencies were consulted in the preparation of this document.

LITERATURE CITED

Knowlton, A. R., S. D. Kraus and R. D. Kenney 1994. Reproduction in North Atlantic right whales (*Eubalaena glacialis*). Can. J. Zool. 72: 1297-1305.

Kraus, S. D. 1990. Rates and potential causes of mortality in North Atlantic right whales Eubalaena glacialis). Mar. Mammal Sci. 6: 278-291.

NMFS. 2011. Environmental Assessment. Issuance of a Scientific Research Permit for Aerial and Vessel Surveys of North Atlantic Right Whales off the Souteastern United States (File No. 13927). National Marine Fisheries Service. Silver Spring, Maryland. 56 pp.

Waring GT, Josephson E, Maze-Foley K, Rosel, PE, editors. 2011. U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments -- 2010. NOAA Tech Memo NMFS NE 219; 598 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026, or online at http://www.nefsc.noaa.gov/nefsc/publications/