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

Supplemental Environmental Assessment for Emergency Action

Issuance of a Modification to Scientific Research Permit No. 14726

for Research on Protected Sea Turtles

April 2011

National Oceanic and Atmospheric Administration

National Marine Fisheries Service

1315 East-West Highway

Silver Spring, MD 20910

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1.0 INTRODUCTION

1.1 Background

On April 20, 2010, a fire and explosion occurred aboard the semisubmersible Mississippi Canyon (MC) 252 drilling platform *Deepwater Horizon* roughly 80 km southeast of the Mississippi Delta. The platform had over 700,000 gallons of fuel aboard, which likely burned, escaped, or sank with the platform (www.restorethegulf.gov). Once the platform sank, the riser pipe connecting the platform to the wellhead on the seafloor broke in multiple locations, initiating an uncontrolled release of oil from the exploratory well. Oil leaked into the Gulf of Mexico (Gulf) at an estimated rate of 53,000 to 62,000 barrels per day from three leaks in damaged piping on the sea floor from the Deepwater Horizon incident which was declared a Spill of National Significance (SONS) on April 29, 2010 (Federal Interagency Solutions Group 2010). A SONS is defined as "a spill that, due to its severity, size, location, actual or potential impact on public health and welfare or the environment, or necessary response effort, is so complex that it requires extraordinary coordination of federal, state, local, and responsible party resources to contain and clean up the discharge" and allows greater federal involvement.

Over the next three months, oil was released into the Gulf, resulting in oiled regions of Texas, Louisiana, Mississippi, Alabama, and Florida and widespread oil slicks throughout the northern Gulf that closed more than one-third of the Gulf Exclusive Economic Zone to fishing due to contamination concerns. Apart from the widespread surface slick, massive undersea oil plumes formed, possibly through the widespread use of dispersants and reports of tarballs washing ashore throughout the region were common. Although estimates vary, NOAA has estimated that 4.9 million barrels of oil were released (Lubchenco et al. 2010). A variety of marine species have been impacted by the spill, including protected marine mammals and sea turtles. As of November 2, 2010, 1,145 sea turtle strandings in the Gulf were documented, of which 473 animals were visibly oiled (http://www.nmfs.noaa.gov/pr/pdfs/oilspill/species_data.pdf). However, specific causes of injury or death have not yet been established for many of these individuals as investigations into the role of oil in these animals' health status continue.

To study impacts to natural resources in the wake of an oil spill or the release of a hazardous substance into the environment, the damage assessment process known as the Natural Resource Damage Assessment (NRDA) was created with the Oil Pollution Act (OPA) in 1990.
To help determine the type and amount of restoration needed to compensate the public for harm to natural resources, including protected species, as a result of the spill, a Natural Resource Damage Assessment (NRDA) is being conducted by NOAA and co-trustee agencies. The Proposed Action would address potential impacts to sea turtle assemblages in the Gulf as part of the NRDA.

1.2 Purpose and Need for Action

Description of Action

In response to receipt of the request from Blair Witherington, Ph.D., Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute, Melbourne Beach Field

Laboratory, 9700 South A1A, Melbourne Beach, FL 32951 (File No. 14726-01) NMFS proposes to issue a modification to a scientific research permit that authorizes "takes"[1] of sea turtles in the wild pursuant to the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*) and the regulations governing the taking, importing, and exporting of endangered and threatened species (50 CFR Parts 222-226).

Purpose and Need

The primary purpose of the permit is to provide an exemption from the take prohibitions under the ESA to allow "takes" for *bona fide* scientific research. The need for issuance of the permit is related to NMFS' mandates under the ESA. Specifically, NMFS has a responsibility to implement the ESA to protect, conserve, and recover threatened and endangered species under its jurisdiction. The ESA prohibits takes of threatened and endangered species, respectively, with only a few very specific exceptions, including for scientific research and enhancement purposes. Permit issuance criteria require that research activities are consistent with the purposes and polices of these federal laws and would not have a significant adverse impact on the species or stock. The proposed permit would allow the applicant to better address recovery plan goals providing information on sea turtle species essential to their conservation and management.

