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MEMORANDUM FOR: The Record

FROM: 
F/PR1 – Jolie Harrison
Chief, Permits and Conservation Division

SUBJECT: Categorical Exclusion for the Issuance of Scientific Research
Permit No. 21233

NOAA Administrative Order (NAO) 216-6A requires all proposed projects to be reviewed with respect to environmental consequences on the human environment. This memorandum addresses the determination that the issuance of a scientific research permit qualifies to be categorically excluded from further National Environmental Policy Act (NEPA) review.

Proposed Federal Action

The National Marine Fisheries Service (NMFS) proposes to issue a scientific research permit under Section 10(a)(1)(A) of the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*).

Description of Applicant's Scientific Research

1. The permit applicant is the NMFS Southeast Fisheries Science Center (SEFSC; Theophilus Brainerd, Ph.D., Responsible Party).
2. The permit will be valid until September 30, 2027.
3. Target species and stocks: green (*Chelonia mydas*) North Atlantic Distinct Population Segment (DPS), hawksbill (*Eretmochelys imbricata*), Kemp's ridley (*Lepidochelys kempii*), leatherback (*Dermochelys coriacea*), loggerhead (*Caretta caretta*) Northwest Atlantic Ocean DPS, and olive ridley (*L. olivacea*) sea turtles
4. Location: Research will occur within U.S. and international waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their embayments.
5. Duration: Surveys may occur year round with more activity in the spring, summer and fall.
6. Objectives: The objectives of the research are to 1) assess sea turtle abundance, population structure, stock identification, life history, genetics, and effects of natural and anthropogenic stressors; 2) examine habitat use and seasonal migratory movements; and 3) characterize sea turtle baseline health status.



7. Methods: Animals would be captured by hand, dip net, hoop net, pound net, seine, cast net, tangle net, or trawl or obtained for study from another legal source such as bycatch in a commercial fishery. Researchers would examine, mark, image, collect morphometrics, collect a suite of biological samples, and attach transmitters to live sea turtles before release. A subset of these animals may also undergo imaging, laparoscopy and internal tissue sampling when transported and temporarily held in a facility before release. A small number of animals may unintentionally die during research; carcasses and parts would be retained in these cases. In addition, live animals may be harassed during vessel and aerial surveys (manned and unmanned) for species counts and observation.

Applicable Categorical Exclusion

Based on the information presented in this document and the application, the issuance of a scientific research permit to the SEFSC for the taking of sea turtles is consistent with activities identified in categorical exclusion (CE) B1 and there are no extraordinary circumstances with the potential for significant environmental effects that would preclude the issuance of this scientific research permit from being categorically excluded. The following summarizes the relevant factors supporting a CE determination for this action.

Determination Summary

In determining whether a CE is appropriate for a given permit, NMFS considers the applicant's specified activity (applicant's action) and the potential extent and magnitude of "takes," including shifts at the population or species level, along with the extraordinary circumstances listed in the Companion Manual for the NAO 216-6A. The evaluation of whether extraordinary circumstances (if present) have the potential for significant environmental effects is limited to the decision NMFS is responsible for, which is issuance of a scientific research permit (NMFS' action). While there may be environmental effects associated with the underlying action, potential effects of NMFS' action are limited to those that would occur due to the authorization of "take" of animals¹. NMFS prepared numerous Environmental Assessments (EAs) analyzing the environmental impacts of the categories of activities encompassed by CE B1 which resulted in Findings of No Significant Impacts. These EAs demonstrate the issuance of a given permit does not affect other aspects of the human environment because the action only affects animals that are the subject of the permit. These EAs also addressed factors in 40 CFR 1508.27 regarding the potential for significant impacts and demonstrate the issuance of permits for the categories of activities encompassed by CE B1 do not individually or cumulatively have a significant effect on the human environment. For these reasons, only circumstances which are present and relevant to the issuance of this scientific research permit are evaluated here.

¹ In some cases, animals not intended as part of the proposed scientific research activities for which "take" will be authorized may have the potential to be present in a given research area. Therefore, NMFS considers target and non-target species or stocks and assesses potential effects associated with the scientific research for both target and non-target species or stocks.

1. Extent and Magnitude of Directed Take

The issuance of this scientific research permit authorizes take of six sea turtle species as well as unidentified sea turtles, such as hybrids. With the exception of a minimal number of mortalities, the proposed research activities are expected to result in short-term (recoverable) adverse effects on individual animals targeted by the proposed research and will not result in any changes to the human environment or the target species or populations.