In light of the potential impacts of the MC 252 oil spill on sea turtle assemblages in the Gulf, assessing damage to sea turtles and other natural resources in the coming months is critical. Under the ESA, four species of the target sea turtles (green, *Chelonia mydas*, Kemp's ridley, *Lepidochelys kempii*, leatherback, *Dermochelys coriacea*, and hawksbill, *Eretmochelys imbricata*) are listed as endangered and one (loggerhead, *Caretta caretta*) is listed as threatened. Each of these species can be found, at various points of the year, within the waters of the Gulf (Eckert et al. 1999). As such, the potential for adverse impacts on listed sea turtles is present and the need to document and assess those impacts is paramount and required as part of the NRDA of the spill.

1.3 Other EA/EIS that Influence the Scope of this SEA

An Environmental Assessment (EA; NMFS 2010) was prepared for issuance of the original Permit (No. 14726) in 2010 which resulted in a finding of no significant impact (FONSI), determining that issuance of the action and conduct of the associated research would not have measurable impacts on the physical, social, or economic environment but could result in harassment, as defined in the ESA, of sea turtles. The analyses focused on potential impacts to the biological environment, especially sea turtles. NMFS determined that the proposed harassment to sea turtles would not result in significant impacts to any portion of the human environment. In addition, a biological opinion was prepared for the action finding that the action would not jeopardize the continued existence of any threatened or endangered species or result in destruction or adverse modification of any critical habitat.

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1 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." The term "harm" is further defined by regulations (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."

Since the Proposed Action would not change the timing or manner of previously authorized research activities, they are not re-examined in this SEA. Therefore, the scope of this SEA is limited to the potential impacts to sea turtles associated with the proposed increases in the number of turtles captured, new activities that would be performed on captured turtles, and the expanded study area.

Research Objectives

Under the ESA, NMFS is responsible for the conservation and recovery of most endangered and threatened species occurring in the marine environment. Scientific research is an important means of gathering valuable information about these species and is necessary to conserve them and promote their recovery.

To collect information on pelagic sea turtles in the Gulf, the applicant proposes to conduct scientific research on green, hawksbill, leatherback, Kemp's ridley, and loggerhead sea turtles in the Gulf. The objectives of this modification would be to: (1) identify threats to pelagic sea turtles, and (2) document the density, condition, diet, and potential MC 252 oil exposure of pelagic sea turtles associated with floating *Sargassum* as part of the post-spill NRDA of the Deepwater Horizon event.

The Proposed Action would modify the existing permit by: 1) increasing the number and life stages of sea turtles that may be taken annually; (2) authorizing the collection of voided fecal samples for all animals; (3) authorizing satellite tagging for a subset of green sea turtles; and (4) expanding the authorized study area in the Gulf. The need for scientific research on sea turtles in oil-affected waters is important as it would provide managers with critical data on the impacts of the MC 252 oil spill on sea turtle populations of the Gulf as part of the NRDA.

2.0 MANAGEMENT ALTERNATIVES

Section 1502.14 of the Council on Environmental Quality (CEQ) regulations requires agencies to explore and objectively evaluate all reasonable alternatives for an action, including the no action alternative. The analysis of alternatives shall describe the environment to be affected by the action and the environmental consequences of each of the alternatives. Alternatives shall be presented in comparative form to provide a clear basis for why decision makers selected the preferred alternative.

Two alternatives are being considered in this SEA. Descriptions of the environmental consequences associated with each alternative can be found in Section 4.0 along with the biological environments affected by this action.

Action: Issue a permit modification for sea turtle research in areas affected by the Deepwater Horizon oil spill.

Alternative 1: No Action. Deny the permit modification request to conduct NRDA research on sea turtles. Under this alternative, Permit No. 14726 would remain valid and research would continue to occur as currently authorized by the permit.

Alternative 2—Proposed Action (Issuance of permit modification with conditions): Under the Proposed Action alternative, a permit modification would be issued for activities as proposed by the applicant, with the permit terms and conditions standard to such permits as issued by NMFS. The proposed modification would be valid through December 31, 2011.

Permit No. 14726 currently authorizes the Permit Holder to locate and describe areas of the Atlantic Ocean and Gulf of Mexico around the coast of Florida that serve as developmental habitat for pelagic-stage juvenile and neonate loggerhead, green, Kemp's ridley, hawksbill, and leatherback sea turtles, to quantify threats to pelagic sea turtles, and to gather information on their life-history, genetics, movements, behavior, and diet. Researchers are authorized to capture by dip net, flipper and passive integrated transponder tag, measure, weigh, and oral swab sea turtles. A subset of animals may be skin biopsied, lavaged or have a satellite tag attached. See Appendix 1 for details on what is currently permitted and requested changes for the modification.

NMFS proposes to temporarily modify the permit through December 31, 2011 to authorize the following:

- Increased number of sea turtles that may be captured for 2011: an additional 350 loggerheads, 450 greens, 50 hawksbills, and 500 Kemp's ridleys.
- Satellite tag up to 50 of the captured green sea turtles in the same manner as currently authorized for Kemp's ridleys.
- Allow researchers to capture subadult and adult life stages of loggerheads in addition to currently authorized juveniles.
- Allow researchers to opportunistically collect voided feces from all captured sea turtles.
- Expand the action area to allow research to occur in Federal waters throughout the Gulf of Mexico.

Duration

The proposed changes to the permit would only be valid through December 31, 2011 to accommodate objectives and data needs for the NRDA. On January 1, 2012, the permit would revert back to originally authorized areas and annual take levels (see Table 1 of Appendix 1) for the remaining life of the permit. NRDA surveys would begin in March 2011.

Area

The Proposed Action would expand the action area to authorize research throughout the Gulf. Specific areas would be based on observations of *Sargassum* patches during associated aerial surveys operated by the NMFS Southeast Fisheries Science Center (SEFSC) flown one day prior to the applicant's proposed sea turtle research. However, the applicant has noted that research

beyond Florida waters would only occur in Federal waters of the Gulf. No work would occur in state waters or protected areas, including National Marine Sanctuaries.

Methods

Research activities (capture, handling, count/survey, satellite tagging, lavage, flipper and passive integrative transponder tagging, measure, sample, oral swab and weighing) would occur in the same manner as previously described in the 2010 EA for Permit No. 14726. Therefore, proposed satellite tagging of green sea turtles would be conducted as described for Kemp's ridleys in the 2010 EA. Adult and subadult lifestages of loggerheads that are proposed would not be captured and handled, rather only counted from the vessel during surveys.

Fecal sampling

The only new research activity that would be authorized by the Proposed Action would be the collection of voided feces by sea turtles that are captured. If a turtle defecates before it is released, the feces would be collected with an uncontaminated wooden spatula, wrapped in aluminum foil, placed into a labeled bag, and frozen.

No other changes to the permit would be authorized. All existing conditions in the permit would remain in effect to minimize potential harassment of sea turtles and non-target species.

Comparison of Alternatives

In **Alternative 1** (No Action), the application for scientific research on sea turtles in the areas affected by the Deepwater Horizon oil spill would be denied.

This alternative would represent the loss of a unique research opportunity to obtain ephemeral biological data on sea turtle assemblages in the areas impacted by the Deepwater Horizon oil spill. These data can only be collected in a narrow window of time following the spill in order for NRDA to assess the species' risk of exposure and injury from the spill.