The proposed research includes vessel and aerial surveys that do not involve physical contact with animals. For acoustic surveys, acoustic devices aboard the vessel would emit signals beyond the hearing range of sea turtles or other protected species that could be in the range of the vessel. Thus, acoustic surveys to assess turtle abundance are not expected to impact the target turtles or other portions of the environment. All methods of survey are expected to result in no more than temporary disturbance of the target sea turtles while in their vicinity. Disturbance may lead to local movements or dives by animals away from the vessel or aircraft. However, as analyzed in prior EAs, animals are expected to resume or continue their behaviors once the vessel or aircraft is out of the area. Encounters with subject animals would be brief, lasting only minutes. Surveys are not expected to alter an animal's habitat use patterns as evidenced by their continued use of areas surveyed in the past.

The proposed research also includes capture by hand, dip net, hoop net, cast net, tangle net, pound net, seine, or trawl. Turtles may be forcibly submerged when entangled in nets by some of the proposed capture methods, such as trawl gear and entanglement nets. Due to the duration of submergence, trawls have the potential to result in mortality or serious injury. However, most sea turtles captured by these methods are not killed or seriously injured. With the exception of a minor number of mortalities or injuries from trawl, most animals would recover within minutes to hours of capture. All animals would be released at or near the point of capture to minimize disruption of an animal's previous behaviors.

Captured turtles, or turtles obtained for work up from another legal capture source (e.g., a commercial fishery), would be subject to an examination and monitoring, photography, marking, imaging, measurements and weight, a suite of biological sampling (skin, blood, tears, fecal, gastric lavage, cloacal swab, fat, organ, muscle biopsy, scute, and /or nasal swabs) and have up to two transmitters attached before release. A subset of animals may also be transported and temporarily held in a facility for additional imaging, laparoscopy and internal organ biopsy. The requested handling, marking and sampling techniques are expected to result in temporary discomfort or pain to target animals. Animals are expected to recover from discomfort as soon as the procedures are done from handling and activities that do not pierce the skin. Invasive activities that involve piercing the skin would result in minor injury at the wound site with wounds healing in days to weeks of the event. Infection and transmission of diseases or pathogens are not expected due to the nature of the proposed activities and permit conditions that would minimize these risks.

Transmitters have the potential to increase the turtle's hydrodynamic drag, affect lift and pitch, and increase an animal's risk of entanglement. NMFS' studies in San Diego Bay have shown that 1) transmitters do not alter the turtle's diving and surface behaviors or swimming speeds,

and 2) transmitters and the tagging experience leave no lasting effect on a sea turtle's habitat use patterns indicating that tag attachments have negligible impacts to tagged sea turtles. Tracking of tagged animals by vessel as proposed by the SEFSC would result in no more than temporary disturbance, lasting only while the vessel is in the turtle's vicinity. Risk of vessel strike is not anticipated.

More invasive procedures, such as laparoscopy, would be performed by or directly supervised by a veterinarian following humane protocols in a laboratory to ensure the safety and health of the subject sea turtles. Animals would be monitored while temporarily maintained in the lab until released back to the wild. Some procedures may require the use of anesthesia which has an inherent risk of accidental mortality. Thus, the permit would authorize a minor number of accidental sea turtle mortalities (two each of green, Kemp's ridley and loggerhead sea turtles and one each of hawksbill, leatherback, and olive ridley sea turtles over the life of the permit) due to research procedures or capture. However, the low number of mortalities that could occur is not expected to translate to a population or species level impact.

In addition, the mitigation measures required by this permit are designed to minimize the potential for adverse impacts to the target species, including unintended consequences, such as mortality or serious injury to the individual animals. Therefore, authorizing take is not expected to have adverse impacts to the populations or species that are the subject of this permit.

The proposed research will take place in the U.S. and international waters of the North Atlantic Ocean, Gulf of Mexico, Caribbean Sea and their embayments. The study area includes or is near State and National Parks or wilderness areas, wildlife refuges, and the Florida Keys National Marine Sanctuary. Research would not occur in properties listed or eligible for listing on the National Register Historic Places or National Historic Landmarks. The study area overlaps with critical habitat for loggerhead sea turtles, gulf sturgeon (*Acipenser oxyrinchus desotoi*), Johnson's seagrass (*Halophila johnsonii*), and North Atlantic right whales (*Eubalaena glacialis*). We expect no adverse impacts to any of the specific primary constituent elements of designated critical habitat areas, because the activities are focused on the target animals. The action does not involve the consumptive use of any resources. However, sea turtle research activities are only expected to impact only the sea turtle species that are the subject of the permit. The presence of vessels and use of nets for captures, observations, subsequent handling and work-up of sea turtles are only expected to affect individual animals. Further, the permit will contain conditions to prevent research activities, including netting operations, from altering, damaging, or destroying physical habitat or cultural or historical resources.