The **Proposed Action** would allow NMFS to permit scientific research on sea turtles in areas impacted by the Deepwater Horizon oil spill and assess threats to sea turtles and impacts of potential oil exposure to sea turtles in relation to the spill. This alternative would result in the short-lived minimal harassment of additional sea turtles. However, as discussed in the following chapters, these effects would not result in impacts at the population or species level. Collecting this information would fill gaps in understanding on sea turtle ecology, identify impacts of the oil spill to sea turtles under NRDA, and allow managers to take more effective conservation measures to help recover these species. As discussed above, this data can only be collected for a limited time and is essential to learning how endangered and threatened sea turtles are impacted by oil spills.

3.0 AFFECTED ENVIRONMENTS

A brief description of the affected environment is included herein for this SEA. More detailed descriptions of the existing affected environment for the current permit can be found in the 2010 EA andare hereby incorporated by reference and briefly summarized here.

The 2010 EA described and analyzed waters of the Atlantic Ocean and Gulf around the coast of Florida that were 10 to 1,000 m in depth. These areas would still be permitted under the Proposed Action. For the Proposed Action, the applicant has requested to expand the action area through December 31, 2011 to include Federal waters of the Gulf, bounded by the following coordinate ranges: 20° to 30° N, 75° to 97° W. Research would not occur in state waters other than Florida waters currently permitted. In addition, the applicant has clarified that work would not occur within any National Marine Sanctuaries or other protected areas. No critical habitat for ESA species is designated in the action area.

Vessel surveys would not involve more than routine vessel movements at the water surface. Researchers would not conduct activities that are likely to alter or damage bottom habitat, essential fish habitat or other protected areas. Due to the nature of the proposed research, NMFS does not expect the physical, social and economic environment to be impacted in a manner not previously analyzed in the 2010 SEA. That SEA determined that impacts to these aspects of the human environment would not be significant. Therefore, they are not considered further in this SEA.

The Proposed Action involves sea turtles that would be authorized for visual counts or capture by dip net and have subsequent procedures performed as noted in Appendix 1. The affected biological environment is limited to the target endangered and threatened sea turtles: green, Kemp's ridley, hawksbill, leatherback and loggerhead sea turtles. The status of these species has not changed since the preparation of the 2010 EA. A more detailed analysis of the status of these species can be found in the Biological Opinion prepared for this SEA. Non-target species would not be affected by the Proposed Action as researchers would not approach or interact with other species.

4.0 ENVIRONMENTAL CONSEQUENCES

This section provides a comparison of the alternatives described in Section 2.0. The direct, indirect, and cumulative effects on the biological environment for each management alternative are described. This section also describes: 1) any unavoidable adverse effects resulting from the Proposed Action and 2) any irreversible or irretrievable commitments of resources resulting from implementation of the Proposed Action.

CEQ regulations (40 CFR 1508.8) define direct effects as those "which are caused by the action and occur at the same time and place." Indirect effects are defined as those "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." Cumulative effects are defined as "impacts on the environment that results from

the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions."

4.1 EFFECTS OF ALTERNATIVE 1: No Action

The No Action alternative would eliminate any potential risk to the environment from the proposed research activities. The target sea turtles would not be impacted by the proposed additional activities. However, activities currently authorized by Permit No. 14726 would continue under the Status Quo. The scientific community would lose the opportunity to collect valuable data from turtles caught in areas impacted by the MC 252 oil spill and information that could aid the understanding of turtle habitat use in the action area in response to the oil spill.

4.2 EFFECTS OF ALTERNATIVE 2: Issue permit modification with standard conditions

Because this modification focuses on activities that would occur on sea turtles already authorized for capture and on the additional sea turtles that would be added under the Proposed Action, impacts would be limited primarily to the biological environment. The type of activities proposed in the permit modification request would be unlikely to affect the physical or socioeconomic environment or pose a risk to public health and safety.

Environmental Consequences to the Biological Environment – Sea Turtles

The environmental consequences to the biological environment for currently authorized research activities have not changed from how they were described in the 2010 EA. As analyzed in the 2010 EA, the currently authorized activities are expected to result in no more than short-lived minimal harassment of individual animals. Animals would recover from most research activities within the course of a day. No serious injuries or mortalities would be expected. Therefore, the following discussion focuses on the effects of research activities that would be new to the permit and the increase in take of the target populations.

Effects of Fecal Sampling

The proposed fecal sampling is a non-invasive activity. Therefore, NMFS does not expect that collection of voided feces would result in any stress to individual turtles. No harm, injury or mortality would be expected. As proposed, sample collection would not be expected to result in the introduction of any pathogens or diseases to the environment.

Effects of Take Increase

The issue most relevant to this analysis is the potential for negative impacts on the target species. It is important to recognize that an adverse effect on a single individual or a small group of animals does not translate into an adverse effect on the population or species unless 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 a 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 nursing, to a degree that the individual's likelihood of successful reproduction or survival was substantially reduced.

That 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.

Although the total number of animals captured and the suite of activities performed would increase during 2011 as a result of the Proposed Action, as described above, none of the activities would result in the serious injury, mortality or reduced reproductive success of the target species. Therefore the Proposed Action is not expected to significantly impact individual sea turtles, their populations or species. In addition, the biological opinion prepared for this action determined that the Proposed Action would not jeopardize the continued existence of any threatened or endangered species or result in destruction or adverse modification of any critical habitat (NMFS 2011).

In summary, NMFS does not expect that mortality or serious injury of any species would occur as a result of the Proposed Action. Impacts to individual sea turtles are likely to be minimal and short-lived. Any effects of the proposed research activities are not expected to adversely affect the survival, longevity, or lifetime reproductive success of any age class of species. Therefore, NMFS does not expect that the proposed activities would adversely affect any species at the population or species levels or have significant effects on them.

4.3 Cumulative Effect Analysis

Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7). Cumulative effects can either be additive or synergistic. A synergistic effect is when the combined effects are greater than the sum of the individual effects.

Historically, one of the major contributors to declines in sea turtle populations was the commercial harvest of eggs and turtles. Today, target sea turtles may be adversely affected by human activities including commercial and recreational fishing (as bycatch via entrapment and entanglement in fishing gear), habitat degradation, and tourism and recreation (via harassment from human approach and presence) within the action area. Of these, disturbance that results in displacement of animals or abandonment of behaviors such as feeding or breeding by groups of animals are more likely to have cumulative effects on the species than entanglement of animals in fishing gear. In addition, the target species benefit from other human activities operated by Federal, state, and local agencies and organizations including management, conservation, and recovery efforts, nest monitoring, education and outreach, and stranding response programs.

In addition to the above information on the threats to target sea turtle species, the 2010 Deepwater Horizon oil well blowout has impacted green, leatherback, Kemp's ridley, loggerhead, and hawksbill sea turtles in the Gulf of Mexico. As noted in Ch. 1, based on the number of animals collected, the event has resulted in the live or dead stranding of more than 1,100 sea turtles. However, this is likely an underestimate of the number of sea turtles impacted by the spill because 1) it is unlikely that all oiled animals were documented and 2) additional sea turtles were observed within oiled waters but were unable to be captured during the response. The overall degree and extent to which the populations and species have been impacted is not known at this time; however, researchers and managers are currently working to assess and quantify impacts through efforts such as the Proposed Action. The biological opinion (NMFS 2011) prepared for this action evaluated the potential impacts of the spill to the target sea turtle species, including the exposure to oil, use of dispersants, and other response activities that could harm sea turtles. The biological opinion concluded that the proposed action would not likely jeopardize the continued existence of any of the species and would not likely destroy or adversely modify designated critical habitat.