Interactions with other protected species in these areas, such as listed² marine mammals and fishes are not expected because the permit includes mitigation measures to avoid or minimize effects to all protected species that researchers may encounter in the study area. Likewise, no effects to animals or habitats protected by the Magnuson-Stevens Conservation and Fisheries Management Act or the Migratory Bird Treaty Act are expected since the research is focused on sea turtles that are the subject of the permit. Finally, the applicant is required to submit annual reports in which they must provide an accounting of the numbers of animals taken and NMFS tracks take numbers via the Authorizations and Permits for Protected Species database.

² Species listed as threatened or endangered under the Endangered Species Act.

Therefore, NMFS can modify this permit if there is reason to believe the surveys, captures, and procedures are having or have the potential to have an adverse effect on the species or population.

A summary of the status of the sea turtle populations is listed below and additional information can be found in the status reviews and recovery plans which are available at: <https://www.fisheries.noaa.gov/sea-turtles>.

Table 1. Status of Affected Sea Turtles

Common Name	DPS	ESA Status	Minimum Abundance or No. Nesting Females
Green turtle	North Atlantic	Threatened	167,528 nesting females
Hawksbill sea turtle	N/A	Endangered	22,004 nesting females
Kemp's ridley sea turtle	N/A	Endangered	5,500 nesting females
Leatherback sea turtle	N/A	Endangered	Unknown but increasing in the Atlantic
Loggerhead sea turtle	Northwest Atlantic Ocean	Threatened	Not available
Olive ridley sea turtle	N/A	Threatened	>1.39 million turtles

2. Other Relevant Factors

The issuance of this scientific research permit will not result in highly controversial environmental effects or result in environmental effects that are uncertain, unique or unknown because scientific research permits have been issued for similar research activities in the same location, for the same species using methods and procedures that employ generally accepted research standards and best management practices that have been tested, verified and approved. In addition, the type of proposed research for sea turtles is well-understood and documented; prior analysis demonstrates issuance of a scientific research permit only affects the animals that are the subject of the permit.

The issuance of this scientific research permit will not establish a precedent for future actions or represent a decision in principle about future actions with potentially significant environmental effects because NMFS' actions under ESA Section 10(a)(1)(A) are considered individually and is based on the best available scientific information, which is continuously evolving. Therefore, issuance of a scientific research permit to a specific individual or organization for a given activity does not guarantee or imply NMFS will authorize others to conduct similar activities. Subsequent requests for permits are evaluated upon their own merits relative to the criteria established in the ESA and its implementing regulations (50 CFR Part 222) on a case-by-case basis.

NMFS' compliance with environmental laws and regulations and Executive Orders (EOs) is based on NMFS' proposed action and the nature of the applicant's proposed research activities. Therefore, the Permits and Conservation Division consulted under Section 7 of the ESA to determine if the issuance of this scientific research permit would likely jeopardize the continued existence of listed species or result in an adverse modification of critical habitat. In 2017, the

Permits and Conservation Division consulted programmatically on its sea turtle permitting program with the NMFS ESA Interagency Cooperation Division. The resulting Programmatic Biological Opinion (BO; NMFS 2017) determined that issuance of permits for sea turtle research is not likely to jeopardize the continued existence of NMFS ESA-listed species or to result in the destruction or adverse modification of designated critical habitat. After reviewing the request, the Permits and Conservation Division determined that the proposed research falls within the scope of the Programmatic BO. The applicant is responsible for securing the necessary Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) permits for import and export, Federal Aviation Administration permits to fly UAS, Institutional Animal Care and Use Committee approvals, National Park special use permits, and permits to operate within or near National Marine Sanctuaries. There are no other environmental laws, regulations, EOs, consultations, federal permits or licenses applicable to NMFS for issuance of this scientific research permit to the SEFSC.

Reference

NMFS. 2017. Biological and Conference Opinion on the Proposed Implementation of a Program for the Issuance of Permits for Research and Enhancement Activities on Threatened and Endangered Sea Turtles Pursuant to Section 10(a) of the Endangered Species Act. Silver Spring, MD.