Research on sea turtles in the United States is carefully controlled and managed so that it does not operate to the disadvantage of the species. In addition to permits issued by NMFS for the scientific research of sea turtles in the marine environment, similar ESA Section 10 federal permits are issued by the USFWS for the taking of endangered and threatened sea turtles on land for activities and efforts that aid the conservation and recovery of these species.

As all current permit conditions would remain in the modified permit, the Permit Holder would continue to be required to coordinate the timing of his activities with other researchers that may be in the area to minimize cumulative impacts to the target species. It should be noted that only one other Permit Holder, the NMFS SEFSC, is currently authorized to conduct sea turtle research in Federal waters of the Gulf. The applicant has been actively collaborating and coordinating research with the SEFSC since 2010. Given the required coordination and NOAA's efforts to coordinate research as part of NRDA, NMFS does not expect that the Proposed Action would result in cumulative significant impacts to the target sea turtle species. Further, to mitigate the risk of negative cumulative effects to turtles, researchers would continue to be required to scan turtles for existing PIT tags before applying new tags; turtles that have existing PIT and flipper tags would not be re-tagged. Permitted researchers are also required to notify the appropriate NMFS Regional Office at least two weeks in advance of any planned field work so that the Regional Office can facilitate the coordination of research permits and other human activities in the area and take steps appropriate to minimize disturbance from multiple activities.

The proposed permit modification would increase takes and potential impacts to the target sea turtles species for a limited period of time (through December 31, 2011). Whether this additional level of disturbance, by itself or in combination with disturbance from other permitted research, would result in cumulative adverse effects depends on how long the effects of each disturbance last, whether the animals have sufficient time between disturbance events to resume or compensate for disrupted activities, and whether the effects of repeated disturbance are additive, synergistic or accumulate in some other way. However, as previously discussed, NMFS limits repeated harassment of individual turtles and avoids unnecessary duplication of research efforts by requiring coordination among Permit Holders. All scientific research permits are also conditioned with mitigation measures to ensure that the research impacts target and non-

target species as minimally as possible. Further, the effects of the proposed research activities (e.g., measure, lavage, etc.) are short-term, most dissipating within a day of the research event, impacting individual animals. These activities are not likely to result in the serious injury, mortality or reduced fecundity of target animals. Given this low degree of adverse impacts and the mechanisms in place to limit repeated disturbance of individual animals, NMFS does not expect the combination of research activities in the action area to significantly impact sea turtles at the population or species level.

The Proposed Action is not related to other actions with individually insignificant but cumulatively significant impacts. The oil spill event itself is expected to lead to cumulatively significant impacts on the physical, biological, and human environment, but the Proposed Action to permit sea turtle research in areas affected by the oil spill is not expected to exacerbate the situation. In general, the Proposed Action would provide resource managers with important information on sea turtle assemblages, including how they may be impacted by the Deepwater Horizon oil spill. NMFS' Proposed Action is not anticipated to have significant direct, indirect, or cumulative effects on the biological, physical, and socioeconomic environment. To the extent that future longer-term management actions and restoration decisions are made, NMFS would conduct future environmental reviews and consider the oil spill within the environmental context of the effects of a proposed action and alternatives.

LIST OF PREPARERS

This SEA was prepared by Amy Hapeman with the NMFS, Office of Protected Resources in Silver Spring, Maryland.

Agency Consulted

National Ocean Service, Office of Response and Restoration, Assessment and Restoration Division

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APPENDIX 1.

Table 1. Current annual takes authorized for juvenile and neonate sea turtles by Permit No. 14726. The permit would revert back to this level of takes on January 1, 2012 and be valid through the remainder of the permit.

SPECIES	NO. ANIMALS	TAKE ACTION	COLLECT METHOD	PROCEDURES
Loggerhead	150	Capture/Handle/ Release	Dip Net	Count/survey; Mark, flipper tag; Mark, PIT tag; Measure; Sample, oral swab; Weigh
Loggerhead	100	Capture/Handle/ Release	Dip Net	Count/survey; Lavage; Mark, flipper tag; Mark, PIT tag; Measure; Sample, oral swab; Sample, tissue; Weigh
Green	100	Capture/Handle/ Release	Dip Net	Count/survey; Lavage; Mark, flipper tag; Mark, PIT tag; Measure; Sample, oral swab; Sample, tissue; Weigh
Hawksbill	50	Capture/Handle/ Release	Dip Net	Count/survey; Lavage; Mark, flipper tag; Mark, PIT tag; Measure; Sample, oral swab; Sample, tissue; Weigh
Kemp's ridley	45	Capture/Handle/ Release	Dip Net	Count/survey; Lavage; Mark, flipper tag; Mark, PIT tag; Measure; Sample, oral swab; Weigh
Kemp's ridley	5	Capture/Handle/ Release	Dip Net	Count/survey; Instrument, epoxy attachment (e.g., satellite tag, VHF tag); Lavage; Mark, flipper tag; Mark, PIT tag; Measure; Sample, oral swab; Weigh
Leatherback	10	Capture/Handle/ Release	Dip Net	Count/survey; Lavage; Mark, flipper tag; Mark, PIT tag; Measure; Sample, oral swab; Weigh

Table 2. Proposed annual authorized takes of sea turtles along the Atlantic **coast of Florida and throughout the Gulf of Mexico.** Changes from the current permit (Table 1) are reflected in bold font. Takes would be valid through Dec. 31, 2011 for the permit.

SPECIES	NO. ANIMALS	LIFESTAGE	TAKE ACTION	COLLECT METHOD	PROCEDURES
Loggerhead	**500**	Juvenile, Neonate	Capture/Handle/ Release	Dip Net	Count/survey; Mark, flipper tag; Mark, PIT tag; Measure; **Sample, fecal;** Sample, oral swab; Weigh
Loggerhead	100	**Adult/Subadult/ Juvenile, Neonate**	Capture/Handle/ Release	Dip Net	Count/survey; Lavage; Mark, flipper tag; Mark, PIT tag; Measure; **Sample, fecal;** Sample, oral swab; Sample, tissue; Weigh
Green	**500**	Juvenile, Neonate	Capture/Handle/ Release	Dip Net	Count/survey; Lavage; Mark, flipper tag; Mark, PIT tag; Measure; **Sample, fecal;** Sample, oral swab; Sample, tissue; Weigh
Green	**50**	**Juvenile, Neonate**	**Capture/Handle /Release**	**Dip Net**	**Count/survey; Instrument, epoxy attachment (e.g., satellite tag, VHF tag); Lavage; Mark, flipper tag; Mark, PIT tag; Measure; Sample, fecal; Sample, oral swab; Sample, tissue; Weigh**
Hawksbill	**100**	Juvenile, Neonate	Capture/Handle/ Release	Dip Net	Count/survey; Lavage; Mark, flipper tag; Mark, PIT tag; Measure; **Sample, fecal;** Sample, oral swab; Sample, tissue; Weigh
Kemp's ridley	**500**	Juvenile, Neonate	Capture/Handle/ Release	Dip Net	Count/survey; Lavage; Mark, flipper tag; Mark, PIT tag; Measure; **Sample, fecal;** Sample, oral swab; Weigh
Kemp's ridley	**50**	Juvenile, Neonate	Capture/Handle/ Release	Dip Net	Count/survey; Instrument, epoxy attachment (e.g., satellite tag, VHF tag); Lavage; Mark, flipper tag; Mark, PIT tag; Measure; **Sample, fecal;** Sample, oral swab; Weigh
Leatherback	10	Juvenile, Neonate	Capture/Handle/ Release	Dip Net	Count/survey; Lavage; Mark, flipper tag; Mark, PIT tag; Measure; **Sample, fecal;** Sample, oral swab; Weigh